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***OXFORD BIBLIOGRAPHIES IN LINGUISTICS***  
**“RELATIVE CLAUSES”**

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## INTRODUCTION

Relative clauses are subordinate clausal modifiers. Semantically, they contain a variable that is somehow related to the anchoring phrase (usually a so-called head noun). Across and within different languages, we find a host of different construction types falling under the general label of relative clause. These can be restrictive or nonrestrictive, be nominalized and/or nonfinite, contain a resumptive pronoun, relative pronoun or other kind of linking element, and so on. Relative clauses seem to be essential for the linguistic expression of complex concepts, and it comes as no surprise that practically every language uses relativization in one way or another. If only for this reason, relative clauses have received ample attention in the descriptive as well as generative linguistic literature, especially since the 1960s. The text and references below provide an overview of the various phenomena involved and the related theoretical debate, thereby establishing a selective guide to the relevant literature, including relatively early scholarship. This bibliography focuses on formal and cross-linguistic work. There is also a rich literature on acquisition and cognitive processing of relative clauses, which is not covered here.

## GENERAL OVERVIEWS

There are a number of useful general overviews of the topic, also containing many references. Nicolaeva 2006 is a brief introduction (complemented by Miller 2006, cited under Pseudo-, Reduced, and Other Kinds of Relatives). Andrews 2007 is a typologically oriented overview; Givón 1984 is a functionally oriented overview; and Alexiadou, et al. 2000 is a theoretically oriented overview. The more peripheral types of relative constructions are presented briefly but insightfully in Grosu 2002. Bianchi 2002 is an advanced general short text about the theory of relative clauses. The comprehensive books Smits 1988 and de Vries 2002 contain typological as well as theoretical discussion. Notice that some of the works mentioned in the Cross-Linguistic Typology section can be considered general overviews as well.

Alexiadou, Artemis, Paul Law, André Meinunger, and Chris Wilder. 2000. Introduction. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 1–51. Amsterdam and Philadelphia: John Benjamins.

General introduction to the syntax of relative clauses; also contains a summary of the papers in this volume.

Andrews, Avery. 2007. Relative clauses. In *Language typology and syntactic description*. Vol. 2, *Complex constructions*. 2d ed. Edited by Timothy Shopen, 206–236. Cambridge, UK: Cambridge Univ. Press.

Basic typological overview of relative constructions.

Bianchi, Valentina. 2002. Headed relative clauses in generative syntax, Part I. *Glott International* 6.7: 197–204.

Concise but in-depth discussion of theoretical issues in the syntax of relative clauses. Contains a “headed relatives” bibliography. Part 2 in *Glott International* 6.8: 235–247

de Vries, Mark. 2002. The syntax of relativization. PhD diss., University of Amsterdam.

Systematic overview of typological and theoretical issues relating to relative clauses. Includes an annotated compendium of syntactic analyses, and an in-depth discussion of the raising analysis.

Givón, Talmy. 1984. *Syntax, a functional-typological approach*. Vol. 1. Amsterdam: John Benjamins.

Contains a long chapter 15 with illustrated strategies of relativization.

Grosu, Alexander. 2002. Strange relatives at the interface of two millennia. *Glott International* 6.6: 145–167.

Discusses atypical relative constructions, which are often semantically maximalizing. This includes amount relatives, free relatives, correlatives, certain internally headed relatives, and modal existential constructions. See also Specific Construction Types. Includes a “Strange Relatives” bibliography.

Nicolaeva, Irina. 2006. Relative clauses. In *Encyclopedia of language and linguistics*. 2d ed. Vol. 10. Edited by K. Brown, 501–508. Oxford: Elsevier.

Basic introduction to the typology and theory of relative clauses.

Smits, Rik. 1988. *The relative and cleft constructions of the Germanic and Romance languages*. Dordrecht, The Netherlands: Foris.

A rich source of data containing a systematically organized overview of relative clauses in the Germanic and Romance (standard) languages. The first half of the book contains an elaborate discussion of theoretical issues. (Published PhD dissertation, Catholic University of Brabant.)

## **CROSS-LINGUISTIC TYPOLOGY**

This section focuses on cross-linguistic studies rather than language-specific descriptions. There is a separate subsection on The Accessibility Hierarchy. Among a great amount of published work on relative clauses in individual languages, two useful edited volumes are Peranteau, et al. 1972 and Alexiadou, et al. 2000. Many language data are also found in

Andrews 1985, and especially in Lehmann 1984, a major typological work. Dryer and Haspelmath 2011 is an online cross-linguistic database containing information about relative clauses. Universals and cross-linguistic implications and tendencies are discussed specifically in Downing 1978 and de Vries 2005.

Alexiadou, Artemis, Paul Law, André Meinunger, and Chris Wilder, eds. 2000. *The syntax of relative clauses*. Amsterdam: John Benjamins.

Contains theoretically oriented papers on Turkish, English, Hindi, Japanese, Swedish, Dutch, and other languages.

Andrews, Avery. 1985. *Studies in the syntax of relative and comparative clauses*. New York: Garland.

Published version of Andrews's 1975 PhD dissertation, from MIT. Early overview containing many cross-linguistic data, comparing relative clauses and comparative clauses.

de Vries, Mark. 2005. The fall and rise of universals on relativization. *Journal of Universal Language* 6:125–157.

A more recent update of the Greenbergian perspective on relative clauses. Argues that—with more and more data becoming available—many alleged universals from the past turn out to be general tendencies at best; but there are also new ones that can be formulated.

Downing, Bruce. 1978. Some universals of relative clause structure. In *Universals of human language*. Volume 4, *Syntax*. Edited by Joseph H. Greenberg, 375–418. Stanford, CA: Stanford Univ. Press.

Discusses cross-linguistic universals relating to relative clauses.

Dryer, Matthew, and Martin Haspelmath, eds. 2011. *The world atlas of language structures online*. Munich: Max Planck Digital Library.

Shows selected linguistic features on maps of the world, with accompanying information. Relevant chapters are chapter 60 by David Gil; chapters 90 (with features A through G) and 96 by Matthew Dryer; chapters 122 and 123 by Bernard Comrie and Tania Kuteva.

Lehmann, Christian. 1984. *Der Relativsatz: Typologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik*. Tübingen, West Germany: Gunter Narr.

Elaborate cross-linguistic study of relative clauses; written in German.

Peranteau, Paul, Judith Levi, and Gloria Phares, eds. 1972. *The Chicago which hunt: Papers from the Relative Clause Festival, April 13, 1972*. Chicago: Chicago Linguistic Society.

Contains contributions on Hittite, Yurok, Ancient Greek, Latin, Russian, Czech, Ukrainian, Slovenian, Serbo-Croatian, Macedonian, Bulgarian, German, Danish, Albanian, English, French, Arabic, Japanese, Turkish, Finnish, Basque, Georgian, Sumerian, Geez, Amharic, Oromo, Malagasy, Kalagan, Ivatan, Batak Toba, Javanese, Malay, Ganda, Shona, Kongo, Mbama, Kinuku, Swahili, Hebrew, Bambara, Amharic, Hindi, Bengali, Gujarati, Telugu, Japanese, Korean, Huichol, Tarahumara, Papago-Pima, Tepecano, Hopi, Tubatulabal, Luiseño, Shoshoni, and Nahuatl.

### **The Accessibility Hierarchy**

Keenan and Comrie 1977 and later Keenan and Comrie 1979, advanced a now famous universal hierarchy of syntactic functions—the “Accessibility Hierarchy”—which explains constraints on relative clause formation. The hierarchy is relative to particular strategies of relativization, of which languages can have more than one. This issue and the competing definitions of relative strategies are studied in more detail in Maxwell 1979. Lehmann 1986, using a larger language sample, proposes a refinement of the hierarchy. Fox 1987 examines the notion of Subject used in the original hierarchy. Bakker and Hengeveld 1999 stress that a multidimensional scale is necessary to explain the attested patterns. Cinque 1981 is a critical review of the basic idea. Comrie 1998 maintains that formal syntactic and pragmatic analysis complement each other.

Bakker, Dik, and Kees Hengeveld. 1999. Relatieve zinnen in typologisch perspectief. *Gramma/TTT* 7.3: 191–214.

This paper (in Dutch) argues that the Accessibility Hierarchy is better explained as the result of different interacting scales (both semantic and syntactic).

Cinque, Guglielmo. 1981. On Keenan and Comrie’s primary relativization constraint. *Linguistic Inquiry* 12.2: 293–308.

A principled critique of Keenan and Comrie’s functional approach to language, based on relativization data from Italian.

Comrie, Bernard. 1998. Rethinking the typology of relative clauses. *Language Design* 1:59–86.

Emphasizes that in some languages, like English, noun phrases with syntactic functions accessible for relativization cannot be too deeply embedded because of constraints on extraction, but in other languages, like Japanese, it is much less clear that such constraints are operative.

Fox, Barbara A. 1987. The Noun Phrase Accessibility Hierarchy reinterpreted: Subject primacy or the absolutive hypothesis? *Language* 63.4: 856–870.

Reexamines cross-linguistic constraints on relative clause formation from a discourse perspective. Challenges certain assumptions underlying the Keenan-Comrie NP Accessibility Hierarchy, and proposes that the category Subject on the original scale must be reinterpreted as absolutive in this context.

Keenan, Edward L., and Bernard Comrie. 1977. Noun Phrase Accessibility and universal grammar. *Linguistic Inquiry* 8.1: 63–99.

Explains certain parametric differences on relative clause formation between languages with respect to a universal scale of syntactic functions.

Keenan, Edward L., and Bernard Comrie. 1979. Noun Phrase Accessibility revisited. *Language* 55.3: 649–664.

Modification of Keenan and Comrie 1977, and response to Maxwell 1979.

Lehmann, Christian. 1986. On the typology of relative clauses. *Linguistics* 24.4: 663–681.

Claims that relative constructions can be nominalized to varying degrees, and that this correlates with basic word order type as well as the position on the hierarchy of syntactic functions.

Maxwell, Daniel. 1979. Strategies of relativization and NP Accessibility. *Language* 55:352–371.

Studies competing definitions of “strategies of relativization” from the perspective of the Accessibility Hierarchy.

## **SEMANTICS OF RELATIVE CONSTRUCTIONS**

This section concerns the possible semantic interpretations of relative clauses. Next to the Basic Distinctions of restrictive and nonrestrictive, there are “strange relatives of the third kind,” as Grosu and Landman 1998 (p. 125, cited under Maximalization) put it, leading to at least a tripartite division. The origin of this claim is made explicit in the section called Maximalization.

### **Basic Distinctions**

Riester 2009 is a fairly recent formal discussion of the basic semantic difference between restrictive and nonrestrictive relative clauses and the consequences for their use in discourse. The referential status of the head noun in restrictives is illuminated in Cinque 2008.

Cinque, Guglielmo. 2008. More on the indefinite character of the Head of restrictive relatives. *Rivista di grammatica generativa* 33:3–24.

Discusses the indefinite character of the head noun in restrictive relative constructions, relating to ideas going back to Stockwell, et al. 1973 (cited under Early Discussions and Foundations).

Riester, Arndt. 2009. Stress test for relative clauses. In *Focus at the syntax-semantics interface*. Edited by Arndt Riester and Edgar Onea, 69–86. Working Papers of the SFB 732 (SinSpeC) 3. Stuttgart: Univ. of Stuttgart.

Investigates which focus patterns on relative clause constructions are possible in which contexts.

### **Maximalization**

Grosu and Landman 1998, an important paper, argues that the semantic opposition restrictive versus nonrestrictive does not really cover all relative constructions. Next to these core types, there are “maximalizing” relative clauses, which can be combined only with definite and universal external determiners; they also resist stacking. Various relevant construction types include *amount*, *kind*, or *degree* relatives, originally discussed in Carlson 1977, and expanded upon in Heim 1982. A more recent discussion and refinement is presented in Herdan 2008. *Correlatives* are also maximalizing, as is shown in Srivastav 1991. Another type involves *event* relativization, discussed in Rothstein 1995. Furthermore, Jacobson 1995 shows that *free* relatives have the semantic properties associated with maximalization. These construction types are also discussed in Grosu 2002, cited under General Overviews. Below, there are separate sections on Correlatives and Free Relative Clauses.

Carlson, Greg. 1977. Amount relatives. *Language* 53.3: 520–542.

Shows that there are relative constructions unlike regular restrictives and appositives, in which there seems to be abstraction over a degree variable, giving rise to an amount reading.

Grosu, Alexander, and Fred Landman. 1998. Strange relatives of the third kind. *Natural Language Semantics* 6.2: 125–170.

Building on various previous scholarship, Grosu and Landman seek to generalize over a number of noncanonical relative clause types, which are all attributed a particular semantics involving maximalization.

Heim, Irene. 1982. The semantics of definite and indefinite noun phrases. PhD diss., University of Massachusetts, Amherst.



Within the general context of a new semantics for indefinite noun phrases, Heim investigates the semantics of “donkey sentences,” antecedent-contained deletion, and degree variables.

Herdan, Simona. 2008. Degrees and amounts in relative clauses. PhD diss., University of Connecticut.

More recent discussion of the ideas in Carlson 1977 and Grosu and Landman 1998. Argues specifically that there are two types of amount relatives, only one of which involves degree relativization.

Jacobson, Pauline. 1995. On the quantificational force of English free relatives. In *Quantification in natural languages*. Edited by Emmon Bach, Eloise Jelinek, Angelika Kratzer, and Barbara B. H. Partee, 451–486. Dordrecht, The Netherlands: Kluwer.

Important discussion of the semantics of free relatives.

Rothstein, Susan. 1995. Adverbial quantification over events. *Natural Language Semantics* 3.1: 1–32.

Discusses a relative clause–like construction type that involves adverbial quantification over events in a neo-Davidsonian framework.

Srivastav, Veneeta. 1991. The syntax and semantics of correlatives. *Natural Language & Linguistic Theory* 9.4: 637–686.

Useful overview of the syntactic and semantic properties of correlative constructions.

## **THEORIES OF RELATIVE CLAUSES**

This section on syntactic and semantic theorizing is divided into three parts: the general Early Discussions and Foundations, the more specific discussion on Head Raising and Matching, and various scholarship about Nonrestrictive/Appositive Relative Clauses. The references here mostly concern “regular” (postnominal headed) relative clauses; for further elaboration, see the section on Specific Construction Types.

### **Early Discussions and Foundations**

Some early discussions of the formal syntax and semantics of relative clauses are Smith 1964, Thompson 1971, Jackendoff 1977, and Bach and Cooper 1978. An important issue of concern is the hierarchical position and structural status (adjunction, complementation, coordination) of the relative clause within the noun phrase or the sentence. Thompson 1971, for instance, advances a coordination analysis, whereas Jackendoff 1977 uses adjunction, and Smith 1964 complementation, to the determiner followed by right-extraposition within the noun phrase. Bach and Cooper 1978 also takes correlative constructions into account. Furthermore, Ross 1967 advances constraints on movement and pied piping. Stockwell, et al. 1973 critically discusses and contributes to the state of

the art at the time. Details aside, the modern consensus is that restrictive relative clauses, as opposed to nonrestrictives, are in the scope of a determiner relating to the head noun (phrase). An important insight concerning the internal syntax of relative clauses is formulated in Chomsky 1977, where they are diagnosed as *wh*-movement constructions, among other types of clauses.

Bach, Emmon, and Robin Cooper. 1978. The NP-S analysis of relative clauses and compositional semantics. *Linguistics and Philosophy* 2.1: 145–150.

Discuss the relation between the syntactic structure of restrictive relative clauses in English and Hittite and their semantic interpretation with respect to the scope of the determiner relating to the head noun. Intends to counter critique directed against the “NP-S” approach to restrictive relative clauses, in which the relative clause seems to outscope the determiner incorrectly.

Chomsky, Noam. 1977. On *wh*-movement. In *Formal syntax: Proceedings of the 1976 MSSB-Irvine Conference on the Formal Syntax of Natural Language, June 9–11, 1976, Newport Beach, California*. Edited by Peter W. Culicover, Thomas Wasow, and Adrian Akmajian, 71–132. New York: Academic Press.

Establishes the properties of standard *wh*- (or A-bar) movement, thereby generalizing over various construction types. In relative clauses, either a relative pronoun or an abstract operator is moved from the gap (base) position to the complementizer domain of the clause.

Jackendoff, Ray. 1977. *X syntax: A study of phrase structure*. Cambridge, MA: MIT Press.

Discusses relative clauses from the perspective of the newly developed multilayered X-bar Theory. Proposes that restrictives are daughters of N'' and nonrestrictives of N'''.

Ross, John. 1967. Constraints on variables in syntax. PhD diss., Massachusetts Institute of Technology.

Seminal work establishing the island character of relative clauses, and many other things. Reprinted as *Infinite Syntax!* (Norwood, NJ: ALEX, 1986).

Smith, Carlota S. 1964. Determiners and relative clauses in a generative grammar of English. *Language* 40.1: 37–52.

One of the first elaborate formal discussions of relative clauses. Proposes a structural connection between determiners and relative clauses.

Stockwell, Robert, Paul Schachter, and Barbara Partee. 1973. *The major syntactic structures of English*. New York: Holt, Rinehart and Winston.

Contains a substantial chapter (7) on relativization, which critically summarizes various theories.

Thompson, Sandra. 1971. The deep structure of relative clauses. In *Studies in linguistic semantics*. Edited by Charles J. Fillmore and D. Terence Langendoen, 78–94. New York: Holt, Rinehart and Winston.

Argues that both restrictive and nonrestrictive relative clauses are derived from underlying coordinated clauses.

## **Head Raising and Matching**

The discussion about head raising and matching is distributed over four subsections: The Raising Analysis contains the original idea of “head raising”; Raising and the Antisymmetry Framework concerns work relating to Richard Kayne’s influential proposal about phrase structure in 1994; The Matching Analysis is an alternative to raising that encompasses a partial retreat to a more traditional approach; and Scope and Reconstruction reflects mixed positions in the ongoing debate.

### The Raising Analysis

An alternative to the traditional right-adjunction analysis of restrictive relative clauses was advanced in Schachter 1973, Vergnaud 1974, and Vergnaud 1985, with reference to unpublished work by Michael Brame. The idea is that the head NP originates inside the relative clause and gets promoted to the matrix clause by movement, which is evidenced by certain reconstruction effects. Furthermore, the presently available literature on maximalizing constructions (including amount relatives, correlatives, etc.) strongly favors this view, as was anticipated in Carlson 1977 (cited under Maximalization).

Schachter, Paul. 1973. Focus and relativization. *Language* 49.1: 19–46.

Contains the first published suggestion of head raising: here, a relative clause is the complement of an abstract “Nom,” a syntactic position to which the head of the relative clause moves from a base-generated relative clause-internal position.

Vergnaud, Jean-Roger. 1974. French relative clauses. PhD diss., Massachusetts Institute of Technology.

Argues for a head-raising analysis (which differs in detail from Schachter’s proposal). After movement of the phrase containing the head noun plus a relative pronoun to the periphery of the embedded clause, the NP moves out and projects. The result corresponds to the familiar NP-S adjunction configuration.

Vergnaud, Jean-Roger. 1985. *Dépendances et niveaux de représentation en syntaxe*. Amsterdam: John Benjamins.

The raising analysis is further supported here by reconstruction data; written in French.

### Raising and the Antisymmetry Framework

The idea of raising was largely ignored until the mid-1990s, when Kayne 1994 revived it within the context of an Antisymmetric phrase structure. An important addition to head raising per se is complementation of the relative clause directly to the determiner head (anticipated by Smith 1964, cited under Early Discussions and Foundations). Bianchi 1999 provides a detailed proposal along these lines. Borsley 1997, among others, notes that the raising analysis is not without problems. Bianchi 2000 attempts to address some of the difficulties; see also de Vries 2002 (cited under General Overviews) and Zwart 2000. It has been observed that a raising analysis is not necessarily implicated by Antisymmetry: when some version of the complement hypothesis is adopted, the head noun could in principle be base-generated as either the selecting head itself (see Platzack 2000), or in some functional specifier position above the relative clause proper (see Schmitt 2000). Finally, it is worth noting that Antisymmetry can be defined differently in order to suit OV languages better; the repercussions on this for relative constructions are discussed in Fukui and Takano 2000. See also the section on Prenominal Relative Clauses.

Bianchi, Valentina. 1999. *Consequences of Antisymmetry: Headed relative clauses*. Berlin: Mouton de Gruyter.

Influential and detailed theory based on the raising hypothesis. Claims to be conceptually as well as empirically superior to an adjunction analysis. Treats relative pronouns as a kind of determiners. Uses a split CP to separate the head NP from the relative determiner. The book is a published version of Bianchi's PhD dissertation from 1995.

Bianchi, Valentina. 2000. The raising analysis of relative clauses: A reply to Borsley. *Linguistic Inquiry* 31.1: 123–140.

Reaction to Borsley's critique of the raising analysis (in Borsley 1997). Specifically, Bianchi addresses how null determiners (empty operators) can be licensed in this approach.

Borsley, Robert D. 1997. Relative clauses and the theory of phrase structure. *Linguistic Inquiry* 28.4: 629–647.

Criticizes Kayne's raising analysis of relative clauses (see Kayne 1994), and questions the validity of Antisymmetric phrase structure.

Fukui, Naoki, and Yuji Takano. 2000. Nominal structure: An extension of the Symmetry Principle. In *The derivation of VO and OV*. Edited by Peter Svenonius, 219–254. Amsterdam: John Benjamins.

A complete turnaround of the picture: relative clauses are left-adjoined by default; postnominal constructions require additional (N-to-D) head movement across the relative clause.

Kayne, Richard. 1994. *The Antisymmetry of syntax*. Cambridge, MA: MIT Press.

Influential book that redefines phrase structure, and that discusses the repercussions on potential analyses of various construction types. For relative clauses Kayne develops a new version of the raising analysis from the 1970s, in accordance with his general theory of Antisymmetry.

Platzack, Christer. 2000. A complement-of-N<sup>0</sup> account of restrictive and non-restrictive relatives: The case of Swedish. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 265–308. Amsterdam: John Benjamins.

Suggests that the head noun and relative clause are base-generated as syntactic sisters, and that the configurational differences between Swedish restrictive and appositive relative clauses is due to movement.

Schmitt, Cristina. 2000. Some consequences of the complement analysis for relative clauses, demonstratives and the wrong adjectives. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 309–348. Amsterdam: John Benjamins.

Discusses (in)definiteness and proposes an extension of the D-complement hypothesis; here, the relative clause is not directly selected by the external determiner, but by an intermediate functional agreement head, of which the head noun (more precisely, “NumP”) is the specifier.

Zwart, Jan-Wouter. 2000. A head raising analysis of relative clauses in Dutch. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 349–385. Amsterdam: John Benjamins.

An extension of Bianchi 1999, with some emphasis on Dutch data. Zwart assumes a three-layered complementizer domain to the relative clause.

### The Matching Analysis

A possible alternative to raising is the idea of matching, as proposed in Sauerland 1998 or Citko 2001: there is an external as well as internal representative of the head NP, of which only the former is pronounced. This idea has antecedents back to at least Chomsky 1965.

Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

In the context of his general theory of syntax, Chomsky provides an early “matching” account of restrictive relative clauses.

Citko, Barbara. 2001. Deletion under identity in relative clauses. In *Proceedings of the North East Linguistic Society (NELS) 31: Georgetown University*. Edited by Minjoo Kim and Uri Strauss, 131–145. Amherst, MA: Graduate Linguistic Student Association.

Argues for a matching analysis of relative clauses: there are two independently generated copies of the head noun phrase, externally and internally to the relative clause. The internal copy is phonologically deleted under semantic identity (coreference) with external one.

Sauerland, Uli. 1998. The meaning of chains. PhD diss., Massachusetts Institute of Technology.

Suggests in §2.4 that at the level of interpretation two potential structures exist for restrictive relative clauses: a matching structure and a raising structure, which can be distinguished by their interpretation. Available online for purchase.

### Scope and Reconstruction

Bhatt 2002 presents new evidence for raising, based on the scope of adjectival modifiers. However, Bhatt also suggests that not every relative clause needs to be derived by raising; a similar standpoint favoring a non-uniform account is found in Åfarli 1994, Szczegielniak 2004, and Hulsey and Sauerland 2006, among others. It is claimed that variation can be related to the choice for a particular relativizer. See also Heycock 2005 for a critical discussion of the scope data. Another work important to the discussion of reconstruction effects is Salzmann 2006, which favors a version of the matching analysis. Finally, Isac 2003 compares restrictive relatives directly to attributive adjectives and argues for an alternative configuration in terms of coordination at the nominal level below the scope-taking determiner.

Åfarli, Tor. 1994. A promotion analysis of restrictive relative clauses. *Linguistic Review* 11.2: 81–100.

Proposes that relative clauses introduced by a complementizer (*som*, in Norwegian) are derived by raising of the head noun, but that relative clauses displaying a *wh*- or *d*-pronoun are derived more traditionally with an external head noun and A-bar movement of the relative pronoun only.

Bhatt, Rajesh. 2002. The raising analysis of relative clauses: Evidence from adjectival modification. *Natural Language Semantics* 10.1: 43–90.

Provides evidence from adjectival modification of the head noun to illustrate that both the raising and matching analysis of relative clauses (but not the simple head-external analysis) are necessary, depending on the specific reading.

Heycock, Caroline. 2005. On the interaction of adjectival modifiers and relative clauses. *Natural Language Semantics* 13.4: 359–382.

Analyzes similar data to Bhatt 2002 and concludes that the evidence Bhatt advances against the head-external analysis—and for a raising/matching approach—is not as strong as Bhatt 2002 supposes.

Hulsey, Sarah, and Uli Sauerland. 2006. Sorting out relative clauses. *Natural Language Semantics* 14.2: 111–137.

Propose that English restrictive relative clauses are structurally ambiguous between a raising and matching derivation. These structures are disambiguated by applying a (controversial) extraposition diagnostic.

Isac, Daniela. 2003. Restrictive relative clauses vs. restrictive adjectives: An asymmetry within the class of modifiers. In *Asymmetry in grammar*, Vol. 1: *Syntax and semantics*. Edited by Anna Maria Di Sciullo, 27–49. Amsterdam: John Benjamins.

Stresses the intersective semantics of restrictive relative clauses, which block the intensional reading that is available for certain adjectives. Claims that relative clauses, like attributive adjectives, are not predicates in the strict sense, and proposes an alternative to head raising or adjunction in terms of low-level coordination. Reconstruction effects are accounted for by a matching and ellipsis procedure.

Salzmann, Martin. 2006. Resumptive prolepsis: A study in indirect A'-dependencies. PhD diss., Leiden University.

Contains a systematic overview of reconstruction data, and favors a version of the matching analysis. Contains an original discussion of “resumptive prolepsis,” a kind of relative construction involving a long-distance A-bar dependency and a resumptive pronoun in the base position.

Szczegielniak, Adam. 2004. Relativization and ellipsis. PhD diss., Harvard University.

Applies ellipsis and other tests to relativization. Argues in chapter 2 that Polish and Russian relative clauses are derived by raising only if they are not introduced by a *wh*-type relative pronoun; otherwise an adjunction analysis is more feasible.

## **Nonrestrictive/Appositive Relative Clauses**

Nonrestrictive relative clauses, also called appositives, are often discussed in contrast to restrictive ones. There is a substantial literature of interest, which is organized in four subsections here.

### The Main Clause Hypothesis

Appositive relative clauses, unlike restrictives, behave in certain respects as main clauses. This section cites some early scholarship pertaining to that idea. Emonds 1979, building on earlier suggestions by John Ross, explicitly formulated the hypothesis that appositive relative clauses are indeed derived from (conjoined) main clauses. The hypothesis is contradicted in Perzanowski 1980 on the basis of constituency tests, but again defended in Kaisse 1981, which examines a particular phonological effect, McCawley 1982, which develops an alternative framework for parentheticals more generally, and finally Stuurman 1983, a short study of X-bar theory.

Emonds, Joseph. 1979. Appositive relatives have no properties. *Linguistic Inquiry* 10.2: 211–243.

Proposes that appositive relative clauses are main clauses that are conjoined to the clause containing their anchor. Two syntactic operations, Parenthetical Formation and S'-Attachment derive the observed surface word order, where the antecedent and the appositive are linearly adjacent.

Kaisse, Ellen. 1981. Appositive relatives and the cliticization of *who*. *Chicago Linguistic Society (CLS)* 17:108–115.

Contains an original argument for the structural distinction of appositives from restrictives, based on the potential cliticization and phonological reduction of *who* in colloquial English.

McCawley, James D. 1982. Parentheticals and discontinuous constituent structure. *Linguistic Inquiry* 13.1: 91–106.

Provides an alternative account to the paradoxical behavior of appositive relative clauses by treating linear order as independent of syntactic hierarchy. Thus, appositives can be coordinated main clauses, and still be realized adjacent to the antecedent, as if they were embedded.

Perzanowski, Dennis. 1980. Appositive relatives do have properties. In *Proceedings of the Tenth North East Linguistic Society (NELS 10)*, 355–368. Amherst. MA: Graduate Linguistic Student Association.

Argues that appositive relative clauses form a constituent with the antecedent phrase based on movement data, among other things.

Stuurman, Frits. 1983. Appositives and X-bar theory. *Linguistic Inquiry* 14:736–744.

Maintains that the main clause hypothesis for appositive relative clauses provides greater descriptive and explanatory adequacy than a constituent account.

### Orphanage or Structural Integration



Comparing appositive relative clauses to parentheticals and/or nominal appositions, some authors have taken the analysis as nonsubordinated clauses a step further, claiming that they are structural “orphans,” that is, not syntactically integrated with the host clause at all; see Safir 1986, Fabb 1990, or Canac-Marquis and Tremblay 1997. However, the controversy in the parentheticals literature is reflected here, since others have argued explicitly against that (e.g., Borsley 1992 and Arnold 2007). In trying to explain the differences as well as similarities between appositive and restrictive relative constructions, resurrections of a structural integration approach for appositives often involve syntactic complications beyond the surface level, such as movement at LF in Demirdache 1991, or a specialized form of constituent coordination in de Vries 2006 (criticized in Citko 2008).

Arnold, Doug. 2007. Non-restrictive relatives are not orphans. *Journal of Linguistics* 43.2: 272–309.

Argues that appositive relative clauses need to be represented in the syntactic structure.

Borsley, Robert. 1992. More on the difference between English restrictive and nonrestrictive relative clauses. *Journal of Linguistics* 28:139–148.

Response to Fabb 1990, indicating some shortcomings of the orphanage idea.

Canac-Marquis, Réjean, and Mireille Tremblay. 1997. The *wh*-feature and the syntax of restrictive and non-restrictive relatives in French and English. In *Theoretical analyses on Romance languages*. Edited by J. Lema and E. Treviño, 127–141. Amsterdam: John Benjamins.

Explains the similar internal structure of restrictive and appositive relatives by analyzing appositives as free relatives; these are then syntactically isolated from the antecedent in the matrix clause, and licensed by coreference at the level of discourse.

Citko, Barbara. 2008. An argument against assimilating appositive relatives to coordinate structures. *Linguistic Inquiry* 39.4: 633–655.

Collects some arguments against the coordination approach to appositives in de Vries 2006.

Demirdache, Hamida. 1991. Resumptive chains in restrictive relatives, appositives, and dislocation structures. PhD diss., Massachusetts Institute of Technology.

In chapter 3, Demirdache suggests that appositive relative clauses are syntactically generated within the noun phrase that hosts their anchor, but are covertly adjoined to the matrix clause at the level of semantic representation (LF). Available online for purchase.

de Vries, Mark. 2006. The syntax of appositive relativization: On specifying coordination, false free relatives, and promotion. *Linguistic Inquiry* 37.2: 229–270.

Contains an overview of theorizing on appositive relative clauses. Proposes an account in terms of constituent coordination, stressing similarities with nominal appositions. A sequel is de Vries 2012, cited under V2 Relatives.

Fabb, Nigel. 1990. The difference between English restrictive and nonrestrictive relative clauses. *Journal of Linguistics* 26.1: 57–78.

Stresses some differences between restrictive and appositive relative clauses, and suggests that appositives are not syntactically part of the matrix.

Safir, Ken. 1986. Relative clauses in a theory of binding and levels. *Linguistic Inquiry* 17.4: 663–689.

Invokes a level of syntactic representation dubbed *LF'* at which certain constraints on variable binding cease to apply. Appositive relative clauses are syntactic orphans, and are attached to their antecedent only at this level.

#### Appositives in Discourse and their Anaphoric Function

The discourse function of appositive relative clauses is discussed at length in Loock 2010. Sells 1985 and, more recently, Del Gobbo 2007, which are concerned with effects of quantification and modal subordination, argue that appositives are linked to their antecedent via an E-type pronoun; see also Kempson 2003 for a discussion in terms of Dynamic Syntax. Appositives can take non-nominal antecedents, most prominently clauses. It is even possible to present these as separate sentences in discourse, the so-called *relatif de liaison*; see Lassiter 2011 for some recent discussion, and also Bianchi 2000, cited under Raising and the Antisymmetry Framework.

Del Gobbo, Francesca. 2007. On the syntax and semantics of appositive relative clauses. In *Parentheticals*. Edited by Nicole Dehé and Yordanka Kavalova, 173–201. Amsterdam: John Benjamins.

Seeks to explain when and why the antecedent of an appositive relative clause can be quantified over. Argues that the antecedent must precede the relative clause in discourse.

Kempson, Ruth. 2003. Nonrestrictive relatives and growth of logical form. *WCCFL 22: Proceedings of the 22nd West Coast Conference on Formal Linguistics*. Edited by Gina Garding and Mimu Tsujimura, 301–314. Somerville, MA: Cascadia.

Looks at quantification effects concerning appositive relative constructions from the perspective of Dynamic Syntax.

Lassiter, Daniel. 2011. Anaphoric properties of which and the syntax of appositive relatives. *NYU Working Papers in Linguistics* 3:69–94.

Investigates appositive relative clauses with a clausal antecedent, specifically.

Loock, Rudy. 2010. *Appositive relative clauses in English: Discourse functions and competing structures*. Amsterdam: John Benjamins.

Detailed study of possible discourse functions of appositive relative constructions, based on spoken and written English corpus data.

Sells, Peter. 1985. *Restrictive and non-restrictive modification*. CSLI Report 85-28. Stanford, CA: Center for the Study of Language and Information.

First discusses the fact that the relative pronoun in an appositive relative clause gets an E-type reading if the antecedent is quantified over. Proposes a solution in terms of Discourse Representation Theory. See pp. 1–33.

### Different Types of Appositives

Appositive relative clauses are attested in languages with a postnominal relative strategy. This raises questions about languages with prenominal and head-internal relative clauses. Del Gobbo 2003 studies Chinese prenominal relative clauses and concludes that they can only be *apparently* appositive. However, taking a step beyond that, Cinque 2008 suggests that there are two *types* of nonrestrictive relative clauses, with different properties and cross-linguistically different distributions. See also Cardoso 2010, cited under Extraposition, Pied Piping, and Split Antecedents, for relevant discussion.

Cinque, Guglielmo. 2008. Two types of nonrestrictive relatives. In *Empirical issues in syntax and semantics* 7. Edited by O. Bonami and P. Cabredo Hofherr, 99–137. Paris: Université de Paris.

Argues for a principled distinction between “integrated” and “non-integrated” nonrestrictive relative clauses. The integrated ones are syntactically identical to restrictive relative clauses, whereas nonintegrated appositives may be different, with different behavior, and they are treated as syntactically isolated from their anchor. Individual languages may have either type, or both. (There is a connection with Cinque 1982, cited under the Complementizer Domain and the Doubly-Filled COMP Filter.

Del Gobbo, Francesca. 2003. Appositives at the interface. PhD diss., University of California, Irvine.

Investigates whether the raising approach can be extended to prenominal relative clauses in Chinese, and if prenominal relatives can be appositive. Shows that there

are substantial differences between alleged prenominal appositives as in Chinese and postnominal appositives as in English.

## **SPECIFIC CONSTRUCTION TYPES**

This section highlights particular types of relative clauses. There are subsections on Prenominal Relative Clauses, Internally Headed Relative Clauses, Correlatives, Free Relative Clauses, Modal Existential *wh*-Constructions, Clefts and Pseudoclefts, V2 Relatives, and Pseudo-, Reduced, and Other Kinds of Relatives.

### **Prenominal Relative Clauses**

Typological information on prenominal relative clauses is collected in Wu 2011a and Wu 2011b; see also the more general references in the section Cross-Linguistic Typology. Furthermore, there is interesting theoretical work specifically on prenominal relatives. Kayne 1994, cited under Raising and the Antisymmetry Framework, suggests raising plus remnant IP movement to the left of the head NP. Wu 2011a extends this approach. Despite the fact that prenominal relatives are often nominalized, do not use relative pronouns, and seem to be more adjective-like than postnominal ones—see Larson and Takahashi 2007, among others—Wu stresses the cross-linguistic similarities between prenominal and postnominal relatives, and investigates potential derivations of all detailed word order patterns attested in prenominal relative constructions. Aoun and Li 2003, however, adopts a more apparent left-adjunction structure, discussing Chinese data in particular. Murasugi 2000, concerned with Japanese, does propose leftward IP movement, but without head raising or any modifier-internal movement, thus casting doubt on the idea that such modifiers are true relative constructions. Del Gobbo 2007 continues the argument by comparing Chinese to Japanese. Cagri 2005, studying Turkish data, investigates inherent constraints on prenominal relativization due to movement restrictions. As for potential nonrestrictive readings in prenominal relatives, see also the section on Different Types of Appositives.

Aoun, Joseph, and Yen-hui Audrey Li. 2003. *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, MA: MIT Press.

Discussion of reconstruction data. Claims that prenominal relativization concerns NP rather than a full argument.

Cagri, Ilhan. 2005. Minimality and Turkish relative clauses. PhD diss., University of Maryland.

Discusses constraints on Turkish prenominal relative clause formation from the perspective of generative (Minimalist) syntax.

Del Gobbo, Francesca. 2007. A comparison between Japanese and Chinese relative clauses. *University of Venice Working Papers in Linguistics* 17:177–197.

Brief but illuminating comparison between Japanese, Chinese, and English relative clauses. Relating to ideas in Fukui and Takano 2000 (cited under Raising and the Antisymmetry Framework), Del Gobbo argues that a parameter involving N-to-D movement can account for certain cross-linguistic differences.

Larson, Richard, and Naoko Takahashi. 2007. Order and interpretation in prenominal relative clauses. In *Proceedings of the 2nd Workshop on Altaic Formal Linguistics (WAFL 2)*. Edited by M. Kelepir and B. Öztürk, 101–120. MIT Working Papers in Linguistics 54. Cambridge, MA: Massachusetts Institute of Technology.

Shows that in prenominal relative constructions, similarly to prenominal adjectives, individual-level properties are ordered closer to the noun than stage-level properties, based on data from Japanese, Korean, Chinese, and Turkish.

Murasugi, Keiko S. 2000. An Antisymmetry analysis of Japanese relative clauses. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 231–263. Amsterdam: John Benjamins.

Adopts Antisymmetry but not head raising. Also argues that there are no “internally headed relative clauses” in Japanese, contrary to what others have claimed.

Wu, Tong. 2011a. *La relativisation prénominale: Typologie et dérivations*. Sarrebruck, Germany: Editions Universitaires Européennes.

Extensive study of the prenominal relative construction; written in French. Published version of Wu’s PhD dissertation, University Sorbonne Nouvelle, Paris.

Wu, Tong. 2011b. The syntax of prenominal relative clauses: A typological study. *Linguistic Typology* 15.3: 569–623.

Collection of cross-linguistic findings concerning prenominal relative constructions.

## **Internally Headed Relative Clauses**

Internally headed relative clauses, also called head-internal or circumnominal relatives, are nominalized clauses containing the understood head noun. These are to be distinguished from Correlatives, which are also internally headed, strictly speaking, but not nominalized, among other things. There are five subsections: State of the Art, Language Descriptions, The Internal and External Representation of the Head Noun, Word Order Generalizations, and Semantic Effects.

### State of the Art

The state of the art concerning internally headed relative clauses can be found in Hiraiwa 2005, Watanabe 2004, Kim 2004, and Grosu 2010. Hiraiwa 2005 relates an in-depth analysis of relative clauses to a Minimalist discussion of phases. Watanabe 2004 argues that two different types of internally headed relative clauses are related to differences in the determiner system of particular languages. Kim 2004 studies the event structure of the Korean/Japanese-type of internally headed relative clauses. Grosu 2010 focuses on the formal semantics of this type, and argues specifically against a semantic account in terms of an E-type pronoun (see also Semantic Effects). Two other extensive studies are Bonneau 1992 and Culy 1990, which include a discussion of early scholarship on the matter. See also de Vries 2002, cited under General Overviews, for a succinct description. Basilico 1996 and, more recently, Bodomo and Hiraiwa 2010 show that the internal head does not necessarily stay *in situ*, but can be preposed, which leads to a potential confusion with Prenominal Relative Clauses.

Basilico, David. 1996. Head position and internally headed relative clauses. *Language* 72.3: 498–533.

Investigates internal scrambling of the head noun, and issues related to quantification.

Bodomo, Adams, and Ken Hiraiwa. 2010. Relativization in Dàgáàrè and its typological implications: Left-headed but internally-headed. *Lingua* 120.4: 953–983.

Make a case for “left-headed HIRC,” that is, apparent postnominal relative constructions that are really internally headed.

Bonneau, José. 1992. The structure of internally headed relative clauses: Implications for configurationality. PhD diss., McGill University, Montreal.

Detailed analysis of internally headed relative clauses within the Government & Binding framework. Defends an external *pro* head, and investigates island effects, operator movement, and unselective binding.

Culy, Christopher. 1990. The syntax and semantics of internally headed relative clauses. PhD diss., Stanford University.

Overview of internally headed relative clauses. Shows, among other things, that an external determiner (including demonstratives), if present, is always linearly to the right of the construction. The analysis is presented in terms of Government and Binding, Lexical Functional Grammar, as well as Head-Driven Phrase Structure Grammar.

Grosu, Alexander. 2010. The status of the internally-headed relatives of Japanese/Korean within the typology of “definite” relatives. *Journal of East Asian Linguistics* 19.3: 231–274.

Discusses the semantics of Japanese-type internally headed relative clauses. Principled attack on the idea that the clause would represent an E-type pronoun (see also Semantic Effects).

Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. PhD diss., Massachusetts Institute of Technology.

Contains an extensive chapter 5 on internally headed relative clauses. Discusses parallels between the clausal and the nominal system, and proposes a new syntactic typology of relative clauses. Also relates to the Minimalist discussion on phases.

Kim, Min-Joo. 2004. Event structure and the internally-headed relative clause construction in Korean and Japanese. PhD diss., University of Massachusetts, Amherst.

Contributes to the discussion on the semantics as well as the syntax of internally headed relative constructions.

Watanabe, Akira. 2004. Parametrization of quantificational determiners and head-internal relatives. *Language and Linguistics* 5.1: 59–97.

Argues that there are two types of determiners, and shows that this results in two types of internally headed relative constructions, as represented by Japanese and Lakota, which display somewhat different properties. Also shows a correlation with *wh-in-situ*.

### Language Descriptions

Among the earliest descriptions of the phenomenon are Wilson 1963 on Dagbani, Bird 1968 on Bambara, Gorbet 1976 on Diegueño, and Kuroda 1992 on Japanese. Some further works of interest, among many others, are Weber 1983 on Huallaga Quechua, Lefebvre and Muysken 1988 on various Quechua languages, and Fontana 1990 on American Sign Language. By now, there are numerous studies on particular languages available, which cannot be listed here—but see especially Hiraiwa 2005 (pp. 238–239), cited under Internally Headed Relative Clauses: State of the Art, for a useful bibliographic overview in this respect.

Bird, Charles. 1968. Relative clauses in Bambara. *Journal of West African Languages* 5.1: 35–47.

Notes that Bird's claim about internally headed relatives in Bambara is contested in Culy 1990, cited under Internally Headed Relative Clauses: State of the Art.

Fontana, Joseph. 1990. Is ASL like Diegueño or Diegueño like ASL? A Study of internally headed relative clauses in ASL. In *Sign language research: Theoretical issues*. Edited by Ceil Lucas, 238–258. Washington, DC: Gallaudet Univ. Press.

Discusses the possibility of internally headed relative clauses in American Sign Language.

Gorbet, Larry. 1976. *A grammar of Diegueño nominals*. New York: Garland.

Published PhD dissertation from 1974 (University of California, San Diego). Describes internally headed relative clauses in Diegueño.

Kuroda, S.-Y. 1992. Pivot-independent relativization in Japanese. In *Japanese syntax and semantics*. By S.-Y. Kuroda, 114–174. Dordrecht, The Netherlands: Kluwer.

One of the first discussions of internally headed relative clauses in Japanese. The 1992 book contains reprinted articles from the 1970s.

Lefebvre, Claire, and Pieter Muysken. 1988. *Mixed categories: Nominalization in Quechua*. Dordrecht, The Netherlands: Kluwer.

Includes descriptions of internally headed relative clauses in Quechua languages.

Weber, David. 1983. *Relativization and nominalized clauses in Huallaga (Huanuco) Quechua*. Berkeley: Univ. of California Press.

Extensive discussion of head-internal relativization in Huallaga Quechua.

Wilson, W.A.A. 1963. Relative constructions in Dagbani. *Journal of African Languages* 2.2: 139–144.

One of the first descriptions of internally headed relative constructions. Derives internally headed relatives from externally headed relatives.

### The Internal and External Representation of the Head Noun

Practically all logical possibilities concerning the internal and external representation of the head noun are represented in the literature. Although much progress has been made since the earliest studies—see Internally Headed Relative Clauses: State of the Art, it seems appropriate to cite some of the historical developments. Interestingly, many approaches seek to generalize over the head-external and the head-internal relative construction. In Wilson 1963 (cited under Language Descriptions), the head is moved from the external to the internal position. In Hale and Platero 1974, as in Gorbet 1976 (cited under Language Descriptions), there is no doubling, just coindexation of the nominalized clause as a whole with the internal NP. In Peterson 1974 and Hale and Platero 1974, there are two coindexed NPs, one embedded in the adjoined relative clause; this internal NP is phonologically deleted. In Broadwell 1985; Itô 1986; and Barss, et al. 1991; and many others since, there is LF-movement of the internal NP to an external or peripheral position. In Culy 1990, cited under Internally Headed Relative Clauses: State



of the Art, what moves at LF is just an abstract *wh*-operator; Bonneau 1992 (cited under Internally Headed Relative Clauses: State of the Art), defends an external *pro* head. An interesting variant is suggested in Kayne 1994 (cited under Raising and the Antisymmetry Framework): starting out from a “regular” [D CP] base order, the remnant relative IP can be moved across D after raising of the head NP to the complementizer domain. In this configuration, neither copy of the NP c-commands the other, and it is a parametrical matter of choice which one to pronounce; this leads to either a prenominal or a head-internal relative without invoking LF movement.

Barss, Andrew, Ken Hale, Ellavina Perkins, and Margaret Speas. 1991. Logical form and barriers in Navajo. In *Logical structure and linguistic structure: Cross-linguistic perspectives*. Edited by C.-T. J. Huang and R. May, 25–47. Dordrecht, The Netherlands: Kluwer.

Investigates if LF movement in internally headed relative constructions in Navajo is constrained by barriers.

Broadwell, George A. 1985. Internally headed clauses in Choctaw. *Kansas Working Papers in Linguistics* 10:16–24.

Argues against an external empty NP position, and for movement of the internal head at LF, creating a nominalized structure only at that level.

Hale, Ken, and Paul Platero. 1974. Aspects of Navajo anaphora: Relativization and pronominalization. *Navajo Language Review* 1:9–28.

Describes internally headed relatives as nominalized clauses containing the head noun. There is no movement, but coindexation between the internal NP and the nominalized clause as a whole.

Itô, Junko. 1986. Head movement at LF and PF: The syntax of head-internal relatives in Japanese. *University of Massachusetts Occasional Papers in Linguistics* 11:109–138.

Proposes LF movement of the internal head noun to an external position. Also contains a discussion of the particle *no* and its different distribution in prenominal and head-internal relative constructions.

Peterson, Thomas. 1974. On definite restrictive relatives in Mooré. *Journal of West African Languages* 9.2: 71–78.

One of the first to pay attention to the position of potential external determiners. Suggests an internal and external representation of the head noun, with deletion of the external one after coindexation.

### Word Order Generalizations

Cole 1987 notes correlations between internally headed relativization, OV word order, and the availability of null anaphors. These are disproven in Culy 1990 and Hiraiwa 2005 (both cited under Internally Headed Relative Clauses: State of the Art), among others. Hiraiwa also contradicts the suggestion in Watanabe 2002 that *wh-in-situ* is a prerequisite for internally headed relativization. Generally adopted now is the necessary availability of a nominalization strategy.

Cole, Peter. 1987. The structure of internally headed relative clauses. *Natural Language & Linguistic Theory* 5.2: 277–302.

Discusses which languages internally headed relative clauses are expected to occur in. Proposes an external null pronoun, which is “lexicalized” only after LF-movement of the internal head to this position.

Watanabe, Akira. 2002. Loss of overt *wh*-movement in Old Japanese. In *Syntactic effects of morphological change*. Edited by David W. Lightfoot, 179–195. Oxford: Oxford Univ. Press.

Relates the availability of *wh-in-situ* to the existence of internally headed relative clauses, based on historical changes in the Japanese system.

### Semantic Effects

A semantic indefiniteness effect for the internal head noun is first discussed in Williamson 1987, and later confirmed by others; see, however, Grosu 2002 (cited under General Overviews) and Watanabe 2004 (cited under Internally Headed Relative Clauses: State of the Art) for further qualifications. As Grosu 2002 explains, there is an often overlooked split between languages in which internally headed relatives are semantically maximalizing (including Japanese) and those in which this is not the case (including Lakhota), that is, where they are regular restrictives. There is an extensive discussion in the literature specifically on the semantics of Japanese and Korean internally headed relative constructions; this concerns the licensing of the relative clause, and the possibility of an “E-type link” between the nominalized clause and the internal head or its thematic role. Kim 2007, building on earlier ideas in Hoshi 1995 and Shimoyama 1999, argues for a particular approach along this line, which in turn is contradicted in Grosu 2010 (cited under Internally Headed Relative Clauses: State of the Art).

Hoshi, Koji. 1995. Structural and interpretive aspects of head-internal and head-external relative clauses. PhD diss., University of Rochester.

Argues that Japanese has genuine internally headed relative clauses, contradicting a potential reanalysis as adverbial clauses, as expressed in Murasugi 2000, for instance (cited under Prenominal Relative Clauses). Also investigates island effects. Claims that Japanese *no* instantiates an E-type pronoun that needs to be licensed by the internal head.

Kim, Min-Joo. 2007. Formal linking in internally headed relatives. *Natural Language Semantics* 15.4: 279–315.

Elaborate discussion of the nature of the “formal linking problem” in interpreting internally headed relative constructions in Korean and Japanese. Ties it to event semantics.

Shimoyama, Junko. 1999. Internally headed relative clauses in Japanese and E-type anaphora. *Journal of East Asian Linguistics* 8.2: 147–182.

Provides an update of the linking problem discussed in Hoshi 1995, and argues for the involvement of thematic roles.

Williamson, Janis S. 1987. An indefiniteness restriction for relative clauses in Lakhota. In *The representation of (in)definiteness*. Edited by Erik J. Reuland and Alice G. B. ter Meulen, 168–190. Cambridge, MA: MIT Press.

Notes that the internal head NP is always indefinite, though an external determiner can make the construction as a whole definite. Also assumes LF-raising of the internal head NP to a position adjoined to the relative clause.

## **Correlatives**

A correlative is a bare (non-nominalized), preposed relative clause with an internal (normally left-peripheral) position for relative pronouns and an internal head NP. The argument semantically projected by it is resumed in the matrix, usually by a personal or demonstrative pronoun, possibly accompanied by a lexical noun. There are two sections here: State of the Art and Early Scholarship.

### State of the Art

Recent studies are collected in Lipták 2009. This book also contains an extensive introduction to the topic, and a cross-linguistic bibliography. The properties of the correlative construction are clearly outlined in Srivastav 1991. The definite (or universal) semantics is similar to the situation in free relatives, as discussed in Dayal 1996 and Grosu and Landman 1998 (cited under Maximalization). Mahajan 2000, however, attributes the indefiniteness restriction to a parallel constraint on scrambling. Bhatt 2003, like Mahajan 2000, proposes movement of the correlative, but in a very different way. Izvorski 1996, dealing with Germanic and Bulgarian data, investigates the meaning contribution of *wh*-movement of the correlative *pro*form. Like Srivastav/Dayal for Hindi, Ivorski assumes base-generation of the correlative clause in the left periphery. Cinque 2009 highlights a few relevant issues that need more attention.

Bhatt, Rajesh. 2003. Locality in correlatives. *Natural Language & Linguistic Theory* 21:485–541.

Takes into account locality effects observed in correlative constructions. Proposes that the correlative clause is base-generated adjacent to the correlate (pronoun) in the matrix and moved to the left.

Cinque, Guglielmo. 2009. Five notes on correlatives. *University of Venice Working Papers in Linguistics* 19:35–60.

Argues, among other things, that “multiple correlatives” do not seem to be correlatives at all, and also that the correlative strategy is never the only strategy of relativization in a language, which makes an analysis that generalizes over relative clause types attractive, contrary to what several other authors believe.

Dayal, Veneeta. 1996. *Locality in wh-quantification*. Dordrecht, The Netherlands: Kluwer.

Discusses quantification and locality. Contains two relevant chapters on relativization in Hindi.

Izvorski, Roumyana. 1996. The syntax and semantics of correlative proforms. In *Proceedings of the North East Linguistic Society (NELS) 26: Harvard University and MIT*. Edited by Kiyomi Kusumoto, 133–147. Amherst, MA: Graduate Linguistic Student Association.

Discusses parallels between correlative constructions, *if . . . then* constructions, and (contrastive) left-dislocation in Germanic, Bulgarian, and Hindi. Claims that *wh*-movement of the correlate (pronoun) contributes to the special meaning of the construction.

Lipták, Anikó, ed. 2009. *Correlatives cross-linguistically*. Amsterdam: John Benjamins.

Collection of recent scholarship on correlative constructions, with a useful introduction by Anikó Lipták. Contains work by Barbara Citko, Georges Rebuschi, Boban Arsenejević, Chiara Branchini and Caterina Donati, Seth Cable, Alice Davison, Marcel den Dikken, Tommi Tsz-Cheung Leung, Rajesh Bhatt, and Anikó Lipták.

Mahajan, Anoop. 2000. Relative asymmetries and Hindi correlatives. In *The syntax of relative clauses*. Edited by Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, 201–229. Amsterdam: John Benjamins.

Underlines the syntactic and semantic asymmetries between correlatives and adnominal and right-extraposed relatives in Hindi, stressed also by Srivastav 1991. Describes correlatives from a head-raising perspective, adopting scrambling of the complex DP and partial deletion rather than left-peripheral base-generation of the relative clause. This enables Mahajan to generalize over different relative clause types, while still accounting for the observed asymmetries.

Srivastav, Veneeta. 1991. The syntax and semantics of correlatives. *Natural Language & Linguistic Theory* 9.4: 637–686.

Important overview of the properties of the correlative construction, based on data from Hindi. Establishes the correlative as basically distinct from other types of relative clauses. Maintains that a correlative CP is base-generated as left-adjoined to IP and constitutes a quantifier that binds the pronoun in the matrix.

### Early Scholarship

Basically, there are two types of approaches. The first maintains that correlatives are derived from adnominal relative clauses by movement of the relative clause to the left of the matrix, stranding the external head noun, which is then lexicalized as a pronoun; see Verma 1966, which compares Hindi to English; Kachru 1978 on Hindi-Urdu; Wali 1982 on Marathi; and Subbarao 1984 on Hindi. A motivation for this is that it facilitates a generalization not only with adnominal but also with right-extraposed relative clauses. However, later work has shown that these are fundamentally different; see especially Srivastav 1991 cited under Correlatives: State of the Art. The second approach treats correlatives as a syntactically different construction type, with base-generation of the relative clause in the left periphery of the matrix; see Donaldson 1971 and Dasgupta 1980, among others. The problem of how to match the syntactic structure to the semantics of the construction is discussed in Dasgupta 1980, and in Bach and Cooper 1978 (cited under Early Discussions and Foundations). However, the special character of the semantics has only been recognized and developed in detail more recently, as described in Correlatives: State of the Art.

Dasgupta, Probal. 1980. Questions and relative and complement clauses in a Bangla grammar. PhD diss., New York University.

Contains an elaborate study of correlatives in Bangla. Describes the semantics of the construction in terms of a binding relationship.

Donaldson, Susan K. 1971. Movement in restrictive relative clauses in Hindi. *Studies in the Linguistic Sciences* 1.2: 1–74.

Investigates movement of relative pronouns and positioning of relative clauses. Claims that Hindi allows for a phrase structure not attested in English, whereby an IP subdivides into two IPs—one the main clause, and one a relative clause—in either order.

Kachru, Yamuna. 1978. On relative clause formation in Hindi-Urdu. *Linguistics* 16.207: 5–26.

Discusses rules of pronominalization and other issues concerning relative clauses in Hindi-Urdu.

Subbarao, Karumuri. 1984. *Complementation in Hindi syntax*. Delhi: Academic Publications.

Includes a discussion of correlatives in Hindi. Assumes that the relative clause contains an internal head and forms a constituent with a similar head noun in the matrix. Movement and pronominalization rules account for the right word order and lexicalization.

Verma, Manindra. 1966. *The noun phrase in Hindi and English*. New Delhi: Motilal.

Contains a discussion of correlatives. Treats the underlying structure of Hindi correlatives as similar to postnominal relative clauses in English.

Wali, Kashi. 1982. Marathi correlatives: A conspectus. In *Special issue: Studies in South Asian languages and linguistics*. Edited by P. Mistry. *South Asian Review* 6.3: 78–88.

Adopts a view of correlative constructions in Marathi that is similar to that proposed for Hindi in Verma 1966 and others.

### **Free Relative Clauses**

The discussion here is divided into three subsections: Regular Free Relatives, Semi-Free Relatives, and Transparent Free Relatives. For so-called irrealis free relatives, see Modal Existential *wh*-Constructions. An introductory overview can be found in van Riemsdijk 2006. For important work on the semantics of free relatives, see also Jacobson 1995, cited under Maximalization.

van Riemsdijk, Henk. 2006. Free relatives. In *The Blackwell companion to syntax*. Vol. 2. Edited by M. Everaert and H. van Riemsdijk, 338–382. Oxford: Blackwell.

Overview of discussions concerning the syntax of free relative constructions (up to approx. 2000).

### **Regular Free Relatives**

Free, or “headless,” relative clauses display a relative pronoun but no overt head noun. They usually behave as arguments (setting adverbial relativization aside) and hence are nominalized according to most authors. Much research is concerned with the position of the relative pronoun and the status of the empty head. Bresnan and Grimshaw 1978 analyzes the relative pronoun as occupying the position reserved for the head noun in headed relatives (the “Head account”), while Groos and van Riemsdijk 1981 argues that the relative pronoun occupies the same position in the complementizer domain as in regular headed relative clauses (the “Comp account”). Suñer 1984 argues that the missing head of free relatives is the null form *pro*, while Grosu 1996 maintains that free relatives, including “missing P” free relatives, contain unpronounced heads. Citko 2002 revives the Head account using novel data involving anaphoric binding. By contrast, Gračanin-

Yuksek 2008 argues for a version of the Comp account. Going against general consensus, Ott 2011 takes a different approach, arguing that free relatives are best understood as bare clauses, like embedded interrogatives, and contain no head element whatsoever. Thus, for Ott, the fact that free relatives behave like noun phrases (or other categories) for the purposes of selection must be accounted for by other means, namely certain properties of the syntactic derivation. Caponigro 2003, an extensive contribution to the discussion, seeks the explanation in the semantics.

Bresnan, Joan, and Jane Grimshaw. 1978. The syntax of free relatives in English. *Linguistic Inquiry* 9.3: 331–391.

Proposes that the relative pronoun in free relatives occupies the position reserved for the head noun in headed relatives. Evidence comes from selection and case matching data.

Caponigro, Ivano. 2003. Free not to ask: On the semantics of free relatives and wh-words cross-linguistically. PhD diss., University of California, Los Angeles.

Discusses the semantics of free relative clauses of different types, and provides a cross-linguistic overview. With regard to DP-like free relatives, Caponigro proposes that they are headed by 0061 maximality operator which type-shifts the clause from logical type  $\langle e, t \rangle$  to  $\langle e \rangle$ .

Citko, Barbara. 2002. (Anti)reconstruction effects in free relatives: A new argument against the Comp account. *Linguistic Inquiry* 33.3: 507–511.

Revives the Head account of free relatives by examining the distribution of anaphoric binding relations within free relative clauses.

Gračanin-Yuksek, Martina. 2008. Free relatives in Croatian: Arguments for the Comp account. *Linguistic Inquiry* 39:275–294.

Favors the Comp account over the Head account on the basis of reconstruction effects and clitic placement in Croatian free relatives.

Groos, Anneke, and Henk van Riemsdijk. 1981. Matching effects in free relatives: A parameter of core grammar. In *Theory of markedness in generative grammar: Proceedings of the 1979 GLOW conference*. Edited by Adriana Belletti, Luciana Brandi, and Luigi Rizzi, 171–216. Pisa, Italy: Scuola Normale Superiore.

Present arguments for the hypothesis that the relative pronoun in free relatives occupies the complementizer domain, based on matching and extraposition data, among other things. Conference held at the Scuola normale superiore, Pisa, 20–22 April 1979.

Grosu, Alexander. 1996. The proper analysis of “missing-P” free relative constructions. *Linguistic Inquiry* 27.2: 257–293.

Argues that “missing-P” free relatives do not constitute a problem for the Comp analysis of free relatives.

Ott, Dennis. 2011. A note on free relative clauses in the theory of phases. *Linguistic Inquiry* 42.1: 183–192.

Utilizing phase-theory and the distinction between interpretable and uninterpretable features, Ott argues that free relatives can be analyzed as bare CPs, despite the fact that they behave like arguments.

Suñer, Margarita. 1984. Free relatives and the matching parameter. *Linguistic Review* 3.4: 363–387.

Argues that the relative pronoun of free relatives occupies the complementizer position, and that the head noun is the null pronominal form *pro*. The case matching observed on the relative pronoun is thus mediated by *pro*.

### Semi-Free Relatives

Semi-free relatives, or light-headed relatives, display in place of the head noun a “light” head—such as a demonstrative, determiner, article, or existential or negative quantifier. As for the semantics and the external syntax, semi-free relatives equal headed relatives (for instance, there are no matching effects); they are unlike true free relatives. Internally, however, there may be differences in the complementizer domain, as argued by Citko 2004. Citko proposes that the relative clause is the sister of the externally generated light head, which is a “bare” determiner phrase. Rebuschi 2003 reaches similar conclusions for Basque, in contrast to an earlier proposal in Rebuschi 2001, which involves operator-movement out of the relative clause to an external determiner position.

Citko, Barbara. 2004. On headed, headless, and light-headed relatives. *Natural Language & Linguistic Theory* 22.1: 95–126.

Highlights dissimilarities between headed, free, and semifree relatives in Polish, concluding that headed relatives display a more complex complementizer domain than their semi-free relative counterparts.

Rebuschi, Georges. 2001. Semi-free relative clauses and the DP hypothesis: Basque evidence and theoretical consequences. *Proceedings of the Israel Association for Theoretical Linguistics (IATL)* 8:55–64.

An interesting account of the properties of semifree relatives, based on data from Basque.



Rebuschi, Georges. 2003. Basque semi-free relative clauses and the structure of DPs. *Lapurdum* 8:457–477.

Proposes that the head element of semifree relatives occupies a determiner-like shell.

### Transparent Free Relatives

This section concentrates on what are known as transparent free relatives (TFRs), first described in Nakau 1971. The previous sentence provides an example of this very construction: a transparent free relative contains a predicate that seems to be part of an intrusive free relative as well as the matrix. Wilder 1999 and van Riemsdijk 2000 propound analyses of TFRs that treat them, from a syntactic perspective, as radically different from regular free relatives, while Grosu 2003 attempts to find a unified account. See also Kluck 2011 for a recent discussion.

Grosu, Alexander. 2003. A unified theory of “standard” and “transparent” free relatives. *Natural Language & Linguistic Theory* 21.2: 247–331.

Treats transparent free relatives as similar to regular free relative clauses. An equative relationship holding between the constituents internal to the relative clause gives rise to their “transparent” interpretation.

Kluck, Marlies. 2011. Sentence amalgamation. PhD diss., University of Groningen.

Contains some pertinent discussion of transparent free relatives within the broader context of amalgamated sentences. Shows similarities but also differences in behavior compared to other types of amalgams.

Nakau, Minoru. 1971. The grammar of the pseudo-free relative pronoun *what*. *English Linguistics* 6:2–47.

First mention of the phenomenon, although in different terms.

van Riemsdijk, Henk. 2000. Free relatives inside out: Transparent free relatives as grafts. In *PASE Papers in Language Studies: Proceedings of the 8th Annual Conference of the Polish Association for the Study of English*. Edited by B. Rozwadowska, 223–233. Wrocław, Poland: Univ. of Wrocław.

Proposes that transparent free relative constructions are derived by the amalgamation of two separate derivations, where the shared predicate acts as the point of interaction.

Wilder, Chris. 1999. Transparent free relatives. In *Proceedings of the Seventeenth West Coast Conference on Formal Linguistics (WCCFL17)*. Edited by Kimary N. Shahin, Susan Blake, and Eun-Sook Kim, 685–699. Stanford, CA: CSLI Publications.

First systematic overview of the properties of transparent free relatives. Proposes that they are parenthetically inserted left-adjacent to the apparently shared constituent, in combination with backward deletion into the relative clause. Conference held at the University of British Columbia, 1988.

### **Modal Existential *wh*-Constructions**

Modal existential *wh*-constructions (or “irrealis free relatives”) are constructions in which a non-indicative constituent headed by a *wh*-phrase is embedded under a possessive or existential predicate. Such constructions necessarily convey nondeontic modality. They are found in Greek, Hebrew, Yiddish, and the Romance and Slavic languages. Due to the fact that they are headed by a *wh*-phrase and behave like noun phrases, they have been analyzed as a type of free relative in Grosu 1994, among others. More recent scholarship contends this idea. Izvorksi 1998 argues that they are syntactically like embedded questions. Šimík 2011, on the other hand, provides evidence that modal existential *wh*-constructions are syntactically “smaller” than clauses, and share properties with purpose clauses. Cross-linguistically, there appear to be two different types. If Šimík is correct, then modal existential *wh*-constructions are not relative clauses at all.

Grosu, Alexander. 1994. *Three studies in locality and case*. London: Routledge.

Analyzes modal existential *wh*-constructions as bare CPs that are semantically related to amount relatives.

Izvorksi, Roumyana. 1998. Non-indicative *wh*-complements of possessive and existential predicates. In *Proceedings of the North East Linguistic Society (NELS) 28: University of Toronto*. Edited by Pius N. Tamanji and Kiyomi Kusumoto, 159–173. Amherst, MA: Graduate Linguistic Student Association.

Treats modal existential *wh*-constructions as embedded questions that are interpreted as properties (<*e*,*t*>-type expressions).

Šimík, Radek. 2011. Modal existential *wh*-constructions. PhD diss., University of Groningen.

A comprehensive discussion of the syntax, semantics, and typology of modal existential *wh*-constructions. Treats them as syntactic TPs or vPs, claiming that they function as event-extension arguments of the existence predicate that selects for them.

### **Clefts and Pseudoclefts**

Di Tullio 2006 provides a concise overview of cleft constructions, discussing the form and function of the relative clause in *it*-clefts, pseudoclefts, and truncated clefts. A comprehensive study of the relationship between specificational copular clauses and

pseudoclefts is found in den Dikken 2007, based on den Dikken, et al. 2000, and earlier scholarship. General discussion and cross-linguistic data from Germanic and Romance languages is in Smits 1988 (cited under General Overviews). The idea that the predicative expression of an *it*-cleft is a restrictive relative clause can be traced as least as far back as Schachter 1973, cited under The Raising Analysis. Opinions differ regarding whether *it* or the pivot is the head noun of the relative. Percus 1997 provides a recent defense of the former analysis, while Reeve 2012 provides a defense of the latter. Frascarelli 2010 argues that neither of the above-mentioned analyses is sufficient, and offers an alternative account that treats the cleft clause as a free relative clause headed by a generic *pro*-form. Opinions about how the relative clause in pseudoclefts is formed and interpreted also differ. Bošković 1997 suggests that the relative clause is formed by covert syntactic movement, while Cecchetto 1999 likens the relative and pivot of pseudoclefts to equative copular clauses.

Bošković, Željko. 1997. Pseudoclefts. *Studia Linguistica* 51.3: 235–277.

Proposes that the pivot of pseudoclefts is connected to the gap position within the relative clause by covert syntactic movement. Under this approach, the *wh*-pronoun of the relative clause is understood as a cataphoric pronoun of the covertly moved pivot.

Cecchetto, Carlo. 1999. Connectivity and anti-connectivity in pseudoclefts. In *Proceedings of the North East Linguistic Society (NELS) 30: Rutgers University*. Edited by Masako Hirotsu, 137–151. Amherst, MA: Graduate Linguistic Student Association.

Argues that specificational pseudoclefts are not derived by syntactic movement, but are closer to equatives. Proposes that those connectivity effects that are suggestive of a syntactic link between the relative clause and the pivot can be explained by appeal to extraneous semantic influences.

den Dikken, Marcel. 2007. Specificational copular sentences and pseudoclefts. In *The Blackwell companion to syntax*. Vol. 3. Edited by M. Everaert and H. van Riemsdijk, 292–409. Malden, MA: Blackwell.

Provides a comprehensive discussion of pseudoclefts, their properties, and past analyses thereof.

den Dikken, Marcel, André Meinunger, and Chris Wilder. 2000. Pseudoclefts and ellipsis. *Studia Linguistica* 54.1: 41–89.

Supports the “question-in-disguise” analysis of specificational pseudoclefts in which the relative clause precedes the copula, arguing that the apparent relative clause is a hidden question that is answered by the predicate of the copula (which itself is a reduced clause).

Di Tullio, Ángela. 2006. Clefting in spoken discourse. In *Encyclopedia of language and linguistics*. 2d ed. Vol. 2. Edited by K. Brown, 483–491. Amsterdam: Elsevier.

Provides a useful introduction to cleft constructions, and discusses their role in spoken discourse.

Frascarelli, Mara. 2010. Narrow focus, clefting and predicate inversion. *Lingua* 120.9: 2121–2147.

Argues that the cleft clause of an *it*-cleft is a free relative subject of a small clause that takes the pivot as its predicate. To derive the surface pivot-cleft clause order, the pivot moves to a functional projection dominating the cleft clause.

Percus, Orin. 1997. Prying open the cleft. In *Proceedings of the North East Linguistic Society (NELS) 27: McGill University*. Edited by Kiyomi Kusumoto, 337–351. Amherst, MA: Graduate Linguistic Student Association.

Argues that the cleft clause of an *it*-cleft is interpreted as modifying the subject, *it*. To account for this syntactically, Percus proposes that the cleft clause is generated as a modifier of *it* but subsequently extraposes to the right-periphery of the entire cleft construction.

Reeve, Matthew. 2012. *Clefts and their relatives*. Amsterdam: John Benjamins.

Supports the analysis that the cleft clause of an *it*-cleft takes the clefted XP, rather than *it*, as its head noun. Reeve also discusses whether the predicate of *it*-clefts is derived by “raising” or “matching,” and concludes that both types of derivation are available under certain conditions.

## **V2 Relatives**

So-called verb second relatives, or quasi-relatives, are first described by Gärtner 2001 on the basis of German data, elaborated upon in Endriss and Gärtner 2005. The most important finding about them is that they are not true relative clauses, but coordinated clauses containing a preposed demonstrative—in some cases homophonous with a corresponding relative *d*-pronoun—which relates to an antecedent in the apparent matrix. Dutch data, which are very similar but not completely the same, are discussed in Zwart 2005 and de Vries 2012. All authors agree about the basic properties and syntactic configuration of the construction, but there are differences in the description of the semantics. There may be a link with certain pseudo-relatives, discussed in Pseudo-, Reduced, and Other Kinds of Relatives.

de Vries, Mark. 2012. Parenthetical main clauses—or not? On appositives and quasi-relatives. In *Main clause phenomena: New horizons*. Edited by Lobke Aelbrecht, Liliane Haegeman, and Rachel Nye, 177–201. Amsterdam: John Benjamins.

An updated analysis of both nonrestrictive and quasi-relatives within the larger context of a discussion of root phenomena in (apparently) embedded clauses.

Endriss, Cornelia, and Hans-Martin Gärtner. 2005. Relativische Verb-Zweit Sätze und Definitheit. In *Deutsche syntax: Empirie und theorie; Symposium in Göteborg 13–15 Mai 2004*. Edited by Franz-Joseph d’Avis, 195–220. Gothenburg, Sweden: Göteborger Germanistische Forschungen.

Sequel to Gärtner 2001, in which the authors attempt to explain the indefiniteness constraint on the antecedent in the first clause; written in German.

Gärtner, Hans-Martin. 2001. Are there V2 relative clauses in German? *Journal of Comparative Germanic Linguistics* 3.2: 97–141.

First description of V2 relatives in German as paratactic constructions.

Zwart, Jan-Wouter. 2005. Iets over zgn: V2-relatieven in het Nederlands. *Nederlandse taalkunde* 10:59–81.

An extensive discussion of the properties of Dutch V2 relatives; written in Dutch.

### **Pseudo-, Reduced, and Other Kinds of Relatives**

There are relative strategies without any relative element; see Lambrecht 1988 and Doherty 2000 for a discussion based on English data. Some other kinds of reduced and infinite relatives are discussed in Sag 1997. See also the brief overview by Miller 2006. Relatives with a “leftward island” are discovered in Truswell 2011. Particularly in Romance languages, “pseudo-relatives” have attracted some attention. These look like subject relatives in the complement of perception verbs, but have been shown to differ from actual relative clauses; see Radford 1975 for an early discussion, and more recently Rafel 2000. Note that McCawley 1981 used the same term for (apparent) relative clauses in presentational contexts in English, which may be related, as well as V2 Relatives.

Doherty, Cathal. 2000. *Clauses without “that”: The case for bare sentential complementation in English*. London: Routledge.

Published version of Doherty’s PhD dissertation from 1993, University of California, Santa Cruz. Discusses embedded clauses without a complementizer, and subject contact relatives. Argues that these are IPs rather than full clauses.

Lambrecht, Knud. 1988. There was a farmer had a dog: Syntactic amalgams revisited. *Proceedings of the Fourteenth Annual Meeting of the Berkeley Linguistics Society, 13–15 February 1988*. Edited by Shelley Axmaker, 319–339. Berkeley, CA: Berkeley Linguistics Society.

Discusses subject contact relatives and relative clauses in presentational contexts.

McCawley, James. 1981. The syntax and semantics of English relative clauses. *Lingua* 53.2–3: 99–149.

Early discussion of the syntax and semantics of pseudo-relative constructions in presentational contexts, among other things.

Miller, Jim. 2006. Relative clauses in spoken discourse. In *Encyclopedia of language and linguistics*. 2d ed. Vol. 10. Edited by K. Brown, 508–511. Oxford: Elsevier.

Complements Nicolaeva's introduction to relative clauses (Nicolaeva 2006, cited under General Overviews) with some remarks about performance issues and "non-standard" speech.

Radford, Andrew. 1975. Pseudo-relatives and the unity of subject raising. *Archivum Linguisticum* 6:32–64.

Early discussion of the pseudo-relative construction.

Rafel, Joan. 2000. Complex small clauses. PhD diss., University of Barcelona.

Contains an elaborate discussion of pseudo-relatives and related construction types, and analyzes them in terms of small clauses.

Sag, Ivan A. 1997. English relative clause constructions. *Journal of Linguistics* 33.2: 431–484.

An analysis of English relative clauses in terms of Head-Driven Phrase Structure Grammar, based on construction and type constraints, and a newly proposed dimension of clausal functions. With attention to reduced and infinitival relative clauses, as well as pied-piping phenomena.

Truswell, Robert. 2011. Relatives with a leftward island in early modern English. *Natural Language & Linguistic Theory* 29.1: 291–332.

Discusses a type of nonrestrictive relative found in early modern English in which the head noun gap is contained within a syntactic island that linearly precedes the remainder of the relative clause.

## **RELATIVIZERS AND LINKERS**

Relative clauses can be introduced by a relative pronoun or a complementizer, and they can contain a gap or a resumptive pronoun, or some relative particle. Thus, a number of "strategies of relativization" have been distinguished. These aspects of relative clauses exist alongside other dimensions, such as prenominal or postnominal construal. There are, however, certain correlations and impossible combinations. For instance, Kuno 1974 and Keenan 1985 note that prenominal relative clauses never contain a relative pronoun

or even a clause-initial complementizer. See de Vries 2002 (cited under General Overviews) for a systematic investigation of the available combined strategies and potential explanations. For valuable data and discussion, see also Lehmann 1984 (cited under Cross-Linguistic Typology). A few interesting contributions on relative pronouns and complementizers are highlighted in the subsections on the Complementizer Domain and the Doubly Filled Comp Filter and Complementizer Alternation and Agreement; there is also a separate subsection on Resumptive Pronouns. There does not seem to be theoretically oriented work on relative verbal particles. All articles cited in this section have some general import. More descriptively oriented research on relativizers in particular languages, while important for other reasons, cannot be listed here. A rich source of further data is the collection of papers in Peranteau, et al. 1972, cited under Cross-Linguistic Typology.

Keenan, Edward L. 1985. Relative clauses. In *Language typology and syntactic description*. Vol. 2, *Complex constructions*. Edited by Timothy Shopen, 141–170. Cambridge, MA: Cambridge Univ. Press.

Useful descriptive overview of relative constructions and various relativization strategies.

Kuno, Susumu. 1974. The position of relative clauses and conjunctions. *Linguistic Inquiry* 5.1: 117–136.

Explores the relationship between the word order patterns of major constituents and the position of a relative clause with respect to its head noun (prenominal or postnominal) across languages.

### **The Complementizer Domain and the Doubly-Filled Comp Filter**

In relative clauses, the complementizer domain is for relative pronouns and complementizers. Usually, they are in complementary distribution. Chomsky and Lasnik 1977 accounted for this by means of the Doubly Filled Comp Filter, which permits only one pronounced element in this domain. However, there are many reported counterexamples to the underlying generalization, in various kinds of clauses in various languages. Some interesting discussion of relative pronouns, microvariation and the Doubly Filled Comp Filter is found in Bok-Bennema 1990, Pittner 1995, and Broekhuis and Dekkers 2000. Cinque 1982 argues that there are different types of relative pronouns, used in different types of relative clauses. Wiltschko 1998 discusses the nature of relative pronouns. Furthermore, work on extensions of the CP domain by Bianchi 1999, Bianchi 2000, and Zwart 2000 are of interest in this respect, all cited under Raising and the Antisymmetry Framework. In these accounts, relative pronouns are analyzed as relative determiners originally merged with the head noun.

Bok-Bennema, Reineke. 1990. On the COMP of relatives. In *Grammar in progress: Glow essays for Henk van Riemsdijk*. Edited by Joan Mascaró and Marina Nespó, 51–60. Dordrecht, The Netherlands: Foris.

Discusses how, why, and when complementizers can take over the function of a relative pronoun.

Broekhuis, Hans, and Joost Dekkers. 2000. The Minimalist program and optimality theory: Derivations and evaluations. In *Optimality theory: Phonology, syntax and acquisition*. Edited by Joost Dekkers, Frank van der Leeuw, and Jeroen van de Weijer, 386–422. Oxford: Oxford Univ. Press.

Investigate the optimality-theoretic constraints that dictate whether a relative pronoun or complementizer is pronounced in headed restrictive relative clauses. Based on Dutch and English data in particular.

Chomsky, Noam, and Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8.3: 425–504.

Introduce the Doubly Filled Comp Filter, among other things. Applied to relative clauses, it prevents the co-occurrence of a relative pronoun (or pied piped phrase) and a complementizer.

Cinque, Guglielmo. 1982. On the theory of relative clauses and markedness. *Linguistic Review* 1.3: 247–294.

Discusses relative pronouns in Italian, French, and English from the perspective of Principles and Parameters and Markedness Theory. Argues that relative clauses can be either integrated or parenthetical, and that relative pronouns are anaphoric or non-anaphoric.

Pittner, Karin. 1995. The case of German relatives. *Linguistic Review* 12.3: 197–231.

Discusses the case of relative pronouns, with attention for diachronic and dialectal variation.

Wiltschko, Martina. 1998. On the syntax and semantics of (relative) pronouns and determiners. *Journal of Comparative Germanic Linguistics* 2.2: 143–181.

Distinguishes between two types of pronouns in German, arguing that only *d*-pronouns are full definite determiners that can be used in relative clauses.

### **Complementizer Alternation and Agreement**

The relationship between relative pronouns, complementizers, and agreement patterns within the complementizer domain is explored in Bennis and Haegeman 1984, which discusses West Flemish data, and Borer 1984, which analyzes Hebrew data. Kayne 1976 introduces the French *que-qui* rule, which is reanalyzed by Rooryck 2000 in terms of clitic movement. A recent take on the matter is given in Sportiche 2011.



Bennis, Hans, and Liliane Haegeman. 1984. On the status of agreement and relative clauses in West-Flemish. In *Sentential Complementation: Proceedings of the International Conference held at UFSAL, Brussels, June, 1983*. Edited by Wim de Geest and Yvan Putseys, 33–55. Dordrecht, The Netherlands: Foris.

Postulates that the distribution of the relative pronoun and complementizer in West Flemish relative clauses is determined according to whether or not an agreement relation (of tense, number, and/or gender) can be established between the head noun and other elements within the complementizer domain.

Borer, Hagit. 1984. Restrictive relatives in modern Hebrew. *Natural Language & Linguistic theory* 2.2: 219–260.

Discusses how agreement between the head noun and the complementizer within the complementizer domain of Hebrew relative clauses licenses the nonpronunciation of the complementizer.

Kayne, Richard. 1976. French relative *que*. In *Current studies in romance linguistics*. Edited by M. Luján and F. Hensey, 255–299. Washington, DC: Georgetown Univ. Press.

Early discussion of the French *que-qui* alternation, which is related to subject extraction. Treats *qui* as an allomorph of the complementizer.

Rooryck, Johan. 2000. *Configurations of sentential complementation: Perspectives from Romance languages*. London: Routledge.

In chapter 8 on the *que-qui* alternation in questions and relative clauses in French, Rooryck proposes to generalize over various uses, and analyzes *que* and *qui* as complex elements, consisting of an invariant complementizer and an incorporated clitic.

Sportiche, Dominique. 2011. French relative *qui*. *Linguistic Inquiry* 42.1: 83–124.

Argues that French and other languages have a double paradigm of *wh*-elements, and challenges the idea that *qui* be a complementizer.

## **Resumptive Pronouns**

With Bianchi 2004 as an interesting exception, much of the past research on resumptive pronouns concentrates upon defining their characteristic properties and distribution in terms of the broader notions of A-bar movement and binding, and consequently does not pertain solely to the distribution of resumptive pronouns within relative clauses. Sells 1984 makes an important distinction between “intrusive” resumptive pronouns (pronouns that “save” syntactic derivations that would otherwise violate subadjacency) and “true”

resumptive pronouns (pronouns that are bound by an operator within the complementizer domain of a clause). The collected articles in Rouveret 2011 explore and expand upon the original distinction made by Sells. McCloskey 2006 extends the idea, identifying three types of resumptive pronouns. Shlonsky 1992 provides an in-depth investigation of resumptive pronouns in Hebrew and Palestinian Arabic relative clauses, stressing the “last resort” character of the resumptive strategy. A more semantically oriented approach is provided in Asudeh 2004. Sharvit 1999 studies functional/pair-list interpretations in relation to the presence of resumptive pronouns. Suñer 1998 investigates when and in which languages resumptive pronouns are meaningless. See also Salzmann 2006, cited under Scope and Reconstruction, concerning resumption in Swiss relatives and in prolepsis constructions.

Asudeh, Ash. 2004. Resumption as resource management. PhD diss., Stanford University.

A semantic-compositional approach to resumptive pronouns that utilizes the Glue Semantics typically associated with Lexical Functional Grammar.

Bianchi, Valentina. 2004. Resumptive relatives and LF chains. In *Cartography of syntactic structures*. Vol. 2, *The structure of CP and IP*. Edited by Luigi Rizzi, 76–114. Oxford Studies in Comparative Syntax. Oxford: Oxford Univ. Press.

Relates a relative clause’s ability to contain a gap or a resumptive pronoun to its semantic type, either as a restrictive, nonrestrictive, or maximalizing relative clause.

McCloskey, James. 2006. Resumption. In *The Blackwell companion to syntax*. Vol. 4. Edited by M. Everaert and H. van Riemsdijk, 94–117. Oxford: Blackwell.

An overview of resumptive pronouns. Divides resumptives into three types: those that are syntactic unbounded, those that are syntactic unbounded and are otherwise a syntactic “gap,” and those that are utilized as a last resort (as in the case of resumptive pronouns in English relative clauses).

Rouveret, Alain, ed. 2011. *Resumptive pronouns at the interfaces*. Amsterdam: John Benjamins.

With an extensive introduction by Alain Rouveret, this volume explores the nature of resumptive pronouns, discussing in particular the difference between “intrusive” and “true” resumptives.

Sells, Peter. 1984. Syntax and semantics of resumptive pronouns. PhD diss., University of Massachusetts, Amherst.

Provides a pioneering exploration of resumptive pronouns.

Sharvit, Yael. 1999. Resumptive pronouns in relative clauses. *Natural Language & Linguistic Theory* 17.3: 587–612.

Observes that relative clauses containing resumptive pronouns must be embedded in an equative sentence to trigger a functional/pair-list interpretation, whereas other relative clauses can always get this interpretation.

Shlonsky, Ur. 1992. Resumptive pronouns as a last resort. *Linguistic Inquiry* 23.3: 443–468.

Focusing upon Hebrew and Palestinian Arabic, Shlonsky argues that resumptive pronouns are bound by a relative operator that is base-generated in the complementizer domain, and are always used as a “last resort” mechanism, namely when A-bar movement is unavailable.

Suñer, Margarita. 1998. Resumptive restrictive relatives: A crosslinguistic perspective. *Language* 74.2: 335–364.

Discusses resumptive pronouns from a cross-linguistic perspective, arguing that under certain circumstances, resumptive pronouns are inserted at the phonological interfaces, and consequently have no interpretative import.

## **EXTRAPOSITION, PIED PIPING, AND SPLIT ANTECEDENTS**

Since relative clauses encompass almost all of sentence grammar, many topics of interest can and have been studied. Only a few relevant publications can be listed here, pertaining to extraposition, pied piping, and split antecedents. Relative clauses, like other modifiers, can be extraposed. Although there is much discussion about the theory of extraposition, with relative clauses as a primary case, this usually does not affect the analysis of relative clauses *per se*, with Cardoso 2010 as an important exception. Pied-piping phenomena in relative clauses are discussed in Heck 2008 and de Vries 2006, among others. A curious phenomenon is the possibility of a split antecedent. See Hoeksema 1986 and Zhang 2007 for some interesting discussion.

Cardoso, Adriana. 2010. Variation and change in the syntax of relative clauses: New evidence from Portuguese. PhD diss., University of Lisbon.

Compares evidence from Portuguese to Germanic, in particular concerning appositive and extraposed relative clauses, and concludes that synchronically or diachronically different languages use derivationally different relativization strategies. With special reference to the head raising analysis.

de Vries, Mark. 2006. Possessive relatives and (heavy) pied piping. *Journal of Comparative Germanic Linguistics* 9.1: 1–52.

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