Where do grammatical morphemes come from? On the development of grammatical markers from lexical expressions, demonstratives, and question words

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1. Introduction

Research on grammaticalization has shown that grammatical morphemes are commonly derived from content words, notably from nouns and verbs. For instance, adpositions are frequently derived from body part terms (cf. Heine et al. 1991) and future tense auxiliaries are often based on motion verbs (cf. Bybee et al. 1994). Of course, not every grammatical marker can be traced back to a content word; very often there is not sufficient historical data to determine the source of a particular morpheme. But since the development of grammatical markers from nouns and verbs is very frequent, it has become a standard assumption of grammaticalization theory that all grammatical morphemes are eventually derived from a lexical source:

All grammatical morphemes have developed out of lexical morphemes, principally nouns and verbs… [Bybee 2003: 161]

However, as I have argued in a series of papers (cf. Diessel 1997, 1999a, 1999b, 2003, 2006a, 2006b) there is at least one other class of linguistic expressions that provides another frequent source for the development of grammatical markers: demonstratives such as English this and that or German der, die, da, and das. It is the purpose of this paper to elaborate this hypothesis.

The article is divided into three parts. The first part provides a brief overview of the grammaticalization of demonstratives and considers their status in language. It is argued that demonstratives serve to establish a joint focus of attention, which motivates their frequent development into grammatical markers. The second part shows that demonstratives and lexical expressions give rise to different types of grammatical morphemes: Lexical expressions develop into grammatical markers that elaborate the conceptual structure of a clause (or phrase), whereas demonstratives develop into grammatical markers that establish links across clause or intonation boundaries. The third part is concerned with another class of function words that differ from ordinary grammatical markers: interrogatives such as English who, where, and what. Like demonstratives, interrogatives serve a particular communicative function that sets them apart from other function words and motivates their development into grammatical markers. Concluding the paper, I argue more generally that the traditional distinction between lexical expressions and grammatical morphemes is not sufficient to characterize the many developments that are commonly subsumed under the notion of grammaticalization. What we need is a more elaborate theory of linguistic categories that allows us to distinguish between different subtypes of grammaticalization.

2. Demonstratives

2.1. The grammaticalization of demonstratives: An overview

Grammaticalization theory is based on the somewhat naïve assumption that lexical items are the earliest and most basic expressions of human language. According to this view, nouns
and verbs are the “evolutionary primitives” from which all other categories, notably all function words, are historically derived (cf. Heine and Kuteva 2007: 59). To be sure, nouns and verbs provide a common historical source for grammatical markers. Across languages, nouns are frequently reanalyzed as adpositions, classifiers, and reflexive pronouns, and verbs are commonly reanalyzed as tense and aspect markers, copulas, and passive morphemes (cf. Lehmann 1982; Heine and Reh 1984; Heine et al. 1991; Heine 1993; Bybee et al. 1994; Hopper and Traugott 2003). But the assumption that all grammatical markers are eventually derived from lexical expressions cannot be empirically demonstrated. In fact, the historical data suggest that grammatical morphemes are also frequently derived from other function words (or, more precisely, from constructions including other function words).

There is one class of function words that provides an especially frequent source for the development of grammatical markers: demonstrative such as English this and that and here and there. For instance, it is well-known that definite articles are commonly derived from demonstrative pronouns that accompany a coreferential noun (cf. Himmelmann 1997). The development has been described in detail for a variety of languages including English, German, French, Finnish, Basque, Hungarian, Cree, Vai, and several others (cf. Christopherson 1939; Heinrichs 1956; Krámsky 1972; Ulan 1978a; Harris 1978; Greenberg 1978; Lehmann 1982; Lüdtke 1991; Traugott 1992; Cyr 1993; Leiss 1994; Epstein 1994; Laury 1997; Himmelmann 1997; Heine and Kuteva 2002).

Another grammatical marker that is commonly based on a demonstrative is the third person pronoun (cf. Lehmann 1982; Givón 1984; Heine and Kuteva 2002). The development originates from an anaphoric demonstrative pronoun functioning as an argument of a verb or adposition. For instance, the French third person pronouns il and elle developed from the anaphoric use of the Latin demonstrative pronoun ille (cf. Harris 1978: 100-1).

Like definite articles and third person pronouns, clause linkers are frequently derived from a demonstrative. For instance, the complementizers of Germanic languages developed from demonstratives that established an overt link between semantically related clauses (cf. Hopper and Traugott 2003: 190-4), and the relative pronouns of certain Indo-European languages evolved from a demonstrative that resumed a prior discourse referent (cf. Lehmann 1984: 378-383). Moreover, conjunctions are often based on discourse-deictic demonstratives creating links between adjacent propositions (cf. McConvell 2006).

The development of demonstratives into definite articles, their person pronouns, and clause linkers marks often only the beginning of a grammaticalization process that can give rise to other grammatical markers. For instance, a demonstrative that has been reanalyzed as a definite article may further develop into a noun class marker (cf. Greenberg 1978) and a third person pronoun derived from a demonstrative pronoun is often reduced to an agreement affix (cf. Givón 1984: 353). Similarly, a relative pronoun may turn into a complementizer (cf. Heine and Kuteva 2002: 254), a complementizer may be reanalyzed as a purposive marker (cf. Haspelmath 1989), and a (subordinate) conjunction may develop into a discourse marker (cf. Tabor and Traugott 1998). Figure 1 provides an overview of the grammaticalization processes that originate from a demonstrative.
In addition to these developments, there are various other grammatical morphemes that in some languages evolved from a demonstrative:

- Copulas (cf. Li and Thompson 1977; Schuh 1983; Gildea 1993; Devitt 1994)
- Linking articles (cf. Foley 1980; Schuh 1990; Himmelmann 1997; Diessel 1999a)
- Focus markers (cf. Heine and Kuteva 2002; Diessel 1999a, 2006a)
- Topic markers (cf. Vries 1995)
- Coordinate conjunctions (cf. Burenhult 2008)
- Temporal adverbs (cf. Anderson and Keenan 1985; Diessel 1999a)
- Directional preverbs (cf. Diessel 1999a)
- Nominal and verbal number markers (cf. Frajzyngier 1997)
- Determinatives (cf. Himmelmann 1997; Diessel 1999a)
- Specific indefinite articles (cf. Wright and Givón 1987)

Some of these grammatical morphemes may also develop from a lexical source (e.g. copulas), and some are perhaps instances of secondary grammaticalization, i.e. they developed from grammatical morphemes which in turn developed from a demonstrative (e.g. number markers). But there can be no doubt that demonstratives provide a common historical source for a wide variety of grammatical morphemes including some very frequent markers such as definite articles, third person pronouns, and clause linkers. In fact, the development of grammatical morphemes from demonstratives is so pervasive that in earlier work on the diachronic evolution of grammar, it was always emphasized that demonstratives are a major historical source for grammatical markers (cf. Brugmann 1904; Bühler 1934; Kuryłowicz 1965).

In the current research on grammaticalization, demonstratives are usually not recognized as a particular topic because demonstratives are seen as grammatical morphemes, which according to grammaticalization theory must have originated from a lexical source, so that the development of a grammatical marker from a demonstrative is just a case of secondary grammaticalization (e.g. Heine and Kuteva 2007: 111). However, this hypothesis is unwarranted. I have compiled a large cross-linguistic database on demonstratives from more than 300 languages from all major language families across the world (cf. Diessel 1999a, 2003, 2005, 2006a), but I have not encountered a single case in which a demonstrative can be traced back to a lexical source. What sometimes happens is that a
demonstrative is reinforced by a content morpheme to strengthen its pragmatic force (e.g. Latin *ecce ille*; cf. Brugmann 1904: 123); but since reinforcement does not create a new type of grammatical marker, it does not bear on the hypothesis that demonstratives evolve from content words.

In a recent study, Heine and Kuteva (2007: 76-7, 84-6) identified two historical sources for demonstratives. First, they argued that demonstrative pronouns are often derived from locational adverbs meaning *here* and *there*; but *here* and *there* are demonstratives according to the standard definition (cf. Lyons 1977; Fillmore 1982; Anderson and Keenan 1985; Himmelmann 1997; Diessel 1999a, 2006a; Dixon 2003). Second, Heine and Kuteva argue that demonstratives may originate from motion verbs (see also Frajzyngier 1987, 1996a). Presenting data from three languages in which a distal demonstrative has a similar phonetic form as the verb *go*, they contend that demonstratives evolved from motion verbs due to the conceptual link between motion and distance. While this is an interesting hypothesis, it is based on scanty evidence. To the best of my knowledge, there is no widespread phonetic similarity between demonstratives and motion verbs and the conceptual link between motion and distance is not sufficient to postulate a new general grammaticalization path. Moreover, even if it turns out that demonstratives and motion verbs are historically related, the direction of the relationship may be the other way around. Heine and Kuteva assume that the expression of motion implies distance, but it is equally plausible to assume that the indication of a distant location is interpreted as a request for movement (Scott DeLancy personal communication).

In sum, there is currently no evidence that demonstratives evolved from motion verbs or other lexical expressions. That does not mean that such a development is impossible, but if it *does* occur it is unlikely to be a major grammaticalization path. As it stands, demonstratives cannot be traced back to lexical expressions, suggesting that they are older than other function words.

### 2.2. The communicative function of demonstratives

This raises the interesting question what distinguishes demonstratives from other function words? Is there any reason why they might be older than other closed-class expressions? In Diessel (2006a) I have argued that demonstratives have a special status in language because they serve one of the most basic functions in language that sets them apart from both lexical expressions and grammatical markers. In spoken discourse, demonstratives are commonly used to focus the hearer’s attention on an entity in the surrounding situation; that is, demonstratives function to establish a joint focus of attention, which is one of the most fundamental functions of communication.

Joint attention has been studied intensively in developmental psychology (Moore and Dunham 1995; Carpenter et al. 1998; Tomasello 1995, 1999), cognitive primatology (Tomasello and Camaioni 1997; Butterworth 1998, Povinello & Vonk 2003), and philosophy of the mind (Eilan et al. 2005). In order to communicate, speaker and addressee must coordinate their focus of attention; that is, the speaker must direct the addressee’s attention such that the communicative partners jointly focus on the same referent. This is not a trivial task because it presupposes that the speech participants recognize each other as mental agents. In order to establish a joint focus of attention, speaker and hearer must understand that the other person takes a different perspective and that their perspectives must be synchronized (cf. Bruner 1983; Carpenter et al. 1998; Dunham and Moore 1995; Tomasello 1995, 1999; Eilan 2005).

Interestingly, young children lack this ability. During the first year of life, children’s interaction with the world is exclusively dyadic; that is, infants are either focused on another person ignoring everything in the surrounding situation, or they are focused on a particular
object ignoring other people. At this age, children do not understand that other people are mental agents that view the world from a different perspective. It is only at around the first birthday that children begin to understand the triadic nature of human communication (cf. Carpenter et al. 1998; Tomasello 1999). At this time, they begin to engage in their first joint attentional behaviours: At the age of nine month they begin to follow the head movement and eye gaze of other people and at around the first birthday they begin to produce their first pointing gestures, which are soon combined with language. In particular, the combination of deictic pointing with demonstratives is very common. Both demonstratives and deictic pointing are used to focus the addressee’s attention on a particular referent; that is, both function to establish joint attention. Of course, deictic pointing gestures can also be combined with other linguistic expressions, but there is no other class of linguistic items that is so intimately associated with deictic pointing than demonstratives (cf. Bühler 1934; Enfield 2003; Levinson 2004; Diessel 2006a).

This may explain why children begin to use demonstratives so early. The first words children produce are usually content words, especially nouns are very common; but there are also other types of expressions that children produce during the one-word stage (cf. Clark 2003). Among the non-content words young children use are demonstratives. According to a study by Eve Clark (1978), demonstratives are usually among the first ten words that English-speaking children produce and they are initially always combined with a deictic pointing gesture. Children use demonstratives early and very frequently. A recent study suggests that the demonstrative that is the single most frequent word that English-speaking children produce during the one-word stage (cf. Diessel 2006a).

The particular communicative function of demonstratives is also reflected in their cross-linguistic distribution. Most linguistic typologists agree that all languages have nouns and verbs, but the cross-linguistic distribution of minor word classes is controversial (cf. Schachter and Shopen 2007). There is evidence that the occurrence of most function words is language-specific; but demonstratives appear to be universal. Like nouns and verbs, they are part of the basic vocabulary of every language and they are surprisingly similar from a cross-linguistic point of view (cf. Himmelmann 1997; Dixon 2003). In the vast majority of the world’s languages, demonstratives comprise two or three distance terms. For instance, English distinguishes proximal this from distal that, and Spanish distinguishes proximal este from medial ese and distal aquel. Languages with more than three distance terms are rare (cf. Diessel 2005). Interestingly, the distance features of demonstratives are reflected in their phonetic forms. There is evidence that the stem vowels of proximal demonstratives tend to be higher and more advanced than the stem vowels of medial and distal terms (e.g. this [high-front] vs. that [low-back]; cf. Woodworth 1991, see also Sapir 1949). Since sound symbolism is characteristic of newly created words, the iconic relationship between distance and vowel quality can be interpreted as evidence for the hypothesis that demonstratives pertain to the basic vocabulary of language (cf. Plank 1979; see also Diessel 1999a: 151-2).

To summarize the discussion in this section, we have seen that demonstratives provide a frequent historical source for a wide variety of grammatical morphemes and that there is no evidence for the development of demonstratives from lexical expressions. I have argued that demonstratives have a special status in language because they serve to establish joint attention, which is one of the most basic functions of human communication. The particular communicative function of demonstratives is reflected in their cross-linguistic distribution, in the frequent combination of demonstratives with a deictic pointing gesture, and in the early and frequent appearance of demonstratives in child language. In the next section, I will take a closer look at the mechanisms that underlie the grammaticalization of demonstratives and lexical expressions.
3. Mechanisms of grammaticalization

3.1. Cognitive processes

Lexical items and demonstratives are very different types of expressions. Both are commonly used with reference to phenomena in the outside world, but the psychological mechanisms that are involved in their semantic interpretation are very different. Lexical expressions denote a concept or category in the psychological sense of the term (Murphy 2002). A concept is a complex knowledge structure that reflects our experience with the world (cf. Barsalou 1999). However, the interpretation of a concept in a particular situation is not only determined by our past experience, it is also affected by the content of other concepts that are jointly activated in a particular situation; that is, the semantic interpretation of lexical expressions is a dynamic process that crucially relies on the relationships between the various concepts that are activated in an utterance (cf. Elman 2004). The co-activation of concepts affects the interpretation of each word and determines the semantic interpretation of the whole construction. This process of semantic co-activation and conceptual integration is essential for the grammaticalization of lexical expressions.

Take for instance the well-known development of the motion verb go into a future tense marker (cf. Fleischmann 1989; see also Hopper and Traugott 2003: 1-3). The development consists of a series of interrelated changes whereby the semantic development of go is crucially influenced by the meaning of neighboring expressions and the conceptual relationship between motion, intention, and future. In the source construction go denotes a motion event, involving an agentive subject and an allative prepositional phrase that specifies the (physical) goal of the motion event (cf. example 1). This construction is gradually transformed into a future tense construction in which go functions as an auxiliary. One important stage of the development involves the use of go in a bi-clausal structure in which the motion event is combined with an infinitive denoting a metaphorical goal, i.e. a purpose, of the motion event (cf. example 2). In the context of this construction, the motion sense of go is backgrounded in favour of the semantic feature of intention. The semantic shift is evoked by the purposive infinitive emphasizing the metaphorical goal of the activity. If go is routinely used in this construction, the motion sense is gradually reduced to the extent that it is eventually no longer perceived as a separate activity. At this point, go assumes the function of an auxiliary and the bi-clausal structure is reanalyzed as a simple sentence denoting a single future event. Since future events are not limited to intentional activities, the future tense construction may occur with a non-agentive subject (cf. example 3), which is not permissible with the earlier motion-cum-purpose sense (cf. Hopper and Traugott 2003: 1-3).

(1) Peter is going to school.         motion
(2) Peter is going (in order) to help John. intention
(3) Rain is going to fall.            future

What this example illustrates is that the development of the future tense marker does not simply involve a change of the motion verb go; rather, what we observe is a change of the whole construction in which the development of go is influenced by the meaning of other lexical expressions (cf. Traugott 2003). The psychological mechanism involved in this development can be characterized as a process of conceptual integration (or blending) whereby the semantic features of multiple symbolic terms are conflated into a new conceptual unit (cf. O’Grady et al. 1999). In the course of this development, the motion verb go is reanalyzed as a grammatical marker that functions to elaborate the conceptual structure of neighboring expressions.
Like lexical items, demonstratives grammaticalize in the context of a particular construction, but this involves a different mechanism. In the literature, it is often assumed that the grammaticalization of demonstratives is motivated by their meaning. Specifically, it has been argued that the expression of distance motivates the development of demonstratives into grammatical markers. By contrast, I suggest that the grammaticalization of demonstratives is primarily motivated by their communicative function to establish joint attention. More precisely, I claim that grammatical markers develop from demonstratives that focus the interlocutors’ attention on linguistic elements in the discourse context (cf. Diessel 2006a; see also Bühler 1934). Two subtypes of this use can be distinguished. The anaphoric use, in which a demonstrative keeps track of a prior discourse referent (cf. example 4), and the discourse-deictic use in which the demonstrative refers to an adjacent proposition (cf. example 5) (cf. Webber 1991; Himmelmann 1996; Fillmore 1997: 103-106; Diessel 1999a: chap 5).

(4) We started a new research project. The goal of this project is to demonstrate that …
(5) I was very tired last night. That’s why I left so early.

In both uses, the demonstrative draws the hearer’s attention on a linguistic element that is currently activated; that is, the demonstrative selects a particular referent from the previous discourse context creating a language-internal focus of attention. Thus, joint attention is not only important to orient the speech participants in the outside world, it is also important to guide the interlocutors’ attention in discourse processing. In order to interpret the manifold relationships between discourse participants and propositions, speaker and hearer must be focused on the same discourse referents. Starting from this use, demonstratives develop into a wide range of grammatical markers that are routinely used with reference to linguistic expressions (cf. Bühler 1934; Diessel 2006a).

In general, the developments of grammatical markers from lexical expressions and demonstratives are based on different mechanisms: The grammaticalization of lexical expressions is based on the conceptual conflation of semantic features from multiple symbolic terms, whereas the grammaticalization of demonstratives is based on their communicative function to coordinate the interlocutors’ attention in discourse.

3.2. Functions of grammatical morphemes

This is reflected in the scope and function of the grammatical markers that originate from the two types of expressions. Grammatical markers that are derived from lexical expressions have usually a narrow scope. They elaborate the conceptual structure of adjacent content words. Take for instance the development of adpositions from relational nouns or the development of future tense auxiliaries from motion verbs (cf. Hopper and Traugott 2003: 110-5). In both cases, lexical expressions are reanalyzed as grammatical morphemes that specify the conceptual structure of other content words within the local boundaries of a clause or intonation unit.

The grammatical markers of demonstratives have usually a wider scope. Demonstratives develop into grammatical markers that create links across clause or intonation boundaries. As we have seen in Section 1, demonstratives provide the historical source for a wide variety of grammatical morphemes; however, the most frequent grammatical markers that develop from a demonstrative pertain to one of two grammatical domains: reference tracking and clause combining.

Reference tracking involves two major grammatical categories: the definite article and the third person pronoun. Both are almost always derived from a demonstrative; more precisely, they develop from anaphoric demonstrative pronouns that keep track of a prior
discourse referent (cf. Givón 1984: 353-60; Diessel 1999a, 2006a). Heine and Kuteva (2002: 209-210) point out that in certain African languages third person pronouns are based on nominal expressions meaning ‘man’, ‘male’, or ‘person’, but this appears to be an areal phenomenon that is only attested in a few African tongues; the cross-linguistic data suggest that definite articles and third person pronouns usually develop from demonstratives (cf. Lehmann 1982: 40; Diessel 1999a: chap 6).

The second domain in which grammatical markers are frequently recruited from demonstratives is clause combining (cf. Hopper and Traugott 2003: 185). As pointed out above, relative pronouns, complementizers, and conjunctions are often derived from a demonstrative. Like definite articles and third person pronouns, these grammatical morphemes establish links across clause or intonation boundaries. For instance, McConvell (2006) showed that in Ngumpin-Yapa, a subgroup of Pama-Nyungan, demonstratives are commonly used to indicate a link between two independent sentences. However, in some contexts, the demonstratives have been reanalyzed as subordinate conjunctions, as in example (8) from Jaru, in which the demonstrative nyangka introduces a temporal/conditional clause. Similar deictic conjunctions occur in English (e.g. thus, so that, therefore) and other European languages (e.g. German so dass ‘so that’, darum ‘therefore’).

(8) Jaru (McConvell 2006: 116)
nga=rny-anu nyang-ku [nyangka=lu pirri yan-ku]
CATALYST=1SG.S-3PL.O see-PURP DEM=3PL.S out come-PURP
‘I will see them when they arrive.’

The development of clause linkers from demonstratives is characteristic of complex sentences that evolved from two independent sentences through ‘clause combining’; but there are other scenarios that can give rise to a complex sentence construction. For instance, a number of recent studies have argued that complex sentences are frequently derived from a simple sentence through a process of ‘clause expansion’ (or ‘clause elaboration’) whereby a NP or PP is transformed into a full clause (cf. Harris and Campbell 1995: chap 10; Givón 2006; Heine and Kuteva 2007: chap 5; Deutscher 2009; Heine 2009). For example, Genetti (1986, 1991) showed that the adverbial clauses of Newari and other Tibeto-Burman languages originated from adpositional constructions including a nominalized verb that was gradually transformed into a subordinate clause. The same development has been observed in a wide variety of other languages and explains why adverbial clauses are frequently marked by former adpositions and case markers (cf. Givón 2006; Heine and Kuteva 2007: chap 5, Deutscher 2009). Interestingly since adpositions are often based on content words, clause linkers may include a lexical expression if they develop from an adposition via clause expansion. An example is the complex preposition on the basis (of), which according to Hopper and Traugott (2003: 184-5) has recently come to be used in complex sentences (cf. example 9). The innovative use can be seen as an instance of analogical clause expansion whereby a prepositional phrase has been expanded into a full clause in which on the basis of functions as a clause linker (cf. Hopper and Traugott 2003: 184-5).

(9) He asked for the special retirement package on the basis of he’s been with the firm for over twenty years.

Another scenario that can give rise to a lexical clause linker involves the structural reanalysis of subordinate clauses. For instance, the temporal conjunctions of adverbial clauses are often derived from a nominal expression of time. The historical source for this development is a relative clause that is headed by a noun meaning ‘time’. When this construction is routinely used to provide the temporal background for the event in the main clause, the relative clause
is reinterpreted as a temporal adverbial clause in which the nominal head functions as a subordinate conjunction. The development is illustrated by example (10) from Lele (Chadic) (cf. Frajzyngier 1996b: 313).

(10) Lele (Frajzyngier 1996b: 313)

\[
[kūr \ gō \ tūwù \ ány] \ déná \ sé \ kīnūrī-gé. \\
\text{time REL fire take then INCEPT run.PL-3PL}
\]

‘The time the fire started, they ran away.’ = ‘When the fire started, they ran away.’

A parallel development has given rise to the English conjunction while, which descended from the Old English expression \textit{þe hwile þe} (or \textit{þa hwile}) ‘the while that’, consisting of the noun phrase \textit{þe hwile ‘the while’} (or \textit{þa hwile ‘for.the while’}) and the relativizer \textit{þe} (cf. Harris and Campbell 1995: 288).

In general, there are multiple pathways to complex sentences and clause linkers. In the classical scenario, in which two sentences are combined to a bi-clausal structure, relative pronouns, complementizers, and conjunctions are frequently derived from a demonstrative that indicates an overt link between clauses or intonation units. But there are other pathways to complex sentences which involve structural reanalysis and/or clause expansion. In these scenarios, clause linkers are usually derived from content words or other function morphemes that elaborate an existing bipartite structure (consisting of two clauses or the core of a clause and an adpositional phrase).

To summarize, lexical expressions and grammatical markers are radically different types of expressions that give rise to different types of grammatical markers. Lexical expressions develop into grammatical markers that elaborate the conceptual structure of other content words in the local context of an existing clause or phrase, whereas demonstratives develop into grammatical markers that establish links between two clause or intonation units.

4. Interrogatives

The previous analysis suggests that demonstratives constitute a special class of expressions that provide a second major source for the development of grammatical morphemes. The particular status of demonstratives is motivated by their pragmatic function to establish joint attention; but demonstratives may not be the only class of function morphemes that have a particular status in language.

Like demonstratives, interrogatives constitute a special class of linguistic expressions that is not consistent with standard assumptions of grammaticalization theory. There is less cross-linguistic research on interrogatives than on demonstratives, but the available data suggest that interrogatives are universal and older than other function morphemes: Their roots are generally so old that it is impossible to reconstruct their historical source (cf. Lehmann 1982: 50; Haspelmath 1997: 176; Diessel 2003; see also Ultan 1978b and Bhat 2004: chap 10). Like demonstratives, interrogatives are sometimes reinforced by lexical expressions that may replace the original question word. For instance, Italian \textit{cosa ‘what’} developed from a noun meaning ‘thing’ that was originally used to strengthen the question word \textit{che} (cf. \textit{che cosa ‘what thing’}; see Lehmann 1982: 50). But since reinforcement does not give rise to a new grammatical category, it is not sufficient to show that interrogatives evolve from content words; there is currently no evidence that question words developed from a lexical source. Like demonstratives, interrogatives seem to form a genuine class of expressions that are part of the basic vocabulary of every language.

Interestingly, interrogatives and demonstratives have many properties in common (cf. Diessel 2003). To begin with, both types of expressions cross-cut the boundaries of several
word classes. Across languages, demonstratives and interrogatives are commonly expressed by pronouns, determiners, and adverbs (see Table 2); but the categorical division is language-specific. In fact, there are languages in which demonstratives and interrogatives do not pertain to a particular category; in these languages, demonstratives and interrogatives are uninflected particles with no specific syntactic functions (cf. Diessel 2003). In the literature on deixis it is often assumed that such particles represent the most basic form of a demonstrative from which more specific syntactic categories are historically derived (cf. Brugmann and Delbrück 1911: 311; Bühler 1934: 144; Himmelmann 1997: 21), but this hypothesis is difficult to verify (cf. Diessel 2006a).

Table 2. Demonstrative and interrogative categories in English

<table>
<thead>
<tr>
<th>Category</th>
<th>Demonstratives</th>
<th>Interrogatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronouns</td>
<td>that (one) / this (one)</td>
<td>who / what</td>
</tr>
<tr>
<td>Determiner</td>
<td>that / this</td>
<td>which / what</td>
</tr>
<tr>
<td>Adverb</td>
<td>here / there</td>
<td>when / where / why</td>
</tr>
</tbody>
</table>

The most conspicuous property that demonstratives and interrogatives have in common is their meaning. Across languages, the two types of expressions are often organized in pairs encoding the semantic features of person, thing, place, direction, time, manner, and amount (cf. Diessel 2003). These are some of the most basic semantic categories, which have been characterized as primitives of conceptual structure (cf. Jackendoff 1983). In some languages, the semantic categories are expressed by affixes that are attached to demonstrative and interrogative stems. For instance, in Khezha, a Tibeto-Burman language of Nepal, demonstratives and interrogatives are combined with six suffixes that indicate the ontological status of the referent: -no ‘thing’, -ba ‘place’, -nhie ‘time’, -ci ‘manner’, -ze ‘amount’, and -bi ‘type’ (Bhat 2004: 154).

Table 3. Demonstratives and interrogatives in Khezha (Bhat 2004: 154)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Demonstrative (proximal)</th>
<th>Interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>hi</td>
<td>thu</td>
</tr>
<tr>
<td>Thing</td>
<td>hi-no</td>
<td>dá-no</td>
</tr>
<tr>
<td>Place</td>
<td>hi-bá</td>
<td>dá- bá</td>
</tr>
<tr>
<td>Time</td>
<td>hi-nhie</td>
<td>di-cha-nhie</td>
</tr>
<tr>
<td>Manner</td>
<td>hi-ci</td>
<td>dá-ci</td>
</tr>
<tr>
<td>Amount</td>
<td>hi-že</td>
<td>dá-že</td>
</tr>
<tr>
<td>Type</td>
<td>hi-bi</td>
<td>di-bi</td>
</tr>
</tbody>
</table>

In other languages, the semantic categories are directly expressed by the stems, as in the following examples from Latin (Indo-European), Tamil (Dravidian), and Vietnamese (Mon Khmer) (for additional examples see Diessel 2003 and Bhat 2004).
Table 4. Demonstratives and interrogatives in Latin

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Demonstrative</th>
<th>Interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>hic/iste/ille</td>
<td>quis/quod/quod</td>
</tr>
<tr>
<td>Thing</td>
<td>hic/iste/ille</td>
<td>quis/quod/quod</td>
</tr>
<tr>
<td>Place</td>
<td>ibi</td>
<td>ubi</td>
</tr>
<tr>
<td>Time</td>
<td>tum</td>
<td>cum</td>
</tr>
<tr>
<td>Direction.to</td>
<td>eo</td>
<td>quo</td>
</tr>
<tr>
<td>Direction.from</td>
<td>inde</td>
<td>unde</td>
</tr>
<tr>
<td>Quantity</td>
<td>tantus</td>
<td>quantus</td>
</tr>
<tr>
<td>Quality</td>
<td>talis</td>
<td>quals</td>
</tr>
<tr>
<td>Manner</td>
<td>ita/sic</td>
<td>quamodo/qui</td>
</tr>
</tbody>
</table>

Table 5. Demonstratives and interrogatives in Tamil (Herring 1994)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Demonstrative (proximal)</th>
<th>Interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>ival/ivar</td>
<td>eval/evar</td>
</tr>
<tr>
<td>Thing</td>
<td>itu</td>
<td>etu</td>
</tr>
<tr>
<td>Place</td>
<td>inke</td>
<td>enke</td>
</tr>
<tr>
<td>Time</td>
<td>ippo</td>
<td>eppo</td>
</tr>
<tr>
<td>Quantity</td>
<td>ivvalavu</td>
<td>evvalavu</td>
</tr>
<tr>
<td>Manner</td>
<td>ippati</td>
<td>eppati</td>
</tr>
</tbody>
</table>

Table 6. Demonstratives and interrogatives in Vietnamese (Thompson 1965: 142)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Demonstrative (proximal)</th>
<th>Interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>dây</td>
<td>dau</td>
</tr>
<tr>
<td>Place</td>
<td>nay</td>
<td>não</td>
</tr>
<tr>
<td>Extent</td>
<td>bày</td>
<td>bao</td>
</tr>
<tr>
<td>Manner</td>
<td>và’y</td>
<td>sao</td>
</tr>
<tr>
<td>Time</td>
<td>bà’y gio</td>
<td>bao gio</td>
</tr>
</tbody>
</table>

In Diessel (2003), I have argued that demonstratives and interrogatives often carry the same semantic features because they serve similar pragmatic functions. Both types of expressions instruct the hearer to search for a particular piece of information; however, they evoke a different search domain. Demonstratives instruct the hearer to search for a particular referent in the surrounding speech situation or universe of discourse. If the search is successful, speaker and hearer are jointly focused on the same referent. Interrogatives are used to indicate that the speaker is missing a certain piece of information, which the hearer is requested to retrieve from his or her knowledge; that is, interrogatives instruct the hearer to search for information in his or her knowledge base. In both cases, the search for information is guided by semantic features that characterize the type of referent. This explains why demonstratives and interrogatives carry the same semantic features. Both types of expressions encode a small number of ontological categories that help the hearer to identify the referent.

Above we have seen that demonstratives provide a rich source for the development of grammatical markers, which is motivated by their pragmatic function. Interrogatives provide a less frequent source for grammatical markers, but there are some grammatical morphemes that originate from question words. For instance, relative pronouns and complementizers are in some languages derived from interrogatives. The development is well-known from Indo-European languages (cf. examples 11a-b), but has also been found in languages of other genetic groups (cf. Lehmann 1984: 325-30; Heine and Kuteva 2007: 229, 242-4; Harris and Campbell 1995: 298).
(11)  a. The city [where she lives] is in the north of Wales.
    b. I don’t know [where she is].

There is one grammatical category that is almost always derived from a question word: the indefinite pronoun. In fact, interrogatives and indefinites are often polysemous—in many languages, they are expressed by the same forms (cf. Ultan 1978b; Haspelmath 1997; Heine and Kuteva 2002: 250-1; Bhat 2004: chap 10). If the two categories are morphologically distinguished, it is usually the indefinite pronoun that is derived from the interrogative pronoun by an additional morpheme (cf. Haspelmath 1997: 176; but see Bhat 2004: 238-249). For instance, in Kannada (Dravidian), indefinite pronouns are derived from interrogative pronouns by suffixing the disjunctive particle o: ‘or’ to a question morpheme (cf. example 12).

(12) Kannada (Haspelmath 1997: 266)

(a) ra:ja ellige ho:da
    Raju where went
    ‘Where did Raju go?’
(b) ra:ju ellige-o: ho:da
    Raju where-or went
    ‘Raju went somewhere.’

The mechanisms that underlie the grammaticalization of interrogatives have never been systematically investigated. I suspect, however, that the development is motivated by the pragmatic function of interrogatives to indicate a missing piece of information. Like interrogatives, relative pronouns, WH-complementizers, and indefinite pronouns express a ‘gap’ that prompts the hearer to search for information. In the case of relative pronouns, the missing piece of information is provided by the head of the relative clause, but in the case of indefinite pronouns and WH-complementizers the gap remains unfilled, resulting in an empty or underspecified place holder.

5. Conclusion

It is one of the most basic assumptions of grammaticalization theory that all grammatical markers are ultimately derived from content words, notably from nouns and verbs. However, the current paper has argued that demonstratives and interrogatives provide a second major source for the development of grammatical markers; in particular the development of grammatical morphemes from demonstratives is very frequent. Across languages, demonstratives are commonly reanalyzed as definite articles, third person pronouns, relative pronouns, complementizers, conjunctions, and a wide variety of other grammatical morphemes. Interrogative pronouns provide the primary historical source for indefinite pronouns and may develop into relative pronouns and WH-complementizers. While most of these developments are well known in the historical literature, they have not been adequately analyzed within the framework of grammaticalization theory. Since demonstratives and interrogatives are often used as pronouns and determiners both types of expressions are usually seen as grammatical markers that must have originated from a lexical source. However, there is no evidence for this hypothesis. Across language, demonstratives and interrogatives are generally so old that their roots are not etymologically analyzable suggesting that they are older than other function words.

I have argued that demonstratives and interrogatives constitute a special class of linguistic expressions that are distinct from genuine grammatical morphemes. Specifically, I
have claimed that demonstratives serve to establish a joint focus of attention, which is one of the most basic functions in language providing a prerequisite for communication, cognition, and social interaction. Interrogatives are semantically more abstract than demonstratives but serve a similar pragmatic function. Both types of expressions provide instructions for the hearer to search for a particular piece of information. Demonstratives instruct the hearer to search for a particular entity in the surrounding situation or discourse, and interrogatives instruct the hearer to search for information in his or her knowledge base. The shared pragmatic function is reflected in parallel forms: Across languages, demonstratives and interrogatives pertain to the same grammatical categories and encode the same semantic features that guide the search procedure.

Finally, the paper has shown that the grammaticalization of demonstratives and interrogatives is based on different mechanisms than the grammaticalization of lexical expressions. The grammaticalization of lexical expressions involves the conceptual integration of semantic features from multiple symbolic terms, whereas the grammaticalization of demonstratives is based on their communicative function to focus the interlocutors’ attention on linguistic elements in discourse. The developments give rise to different types of grammatical markers: Lexical expressions develop into grammatical markers that elaborate the conceptual structure of adjacent content words, whereas demonstratives develop into grammatical morphemes that establish links between nominal expressions and propositions. That does not mean that the grammatical markers of lexical expressions and demonstratives are mutually exclusive. While there are grammatical morphemes that typically develop from demonstratives (e.g. definite articles and third person pronouns) and others that usually evolve from content words (e.g. adpositions and auxiliaries), some grammatical markers are commonly derived from both types of expressions; in particular, the various clause linkers evolve from both sources. However, they emerge in the context of different constructions: Demonstrative clause linkers develop in the context of two separate sentences or intonation units that are deictically combined, whereas lexical clause linkers develop in the local context of an existing bipartite structure that is expanded or reorganized. The mechanisms that are involved in the grammaticalization of interrogatives have not yet been studied in detail. I suspect, however, that the development is motivated by the pragmatic function of interrogatives to indicate a gap of information.

To conclude, the distinction between lexical expressions and grammatical markers is one of the most basic tenets of modern linguistics that has underlain grammaticalization research since it beginning. However, the current paper calls this distinction into question. Demonstratives and interrogatives must be kept separate from both types of expressions; they constitute a special class of function words that pertain to the basic vocabulary of language. Thus, what we need is a more elaborate theory of linguistic categories, which will allow us to distinguish between different subtypes of grammaticalization.

References


