

Voice

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1 Introduction

The range of phenomena that have been taken to fall under the umbrella of ‘voice’ empirically is vast and heterogeneous, and does not always line up with the range of things that have been analysed in connection with a syntactic primitive called ‘Voice’ theoretically. Historically, the most important or central voice phenomenon is the alternation between active and passive sentences like the English examples in (1).

- (1) a. The cat chased the dog.
b. The dog was chased (by the cat).

In the passive sentence in (1b), the morphology of the verb has changed, the object of the active sentence now functions as the subject, and the subject of the active sentence is no longer an argument of the verb, though it can be optionally introduced in an oblique (*by*-)phrase. The active-passive alternation has been central to generative syntactic theory going back to Chomsky (1957), and played an important role in the development of Lexical-Functional Grammar (Bresnan 1982), Relational Grammar (Perlmutter and Postal 1984), Head-Driven Phrase Structure Grammar (Pollard and Sag 1987), and many (perhaps most) other theories of grammar. Early generative approaches argued for a transformational rule that derived (b) directly from (a). Later approaches, within the Government-Binding (GB) framework, argued that the process was driven by the passive suffix, which absorbed the external argument theta-role, and led to other derivational consequences, such as preventing the verb from assigning accusative Case and forcing the internal argument to move or map to the subject position instead (Marantz 1984; Baker et al. 1989).

In mainstream Minimalism, there have been various attempts to link the active-passive alternation with a functional head that is responsible for the appearance or non-appearance of the external argument in active vs. passive sentences. Although a number of proposals were already moving in that direction, perhaps most notably Larson (1988) and Hale and Keyser (1993, 2002), arguably the most influential such proposal is Kratzer (1994, 1996), who proposed to label the functional head in question *Voice*, saying that this head ‘is at the heart of the phenomenon of voice’, and its properties ‘square well with traditional views of voice, too’ (Kratzer 1994: 118–119).¹ Indeed, the range of phenomena that have since been proposed to involve the Voice head does overlap quite a bit with things that have been traditionally referred to as voice phenomena. But the overlap is not complete: there are phenomena involving the Voice head that have not traditionally been thought of as voice, and traditional voice phenomena that arguably do not involve the Voice head that Kratzer and others had in mind. Thus, a chapter concentrating on voice (the class of phenomena) would have quite a different scope from a chapter concentrating on Voice (the syntactic head).

We have chosen the latter option: rather than deciding *a priori* what counts as ‘voice’ phenomenologically and discussing anything that potentially falls under the umbrella of that decision

¹Kratzer cites precedent in the literature for both the content of this head and terminology she adopted, but there is no doubt that her work played a central role in the way that linguists developed the notion of the Voice head and voice-related phenomena, even though her most-cited papers only hinted at an analysis of verbal passives.

empirically, we focus our chapter around the phenomena that have been analysed in terms of the properties of the Voice head (and the heads surrounding it). Thus, while voice phenomena have been central to the development of various syntactic theories, we focus on Voice within Minimalism. The topic is vast, and our hope is to give the reader a bird's-eye-view of the issues that have been connected to the morphosyntax of voice. In a sense, the properties of the Voice head as it has been used can be seen as a cover term for the three empirical domains in (2)–(4).

- (2) The interpretations of external arguments, and alternations in those interpretations
- (3) The linking or licensing of arguments, and alternations in those mechanisms
- (4) The morphological forms taken by verbal heads, and alternations in those forms

Thus, the decision to ground the scope of this chapter in this way does not restrict the relevance of our discussion to this line of theoretical work. Researchers in other frameworks can cash out the connections between these domains that we describe below in any number of ways.²

We see several advantages to this approach. First, it allows us to cover many traditional voice phenomena, while at the same time going deeper into how our understanding of those phenomena connects with general developments in syntactic theory. Second, it offers both a general framework for cross-linguistic research and an explicit explanation for why cross-linguistic comparisons can be challenging. Third, it grounds the topic of voice theoretically in a way that has served as an engine driving an enormous body of cross-linguistic work, which has gone (and continues to go) beyond traditional voice phenomena. Finally, it allows us a particular angle on what makes Voice special: to focus on Voice is to focus on the highest layer of the event structure domain, on the border between event structure and temporal/aspectual structure, where the highest and last argument may or may not be introduced.

The chapter is organised as follows. Section 2 discusses the Voice head itself and the syntactic, interpretative and morphological properties that have been ascribed to it. In doing so, we see how the Voice head enables us to understand not only actives and passives, but also non-active (mediopassive) voice, as well as certain verb types and alternations that do not fall under the traditional remit of voice, including unaccusatives, anticausatives and generic middles. Section 3 discusses the various ways that the Voice head is realised morphologically, including as a light verb, affix, and more complex realisations. Section 4 then looks at constructions that go beyond the canonical Voice alternations, but raise important questions about the function of Voice in the grammar. This includes configurations where Voice is embedded under other argument-structure-related functional material, and analyses positing that a secondary position for external arguments lurks below VoiceP in deponents, unergatives, and antipassives. Section 5 concludes with some broader remarks on the role of comparative work in our understanding of Voice in particular and argument structure more generally.

2 Syntactic and Semantic Properties of the Voice Head

In this section, we explore claims that voice-related phenomena can be attributed to a functional head called ‘Voice’ (sometimes called ‘v’—though in §2.1 we see that this choice is not always

²Readers interested in the typology of voice phenomena might consult Klaiman (1991); Kulikov (2011) or Zúñiga and Kittilä (2019). See also Legate (2021) for further discussion of these issues, and Roberts (2019: ch. 6), who proposes a hierarchy of parameters to account for the syntactic, morphological and semantic variation in passives and passive-like constructions cross-linguistically.

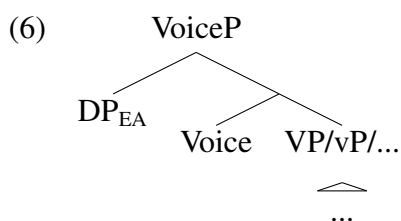
purely terminological). Because of the variety of different (often incompatible) assumptions that get employed when different theoreticians invoke a functional head ‘Voice’ or ‘v’, it is useful to separate out several different functions that Voice/v might be performing in any given language or analysis:

- (5) a. hosting an argument in its specifier
- b. forming a case/agreement dependency with an argument
- c. introducing causative semantics
- d. introducing the external argument’s thematic role
- e. being realised as voice morphology
- f. verbalizing a category-neutral root

Different linguists assume different sets of heads for these functions, and use overlapping terminology, so it is important to be clear for any given work what is intended. Moreover, Harley (2017), building on Pykkänen (2002, 2008), has argued that languages can vary as to whether they bundle (some of) these functions into one head, or use separate heads for some or all of them.

2.1 External Arguments

In research building on Kratzer’s original proposal, the external argument (‘DP_{EA}’) is introduced in SpecVoiceP. An active sentence with an external argument will therefore have a structure like (6). The external argument is integrated into the meaning of the verb phrase via the denotation of the Voice head (on which see §2.3) and its verb phrase complement.



If the clause has an unfilled subject position in a language which requires such a position to be filled, then the external argument, as the highest argument in the clause, usually becomes the subject. This is not necessarily always the case; Legate (2014: 47ff.) argues that in Acehnese *object voice* clauses, the external argument remains *in situ* and the internal argument skips over it to become the subject. Ershova (2019) proposes a similar derivation for active clauses in West Circassian. Nevertheless, the kind of derivation where an internal argument A-moves past a syntactically projected external argument is at best cross-linguistically rare, and requires some additional explanation for how locality is violated.

In the remainder of this subsection, we lay out a range of syntactic configurations in which the external argument is suppressed or absent, which necessarily involve some deviation from the structure in (6). We begin by discussing two ways of doing this: above the VoiceP level, or at the VoiceP level.³ We will show how these have systematically different properties, with the latter connecting to the analysis of anticausatives, unaccusatives, and generic middles, among other things.

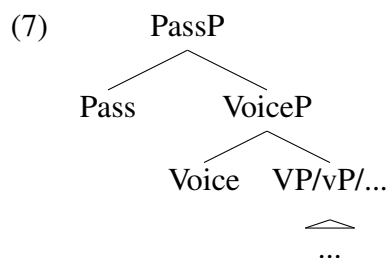
³We skip over the influential analysis of Baker et al. 1989 as it predates the Kratzerian Voice head.

2.1.1 Passives

As alluded to above, we take Voice to be special in that it sits at the border of the event-structure domain and the tense/aspect domain. It is the ‘last chance’ to introduce a core argument of the event denoted by the verb, and is widely thought to close off the ‘first phase’ of the clause (to borrow a term from Ramchand 2008). As such, it, in a sense, finalises the interpretation of the verb and its arguments. This characterisation of the Voice head allows us to distinguish two possible ways of forming a passive, both of which have been proposed for different languages or constructions.

To start, we understand the term *passive* here as referring to a construction where the external argument is always present semantically, but is either implicit or expressed as an oblique or PP. In principle, there are broadly two ways to build a passive: by adding something on top of a VoiceP, or by using a special subcategory of Voice, distinct from the one used in actives. The first case generally characterises a family of analyses of English-type passives, and the second case a family of analyses of ‘non-active’ or ‘medio-passive’ constructions, such as those found in Greek.

In the first category, there are a range of analyses that are quite distinct from each other in certain details. In one widely-adopted analysis, an additional Pass(ive) head merges with a specifierless VoiceP (Embick 2004; Bruening 2013; Schäfer 2017). This results in a structure like (7). In this kind of analysis, there is no syntactically-projected external argument, and any effects attributed to an ‘implicit’ external argument derive solely from the semantic contribution of the Pass and Voice heads.⁴



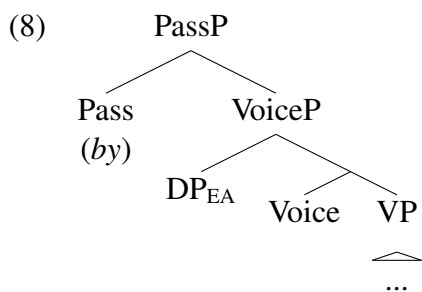
The next-highest argument within the VP/vP – if there is one – will be free to advance to an unfilled subject position without incurring a locality violation, since there is no external argument.

An alternative analysis, which retains the idea that the passive ‘adds to’ a VoiceP, is proposed by Collins (2005) (see also Bowers 2010). What’s different is that the external argument is syntactically projected in passives, just as it is in actives.⁵ In passives, a Pass head merges on top of VoiceP and Case-licenses the external argument; Pass can be pronounced as *by* (when there is a *by*-phrase) or it can be silent (when the external argument is itself silent).⁶

⁴Embick (2004) identifies ‘Pass’ as an Asp(ectual) head.

⁵The presence vs. absence of the external argument in these two structures is connected with differing views on the status of the implicit agent argument of passives – a debate we avoid for reasons of space.

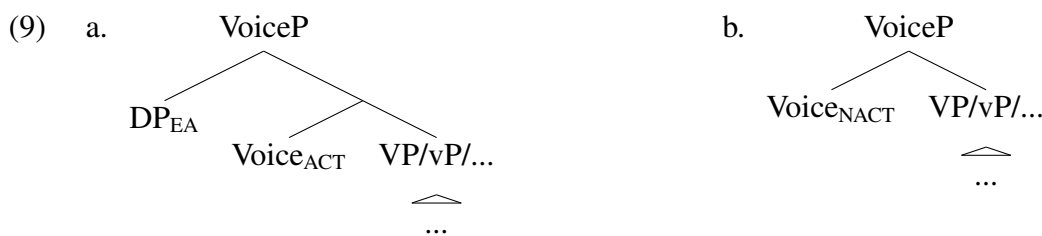
⁶What we call ‘Pass’, Collins calls ‘Voice’, and what we call ‘Voice’, Collins calls ‘v’. Changing the labels in this way makes the presentation clearer, and stays true to the function of each head as we have presented it.



In this analysis, a Part(icip)P constituent containing the verb and the internal argument raises to SpecPassP, thereby allowing the internal argument to move to the subject position without violating locality. Collins refers to this as a ‘smuggling’ derivation.⁷

Although distinct in many ways, both kinds of analysis converge on the conclusion that English-type passives involve two heads: a low head which provides a syntactic slot and thematic interpretation for the external argument, and a higher head which is involved with how the external argument is licensed (or not licensed). The core idea common to both is that passives ‘add to’ an already-built active structure. This is a feature rather than a drawback of these analyses of English-type passives. It predicts that any verb that can occur in the passive structure can also occur in the active structure (but not necessarily vice-versa (Postal 2010)), since the active VoiceP—at least up to the Voice head and its complement—is contained within the passive structure. This seems to be the correct result for English-type passives.

We find a second way of building passives in Greek, which has an alternation between active and ‘non-active’ (a.k.a. ‘mediopassive’) paradigms. Unlike in the analyses of passive given above, non-active voice has been argued to involve just *one* functional head in a given structure: the specifierless non-active Voice head (Voice_{NACT}), which replaces the active Voice head (Voice_{ACT}). The structures for active vs. non-active clauses, based on Alexiadou et al. (2015) and Schäfer (2017), are given in (9).



The different syntactic structures associated with English-type passives and Greek-type non-actives capture some of the differences between the two voices. For instance, Greek-like passives are not fully productive the way that English-like passives are. Certain verbs cannot appear in the non-active on the basis of either morphophonological factors, semantic factors, or pure lexical idiosyncrasy. Similarly, certain verbs can appear *only* in the non-active (see Zombolou 2004; Zombolou and Alexiadou 2013; Alexiadou et al. 2015 on Greek). Not all of the verbs that can appear in the non-active can get a passive interpretation. Some are instead interpreted as inchoatives/anticausatives:⁸

⁷See also Merchant (2013), who defends this kind of analysis on the basis of VP-ellipsis patterns across actives and passives, and Sigurðsson (2012), whose analysis has features of both of the above-cited approaches.

⁸Reflexive pronouns and clitics can behave in a very similar manner, as discussed below.

- (10) a. to pukamiso stegnothike apo to Janis b. i supa kaike
 the shirt dried.NACT by the Janis the soup burnt.NACT
 ‘The shirt was dried by Janis.’ ‘The soup burnt.’

(Alexiadou and Doron 2012: 15-18)

Non-actives in Greek-like languages can also have dispositional middle readings, reflexive readings, reciprocal readings, and more (see §2.3). This variability and interaction with the root is argued to be possible because Voice_{NACT} is sufficiently close to the verb root to interact directly with it. In the terms outlined earlier, it is at the border of the event structure domain, but it is still within it. By contrast the Pass head of English-type passives is beyond that border, and cannot interact in a direct way the verb root. Hence it is more productive, its meaning is more predictable and fixed, and it does not interact with particular verbs in idiosyncratic ways.

From this perspective, it is possible for a language to have both English-type passives and Greek-type non-actives. Languages known for these properties include modern Hebrew (on which see Kastner 2016, 2019b); ancient Indo-European languages like Classical Greek and Sanskrit; and Fula (Klaiman 1991). A Fula verb with active, mediopassive and passive forms is shown in (11).

- (11) a. o yiwii=ɲgel b. o yiiwake c. ɲgel yiiwaama
 3SG bathed.ACT=CL3 3SG bathed.MID CL3 bathed.PASS
 ‘S/he bathed it (the child).’ ‘S/he bathed.’ ‘It (the child) was bathed.’

(Kaufmann 2007: 1678)

In this section, we saw how the same (or similar) meaning (that of an English-type passive) can be associated with two different structures, but also how one of those structures can be associated with other meanings, including the inchoative/anticausative reading. Next, we discuss this latter reading, and the various structures with which it associates across languages, in more detail.

2.1.2 Anticausatives and Unaccusatives

Generally ‘anticausative’ refers to the intransitive alternant of a verb form which alternates between a causative transitive and change-of-state intransitive, as in the German examples in (12)–(13).⁹ Though as these examples show, the class of anticausatives is not syntactically uniform, even within one language. In German, we find both ‘marked’ anticausatives, which have the *sich* reflexive element, and ‘unmarked’ anticausatives, which lack it. As for ‘unaccusative’, this is an umbrella term that includes both anticausatives (which alternate with transitives) and non-alternating intransitive verbs whose subject is an internal argument (e.g. *arrive*, *emerge* in English; see Irwin 2012).

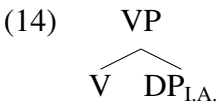
- (12) a. Hans öffnete die Tür. b. Die Tür öffnete **sich**
 Hans opened the door the door opened **REFL**
 ‘Hans opened the door.’ ‘The door opened.’ (Alexiadou et al. 2015: 71)

⁹For some linguists (e.g., Haspelmath 1993, 2016), the term ‘anticausative’ is reserved for constructions where some overt morphological marker appears on the intransitive variant of the causative alternation, as in (12). Here we refer to both ‘marked anticausatives’ like (12) and ‘unmarked anticausatives’ like (13) as types of anticausative – see Schäfer 2008 for a more complete taxonomy of anticausatives.

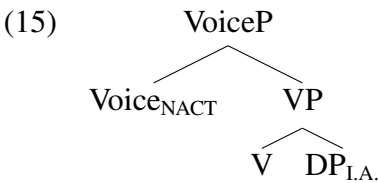
- (13) a. Hans zerbrach die Vase. b. Die Vase zerbrach.
 John broke the vase the vase broke
 ‘John broke the vase.’ ‘The vase broke.’ (Alexiadou et al. 2015: 71)

While passives have at least a semantic external argument, anticausatives and unaccusatives (henceforth just ‘anticausatives’) do not have even that: there is no external argument syntactically or semantically.

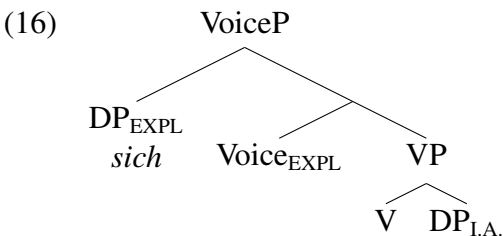
Anticausatives can be constructed in various ways. The simplest way is by merging no Voice head at all, as in (14). Alexiadou et al. (2015) apply this analysis to anticausatives that are morphologically unmarked (such as (13)), as well as ‘pure unaccusatives’ that don’t alternate, like *arrive*.



An alternative option is to build (14), and then merge a non-active Voice head ($\text{Voice}_{\text{NACT}}$) – a Voice head with nothing in its specifier. This, schematised in (15), is Alexiadou et al.’s analysis of *marked* anticausatives in Greek-type languages. It is the same head as in (9b), implicated in non-actives with various kinds of interpretation, including the anticausative interpretation (see (2.1.1)) but also passive and middle interpretations.



The final, most syntactically-complex way to form an anticausative is to merge a syntactically-transitive but semantically-inert Voice head, notated in (16) as ‘ $\text{Voice}_{\text{EXPL}}$ ’. Being syntactically-transitive means that $\text{Voice}_{\text{EXPL}}$ must take a DP in its specifier; but being semantically inert means that it cannot assign a thematic role to this DP. Thus the kinds of things that occupy $\text{SpecVoice}_{\text{EXPL}}\text{P}$ are reflexive pronouns, such as *sich* in (12). This structure has been argued to underlie constructions involving a reflexive pronoun or clitic across Indo-European (Schäfer 2008, 2017; Wood 2015).



In this way, Voice can appear in a variety of different syntactic configurations with quite similar semantic consequences. There is a large literature on why particular roots in a given language might associate with different anticausative syntactic structures available in that language. Alexiadou et al. (2015) and Schäfer (2017) essentially claim that, while a language’s lexicon may display certain pragmatically-influenced trends, the different ways of forming anticausatives do not correspond to systematic truth-conditional differences.

2.1.3 Dispositional Middles

One final interpretation of these structures that we will briefly discuss is the ‘dispositional’ or ‘generic’ middle. In languages like Greek with non-active voice morphology, this is one of the available interpretations of non-active structures, as illustrated in (17b).

- (17) a. o Janis diavase to vivlio
the Janis read.ACT the book.ACC
‘Janis read the book.’
b. afto to vivlio diavezete efkola
this the book read.NACT easily
‘This book reads easily.’ (Alexiadou and Doron 2012: 16)

In a dispositional middle, the external argument is suppressed, and the resulting sentence ascribes a dispositional state (a state about capability, potential or tendency) to the internal argument theme (Lekakou 2005). In Greek, their syntax and morphology has caused them to be analysed as sharing the non-active syntactic structure in (9b)/(15). In languages like German, a dispositional middle interpretation may be achieved with the reflexive pronoun *sich*. Schäfer (2008) argues that this involves the structure in (16), the same structure employed in marked anticausatives.

For reasons of space, we cannot go into detail about the morphosyntactic and semantic properties of generic middles (on which see Keyser and Roeper 1984; Ackema and Schoorlemmer 1995; Stroik 1999; Lekakou 2005, a.m.o.). What is important is the fact that there are various morphosyntactic routes to middle interpretation, just as there are various routes to anticausative interpretation and passive interpretation. This highlights two themes of this section. First, multiple different structures may yield the same or similar semantic interpretation. Second, those different structures involve manipulating the formal and interpretive properties of the Voice head at the edge of the event structure domain.

2.2 Case-Marking and Agreement

Voice alternations often involve case alternations. In the canonical passive, for example, the accusative object of the active corresponds to the nominative subject of the passive. The same pattern holds for canonical (anti)causative alternations. The relationship between having a syntactically projected external argument and the assignment of accusative case was famously stated by Burzio (1986) and became known as ‘Burzio’s Generalisation’. The standard analysis of this generalisation in the Minimalist Program is to assume that the active Voice head also assigns accusative case. When the external argument is not there, it is because there is no active Voice head, or no Voice head at all, so accusative case is not assigned. Case-assignment in the Minimalist Program is sometimes assumed to stem from an Agree relation, and therefore object agreement is also sometimes seen as a reflection of this general relation (Chomsky 2000, 2001).¹⁰

Languages with ergative case patterns present another way that Voice alternations are connected with case-marking patterns. According to one kind of analysis, ergative is assigned by the Voice head to the external argument in its specifier (Legate 2002, 2008, 2012b; Aldridge 2008, 2012). That is, the Voice head both hosts the external argument in its specifier *and* assigns case

¹⁰In case-rich languages, some verbs may assign a non-accusative case to their objects. When these verbs are passivised, the case assigned in the active is often, but not always, preserved in the passive (for recent analyses, see H.Á. Sigurðsson 2012; Alexiadou et al. 2014; Anagnostopoulou and Sevdali 2015; and E.F. Sigurðsson 2017).

to it – an idea based in Woolford’s (1997) proposal that ergative is inherently associated with the external argument. This connection between Voice and ergative case is similar to the oft-proposed connection between Appl(icative) and dative case: an argument is both introduced and assigned dative case by the same functional head (Cuervo 2003; McFadden 2004).

However, the connection between Voice and case has also been argued to be quite indirect, and there are alternative approaches to ergative case (Baker and Bobaljik 2017). Support for a less direct approach in the context of nominative-accusative languages comes from the fact that contrary to Burzio’s Generalisation, there are constructions that lack an external argument but still seem to have accusative case. Consider the Icelandic examples (18). In (18a), there are two accusative DPs, ‘the car’ and ‘this route’. In (18b), the verb is passivised, and while ‘the car’ become nominative, ‘this route’ remains accusative. In (18c), when ‘this car’ is removed, ‘this route’ becomes nominative (and agrees with the passive participle in gender). (18c) shows that a DP like ‘this route’ is subject to voice-based case alternations, and yet, (18b) shows that it can be accusative even when the verb is passive.

- (18) a. Hann keyrði bílinn þessa leið.
 he.NOM drove car.the.ACC this route.ACC
 b. Bíllinn var keyrður þessa leið.
 car.the.M.NOM was driven.M.PASS this route.ACC
 c. Þessi leið hefur aldrei verið keyrð.
 this route.F.NOM has never been driven.F.PASS

(Zaenen et al. 1985: 474–475)

If accusative case is only assigned by a Voice head that introduces an external argument, then we do not expect accusative case in examples like (18b).

Yet another challenge comes from an Icelandic construction discussed by Maling and Sigurjónsdóttir (1997) that looks morphologically like a passive, and seems to have no external argument, but still assigns accusative case.

- (19) Það var lamið mig á leikvælinum.
 EXPL was hit me.ACC on playground.the
 ‘I was hit on the playground.’

Although they referred to it as a ‘new passive’ construction, they later argued that in fact, it is not passive at all: it is an impersonal construction with a silent but syntactically projected external argument (Maling and Sigurjónsdóttir 2002). If that analysis is correct, then the construction falls strictly outside of the scope of Voice phenomena.

However, the impersonal analysis has been contested (see e.g. Eythórsson 2008; Jónsson 2009), and the subsequent debate revealed and brought attention to several important things. First, it is not always straightforward to distinguish a passive from an impersonal, as the two kinds of construction share many syntactic, semantic, and functional properties.¹¹ But understanding the distinction is crucial to our understanding of Voice. Second, the way that Maling and Sigurjónsdóttir (2002) made their initial argument was to point out that Ukrainian and Polish seem to have similar constructions, but in Ukrainian the construction is passive, whereas in Polish the construction is an

¹¹The distinction between impersonal and passive becomes even blurrier in analyses where passives have syntactically projected external arguments (as in Collins 2005; Landau 2010).

active impersonal. This contrast highlights the challenge of identifying what a theory of Voice should account for in the first place.

Third, this debate has led to analyses that fall between the traditional dichotomy of ‘passive, but with accusative case’ versus ‘active, but with a silent external argument’. H.Á. Sigurðsson (2011) and Schäfer (2012) proposed that ‘accusative passives’ involve a special Voice head, equipped with phi-features that prevent A-movement of the internal argument and connect (in different ways) to accusative case assignment. H.Á. Sigurðsson (2011: 174) referred to such cases as ‘unusually active’ passives. Another line of thought argues that some kind of structural external argument may be present without being a fully-fledged DP argument. Legate (2014) and E.F. Sigurðsson (2017), for example, argue that a syntactically active bundle of phi-features may be present in VoiceP, and these features, being smaller than a DP, make a construction share properties with both actives and passives. E.F. Sigurðsson and Wood (2021) refer to such constructions as ‘quasi-active’.

A similar set of considerations has arisen for apparent unaccusatives that have accusative case on the sole argument. H.Á. Sigurðsson (2012) argues that such constructions are derived with special Voice heads. Lavine and Babby (2019) and Šereikaitė (2020) have argued that constructions of this sort arise when Voice is a separate head from a verbalizing little *v*, and therefore *v* can assign accusative case regardless of the properties of Voice. An alternative set of analyses, however, has argued that cases like this involve a silent external argument (Haider 2001; Platzack 2006; Schäfer 2008, 2012; Wood 2017). It is generally pointed out that such examples have special interpretive properties that suggest the presence of a causer. Wood (2017) emphasises that constructions like this in Icelandic never show the kinds of intransitive morphology that are characteristic of constructions that truly lack an external argument.

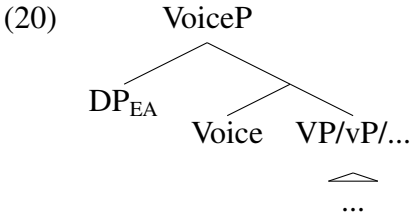
Two broader points emerge from all of this. First, while Voice alternations very often involve case alternations, the relationship between case and Voice is likely indirect, at least in many cases. If Voice heads do assign case, clearly they can vary as to what cases they assign, and when they assign them, both across and within languages. Second, it is not straightforward to determine what morphosyntactic phenomena should be attributed directly to Voice, and what should be reduced to other factors. This second point is in fact crucial in cross-linguistic comparison. Consider, for example, that Turkish was once raised as a rare case of a language with ‘double passives’ (a second round of passivisation of an already passive verb). If this is correct, our theory of Voice clearly has to be modified. However, Legate et al. (2020) have shown that the construction in question is really an impersonal stacked on top of a passive. The question of whether true double passives exist will of course bear in a fundamental way on our general understanding of how Voice works, and this in turn depends on our ability to distinguish a passive from an impersonal.¹²

2.3 Interpretation

The Voice head is traditionally considered the locus of the ‘agent’ role held by canonical transitive subjects.¹³ A Voice head with an external argument in its specifier (as in (20), repeated from (6)) will introduce the role that is saturated by this argument.

¹²See Koopman (2012) for an analysis of Samoan ergative case as resulting from a kind of double passive derivation.

¹³Ramchand (2008), who emphasises aspectual structure in the decomposition of verbs, uses the more general notion of ‘initiator’, and labels what we call VoiceP as ‘InitP’. Similarly, Borer (2005) uses the term ‘Originator’, which is connected to aspectual structure through an EP (Event Phrase) rather than a VoiceP, and argues that ‘argument roles are by and large epiphenomena’ (Borer 2005: 220).



However, as we have seen, Voice heads need not introduce an argument in their specifier, and they need not be associated with any kind of thematic role. In this subsection, we discuss the possible interpretations of Voice, and how they correspond to the different syntactic structures that involve Voice. A key theme that emerges is that the interpretation of a Voice head may depend on its immediate syntactic and semantic *context* – an idea that is sometimes called *contextual allosemy* (Marantz 2013; Wood 2015, 2016, 2023; Myler 2016; Kastner 2016, 2017; Wood and Marantz 2017; Tyler 2020).

We start by considering some other possible interpretations of the Voice head when it has an argument in SpecVoiceP. This first requires that we think about what exactly is the role that Voice assigns. Dowty (1991) influentially proposed that ‘agent’ (and, correspondingly, ‘patient’) is a proto-role defined by a cluster of entailments, none of which is a necessary condition for agenthood. Such entailments include volitionality, sentience, and an asymmetry in affectedness (the patient is affected, the agent is not). The arguments of different lexical items take on different numbers of agent entailments or patient entailments and (broadly) the argument with the most agent entailments get assigned to the subject position. For instance, the subject of *murder* has more of Dowty’s agent entailments than the subject of *kill*, but they both get assigned to the subject position:

- (21) a. The falling rock killed the man.
 b. *The falling rock murdered the man.

If the variation in the entailments of the ‘agent’ role assigned by different verbs was a solely lexical matter – that is, if the difference between the entailments of the subject of *kill* and the subject of *murder* had no import beyond the lexicon – then there would perhaps be not much more to say as far as this chapter is concerned. But some theorists have argued that fine-grained distinctions in the semantics of the external argument role *are* of syntactic relevance, and, correspondingly, can vary across languages.

Many theorists distinguish between an *agent* role and a *cause* role (Folli and Harley 2004, 2007). Evidence that these distinctions are syntactically relevant comes from contrasts like the following:

- (22) a. The guests ate (away) the cake.
 b. The sea ate *(away) the beach.

Here, the verb *eat*, by itself, requires an agent subject (which in this instance is equivalent to an animate subject), but the addition of *away* alters the syntactic structure of the clause, removing the agent requirement and allowing the subject to be an inanimate *cause* instead. It seems that whether an external argument is assigned an agent vs. a cause role (or some other role, e.g. Kratzer’s 1996 *state-holder* role) is determined by a combination of the properties of the argument DP, the lexical verb, and the syntactic configuration.

The distinction between an agent and a cause role has also been implicated in the cross-linguistic variability in how causatives are interpreted. In English, causative verbs like *burn* entail (or strongly implicate) that the theme argument is affected. The Mandarin Chinese translation-equivalents of these verbs also have so-called ‘zero-change’ and ‘partial change’ readings:

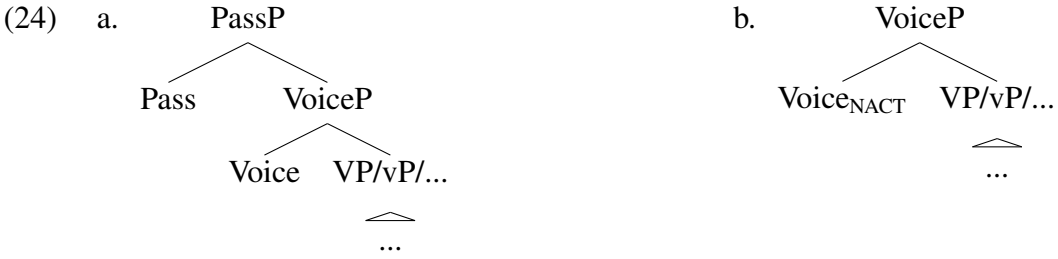
- (23) a. Yuēhàn shāo le tā-de shū, dàn gēnběn méi shāo-zháo.
 Yuehan burn PFV 3SG-DE book but at.all NEG.PFV burn-ignite
 ‘Yuehan burned his book, but it didn’t get burned at all.’
 (Martin and Demirdache 2020: 1216)
- b. Zhāngsān shāo-le nèi-běn shū kě shū méi quán shāo-zháo.
 Zhangsan burn-PFV that-CL book but book NEG complete burn-reach
 ‘Zhangsan burnt that book, but the book didn’t get burnt completely.’
 (Martin and Demirdache 2020: 1202)

However, these readings become unavailable when the external argument is a non-agent (Martin 2020). Martin (2019) links the (un)availability of these readings in different verb classes across languages to the different way in which Voice may combine with its specifier and its VP complement. Some linguists (e.g. Folli and Harley) propose that we therefore need multiple subcategories (‘flavours’) of Voice, each of which assigns a different role and is licensed in different syntactic environments.

However, the syntactic subcategories proposed do not in general get distinct, identifiable realisations in morphology, which is surprising in a realisational theory of morphology (Harley 2009). An alternative approach that addresses this issue is thus that the denotation of a terminal node is not necessarily fixed, but rather is sensitive to the environment in which it appears. The syntax-semantics mapping is therefore analogous to the syntax-morphology mapping. In the morphology, a single underlying syntactic terminal may be realised in different ways according to context; this is allomorphy. In the semantics, a single underlying syntactic terminal may be interpreted in different ways according to context; this is allosemy. One advantage to this view is that it avoids a proliferation of morphosyntactically-identical functional heads which are distinguished only by their interpretation. As we see now, it also provides a way of accounting for the various interpretations of *non-active* Voice heads (mentioned in §2.1.1).

A Voice head without an external argument in SpecVoiceP may still introduce an agent role semantically, but this role cannot be immediately discharged to an argument, since there is no such argument. In a language with English-type passives (schematised in (24a)), it may be that the role is introduced by Voice but left unsaturated, and is either (a) existentially-bound by a higher Pass head or (b) saturated by an adjoined agent phrase. Alternatively, in a language with Greek-type non-actives (as in (24b)), the thematic role may be introduced and existentially bound within the denotation of the non-active Voice head. In both cases, where there is no agent phrase, the existentially-bound agent role leads to the impression that there is an ‘implicit’ agent argument in the clause.¹⁴

¹⁴Not all linguists admit the possibility that a thematic role may be introduced by one head (e.g., Voice), and not saturated until composition with a later head (e.g., Pass). However, for those linguists that do allow this configuration – a.k.a *delayed saturation* or *delayed gratification* configurations – a variety of other voice-related phenomena can be analysed along these lines. See Wood (2014, 2015); Myler (2013, 2016); Kastner (2019b); Tyler (2021) for recent work that makes use of this possibility.



When a *by*-phrase is present, Voice’s thematic role is not existentially bound, but is instead transferred to the *by*-phrase (Bruening 2013).

However, non-active Voice heads need not introduce a thematic role at all. This is the analysis of the semantically-expletive Voice head that is employed in the construction of anticausatives (see §2.1.2) (Alexiadou et al. 2015). In fact, by allowing non-active Voice heads to have *either* interpretation, depending on context, we can account for the variable anticausative and passive interpretations of non-actives (see also Kallulli 2006, 2007). But if we look at a particular language, we see that non-actives show a broader range of interpretations than that. We have seen in this chapter that Greek non-active Voice can have passive (10a) or middle (17b) interpretation. But as shown in (25), it can also have a range of further interpretations: anticausative, reflexive and reciprocal.¹⁵ In some languages with non-active voice, we also find ‘feels like’ interpretations, as in (26a), reflexive benefactives, as in (26b), and other interpretations (Oikonomou and Alexiadou 2022).

- (25) a. I Ana gratzunistike.
the Ana scratch.NACT.PST.3SG
‘Ana got scratched.’ (anticausative)
- b. I Ana tsimbithike
the Ana pinch.NACT.PST.3SG
‘Ana pinched herself.’ (reflexive)
- c. I Ana ke o Petros agliastikan
the Ana and the Petros hug.NACT.PST.3PL
‘Ana and Peter hugged.’ (reciprocal)
(Oikonomou and Alexiadou 2022: 4)

- (26) a. Anës i lexo-het një libër.
Ann.DAT her.CL.DAT read.NACT.PRES.3SG a book
‘Ann feels like reading a book.’ (Albanian)
(Oikonomou and Alexiadou 2022: 4)
- b. brāhmaṇaḥ prayājaṃ yaja-te
priest.NOM sacrifice.ACC worship.PRES-3SG.MID
‘The priest performs the sacrifice (for his own sake).’ (Vedic Sanskrit)
(Kulikov 2011: 391)

However, the interpretation of Voice_{NACT} does not vary freely. Some verbs allow multiple possible interpretations for their non-active form, while others allow just one. The interaction between

¹⁵See Spathas et al. (2015) on the interaction between the reflexive reading of non-active Voice and *afto*-prefixation.

the verbal root and the interpretation of the non-active form is crucial to the theory of contextual allosemy. As discussed in section 2.1.1, the root is able to interact with the interpretation of the non-active form because Voice_{NACT} and the root are in a sufficiently local relationship. By contrast, the Pass head in (24a) is too far from the verb root, so an English-type passive always gets its interpretation from the corresponding active.

3 Morphological realisation of the Voice Head

Having reviewed the syntactic and semantic alternations that have been attributed to the Voice head, we now turn to the various ways that Voice has been argued to be expressed morphologically. First we discuss the most ‘straightforward’ way in which a Voice head could be realised – as its own morpheme (§3.1). We then discuss some more complex manners of realisation, including the effects of contextual allomorphy with the root and with the higher inflectional domain (§3.2), and the role of syncretism (§3.3).

One thing that becomes clear in this section is how the highly variable morphological realisation of Voice across languages make cross-linguistic comparison quite difficult. The vagaries of morphological spellout serve to blur and obscure the crisp syntactic distinctions that we have been describing so far.

3.1 Voice as Its Own Morpheme

The most transparent way to realise the Voice head is as its own morpheme – an affix or perhaps a standalone light verb. The Creek verb in (27) shows that both the transitive and intransitive alternant in the causative alternation may be realised as their own suffix – plausibly, the suffixes *-ic* and *-k* realise active and non-active Voice heads respectively.

- (27) *hol-ic-ita* ‘make sore’
hol-k-ita ‘be sore’ (Creek, Hardy 1994)

Similarly, the morphological asymmetry of most active-passive alternations follows from the syntactic structure shown in §2.1.1. The passive involves more syntactic structure than the active (e.g. an additional functional head Pass), and this is reflected in how, generally, the passive involves morphological marking that is not present in the active (Haspelmath 1990).

Additionally, recall that anticausative forms of verbs, being unaccusative, need not have a Voice head at all (as in the structure in (14)). Therefore alternations between an unmarked anticausative form and a marked causative form, like that in (28) from St’át’imcets (Salish), can be transparently related to plausible underlying syntactic structures – the unmarked anticausative in (28a) has no Voice, the marked causative in (28b) does have Voice.

- (28) a. qám̄t=kan
 get.hit=1.SG.SU
 ‘I got hit.’
 b. qám̄t-š-túm̄x-aš ta=k’óλ̄h=a
 get.hit-CAUS-1SG.OBJ-3ERG DET=rock=EXIS
 ‘The/a rock hit me.’ (Davis and Matthewson 2009: 1102)

However, the morphology-syntax mapping is not always so transparent, and in the languages of the world we find both labile (morphologically-undifferentiated) alternations, and alternations

where the intransitive alternant is marked, and transitive alternant is unmarked (see Haspelmath 1993 for typological discussion). An alternation of this latter type is demonstrated by the Creek verb in (29) – additionally, German marked anticausatives, as in (12), exemplify this also.

- (29) *folot-ita* ‘turn (tr.)’
folot-k-ita ‘be turned/turn (oneself)’

According to standard syntactic assumptions, the unmarked transitive alternant in cases like this *must* involve a Voice head. But since the transitive alternant is unmarked, that Voice head must be phonologically null.

With phonologically-null Voice heads at our arsenal, the range of analytical options for any given language expands considerably. An apparent causative or active morpheme may not be the realisation of Voice, but could instead be the realisation of a verbalizing head ‘*v*’ (Pykkänen 2002, 2008; Harley 2013), or the realisation of a dedicated ‘Cause’ head (Myler and Mali 2021), or something else entirely (e.g. Volpe 2005). Indeed, when doing cross-linguistic comparison, we cannot assume that voice-related morphemes in two different languages, with apparently-similar functions and distributions, necessarily correspond to the same functional head.

Some scholars have argued that Voice can, sometimes, be spelled out as its own independent word, separated out from the lexical verb. For instance, Haddican (2007), Thoms (2010) and Baltin (2012) argue that so-called ‘British *do*’, as in (30), is a realisation of Voice/*v* with a missing or ellided complement.

- (30) Terry will eat pasta and Ines will do, too. (Haddican 2007: 539)

Similarly, Sybesma (2021), building on proposals by Sybesma (1999) and Huang et al. (2009), proposes that (active) Voice in Mandarin Chinese is realised by a standalone element *bǎ*. (31) shows that *bǎ* may be separated from the lexical verb in some ‘OV’ constructions.

- (31) Tā bǎ wǒ-de bóshì lùnwén kàn-wán-le.
 3SG BA my doctor thesis read-finished-PRF
 ‘He finished reading my dissertation.’ (Sybesma 2021: 48)

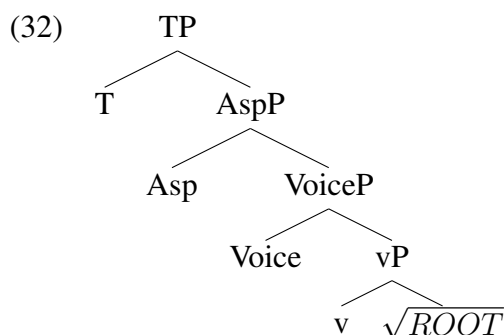
However, the picture becomes more complicated when we consider light or ‘semi-lexical’ verbs, which often play a part in voice phenomena and alternations across languages. For instance, light verbs such as French *faire* and English *make* are involved in the formation of causatives, yet carry some lexical content too.¹⁶ Similarly, so-called non-canonical passives, such as English *get*-passives or Mandarin *bei* or *gei*-passives, also involve semi-lexical verbs (see Biggs and Embick 2022 and the articles in Alexiadou and Schäfer 2013). These verbs are often analysed as involving more syntactic structure than just the Voice head, but not always. By way of example, Lundin (2003) argues that a special flavour of Voice, which derives an ‘indirect causative’ (with no overt embedded causee), is realised in Swedish as *låta* ‘let’, but that in other uses, *låta* ‘let’ is an ordinary lexical verb (see also Folli and Harley 2007 on Italian; Torrego 2010 on Spanish; Wood 2011 and E.F. Sigurðsson and Wood 2021 on Icelandic; and Pitteroff 2015 on German). Similar analyses have been proposed for verbs meaning ‘get’ in Scandinavian languages (Taraldsen 2010; E.F.

¹⁶See also Kayne (2010), proposes that silent variants of such light verbs are present in canonical causative alternations.

Sigurðsson and Wood 2012 and Wood and E.F. Sigurðsson 2014). And a further example comes from Folli and Harley’s (2013) analysis of Italian: they propose that *v* (which for them serves the function of the Voice head) is realised as one of three different light verbs in constructions where the ‘lexical’ verb is nominalised and occupies an object position.

3.2 More Complex Realisations of Voice

Although Voice can be directly realised as a simple affix or separate word, we have already alluded to several cases where the expression of Voice distinctions may also involve nearby heads. Voice may be sensitive to their properties, or they may be sensitive to the properties of Voice. The tree in (32) (omitting specifiers), based on Merchant (2015), is a fairly mainstream representation of the syntactic environment that surrounds Voice. Nearby functional structure, and the root, can be implicated in the realisation of the Voice head.



For example, Wood (2023) proposes that the Icelandic suffix *-na* is really the expression of the verbaliser *v*, in the context of a specifierless Voice head; Ranero (2021: 97–102) argues for this kind of analysis of a number of voice morphemes in Kaqchikel. Passive suffixes that resemble participles are often argued to be realisations not of Voice, but of Asp or similar heads. Myler (2014, 2016) proposes that English *have* is a light verb which realises a little *v* head in a way that is sensitive to the features of Voice. In this way, *have* does not realise Voice directly, but its expression does reflect the features of the Voice head.

As noted above, Voice alternations are sometimes expressed as adjustments to a verb root. The difference in English between transitive *raise the flags* and intransitive *the flags rise* has been suggested to be the adjustment of one root on the basis of whether Voice is transitive or expletive. This kind of contrast is quite limited in modern English, but is more robust in other Germanic languages (Schäfer 2008; Wood 2015). Perhaps a more extreme example comes from Semitic languages, which have distinct ‘root-and-pattern’ morphology. There, distinct sets of vowels, expressing functional contrasts, are interspersed with the consonants of lexical roots. In verbs, the vowel patterns are sometimes analysed as realisations of Voice (and other nearby heads), though the precise details of the implementation vary widely (Arad 2005; Wallace 2013; Kastner 2019a).

The realisation of Voice is very often tied up with the realisation of ϕ -agreement. Sometimes this is an ‘indirect’ realisation. For example, in languages like Modern Greek, Ancient Greek and Latin, middle and active voice are realised with different inflectional paradigms, which feature portmanteau suffixes that simultaneously express voice and subject agreement (as well as other categories like tense). Merchant (2015) and Grestenberger (2016) propose analyses in which T bears subject agreement features, and Voice is sufficiently local to T to allow the expression of Voice-T portmanteaux (see Embick 2000; Halle 2019 for analyses of Latin passive morphology).

But in some analyses, the Voice head itself carries ϕ -features which are subsequently realised. For instance, Legate (2012a) argues that in the Acehnese, Voice carries the ϕ -features of the external argument, and these are spelled out in both active and passive clauses:

- (33) a. Uleue nyan di-kap lôn.
 snake that 3FAM-bite me
 ‘The snake bit me.’
 b. Lôn di-kap lé uleue nyan.
 I 3FAM-bite by snake that
 ‘I was bitten by the snake.’ (Legate 2012a: 497)

Tyler (2019) proposes a similar analysis of agentive clitics in Choctaw – though he proposes that the clitics are complex heads of category D that attach to Voice, rather than ‘bare’ bundles of phi-features.

Voice can also carry the phi-features of an *internal* argument – where these features are expressed, this generally looks like object agreement. And as above, this may involve the direct realisation of a Voice head carrying valued phi-features (Chomsky 2000, 2001; Baker 2012), or the attachment of an object clitic to the Voice head (Harizanov 2014; Kramer 2014).¹⁷

Allowing Voice to carry morphologically-expressible phi-features opens up further analytical options. For instance, in Romance and Slavic languages, where anticausatives may be expressed with reflexive pronouns or clitics, various authors have argued these reflexive clitics are realisations of Voice (Labelle 2008; Armstrong and MacDonald 2021a; McGinnis 2022).¹⁸ A particularly interesting use of phi-bearing Voice comes from Oxford’s (2019) analysis of inverse phenomena in Algonquin. He argues that Voice generally carries the features of the object, which are spelled out. However, he proposes when Infl and Voice agree with the same argument, then the phi-features on Voice are deleted, and Voice is realised as a morpheme that we call the ‘inverse’ marker.¹⁹

3.3 Syncretism

A major issue in Voice-related morphology is the fact the morphemes involved are often multifunctional, and may appear in multiple different structures, or with multiple different meanings. For instance, we saw in section 2.1.1 that non-active morphology in languages like Greek may have multiple different interpretations. To give another example, the *-ed*-participle that forms the English passive is also used to form active perfects, stative adjectives (sometimes called adjectival passives), and resultative adjectives. These phenomena both fall under the term ‘syncretism’, though they may call for quite different analyses.

One approach to syncretism is to assume a single syntactic structure, which has multiple ways of interpreting it. The discussion of non-actives in §2.1.1 takes this approach (although other approaches to the non-active do exist, see e.g. Alexiadou and Doron 2012). The technology of contextual allosemy (see §2.3) enables this kind of analysis, with one-to-many mappings from syntax to semantics. Another approach to syncretism is to assume that there are multiple syntactic structures, which are morphologically neutralised. Embick’s (2003; 2004) influential analysis of English passive participles takes this latter approach. He assumes that participial inflection (an Asp head) can

¹⁷We do not engage with the lively debate on how object agreement should be distinguished from object clitic-doubling – see Yuan (2021) for a recent overview.

¹⁸See the papers in Armstrong and MacDonald (2021b) for a range of views on Romance reflexive clitics.

¹⁹See Oxford (2022) for an updated version of this analysis.

be attached to verbal structures of different sizes. When it attaches to a large verbal structure, the result is a verbal passive participle; when it attaches to a smaller structure, the result is an adjectival passive participle.

There are more kinds of syncretism in the Voice domain than we can discuss here (causative/applicative syncretism in particular, on which see Jerro 2017 and Franco 2019). Oikonomou and Alexiadou (2022) is a recent attempt to explain a multitude of Voice syncretisms in a ‘unified structures’ approach.

4 Beyond Canonical Voice Alternations

Once we have an understanding of how variation in the properties of Voice can lead to variation in canonical transitivity alternations, we open up the possibility of deriving the properties of numerous other constructions as well. In this section, we briefly outline just a sample of constructions that have been approached in this way, as a way of illustrating the myriad possibilities that exist.

4.1 Causatives

In many languages, verbs can be *causativised*. Typically a causative morpheme is added to the verb, and a new causer argument becomes the subject. The old subject, now a ‘causee’, is demoted to object or is made oblique. A simple causative, turning an unergative intransitive verb into a transitive verb, is shown in (34).

(34) Causative in Choctaw

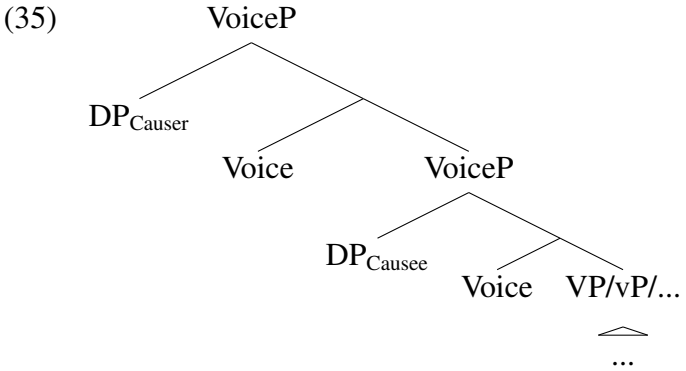
- a. Hattak-at taloowa-tok.
man-NOM sing-PST
‘The man sang.’
- b. Abanopoli-yat hattak taloowa-**chi**-tok.
preacher-NOM man sing-CAUS-PST
‘The preacher made the man sing.’

(Broadwell 2006: 128)

The literature on causatives is vast and we cannot do it justice here. What is relevant in the current context is that as our understanding of Voice evolves, the properties of other constructions, such as causatives, can be seen in a new light, and captured in part as a consequence of a theory of Voice.

Some alternations between causative and non-causative verbs can be analysed as causative alternations of the type discussed in §2.1.2. However, alternations cannot be analysed in this way when the causativised verb stem already has an external argument, as in (34b). A popular analysis of this latter kind of causative is that the causative affix is the spellout of a causative verb (Miyagawa 1984; Marantz 1993) to which the lower verb has raised. This higher verb was later identified as Kratzer’s Voice head (Harley 1995, 2008), leading to an analysis like (35), wherein one Voice head embeds another.²⁰

²⁰In some analyses, a Voice head can directly select for another Voice head as its complement (Nie 2019; Tyler 2021). Other linguists assume that other heads intervene between the two Voice heads (Harley 2013; Myler 2016).

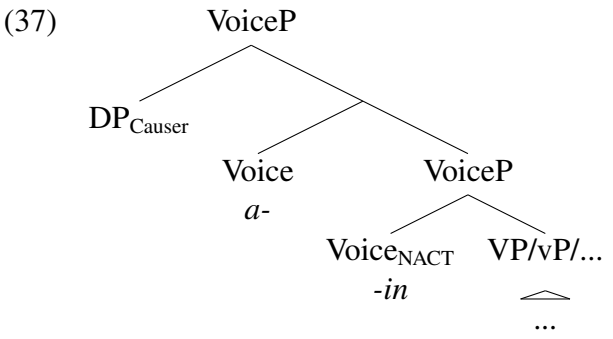


In this kind of analysis, the higher Voice head is too far away from the lexical verb root to be realised by a lexically-conditioned allomorph (Harley 1995; Arad 2003; Embick 2010; Marantz 2013; Moskal 2015; Harðarson 2018), so it always takes a predictable ‘elsewhere’ form (e.g. Choctaw *-chi*, in (34b)). The lower Voice head, however, is close enough to the verb root to be realised by lexically-conditioned allomorphs, including \emptyset . But if the verb root does not call for any special allomorph, then the lower and higher Voice heads might both be realised by the ‘elsewhere’ form, leading to apparent causative recursion, as in Japanese examples like (36) (Kuroda 1993).

- (36) Hanako-ga Taroo-ni yotei-o aw-(s)ase-sase-ta.
 Hanako-NOM Taro-DAT schedule-ACC match-CAUS-CAUS-PST
 ‘Hanako made Taro match the schedule.’ (Miyagawa 2012: 199)

Some have argued that true (syntactic) ‘double causatives’ are unattested (Key 2013), while Nie (2022) argues that there is no upper limit on causative iteration in principle.

Not all causatives involve the simple embedding of one active Voice head under another. Nash (2020) shows that in Georgian causativised transitives, the causative Voice head *a-* takes as its complement a *non-active* (i.e. mediopassive) Voice head *-in*, as in (37).



This non-active Voice head cannot introduce an external argument in its specifier, explaining why causatives of transitives may appear with no syntactically-projected causee argument, as in (38). And when causees *do* appear, Nash argues that they are introduced in the specifier of an optional Appl(icative) Phrase that sits between the Voice heads.²¹

²¹Nash argues that the causee in (38) is absent and not simply *pro*-dropped.

- (38) keti-m iat'ak'-i ga=a-c'mend-in-a
keti-ERG floor-NOM prev=VOICE-clean-NACT-AOR.3SG
'Keti had the floor cleaned.' (Nash 2020: 370)

Structures similar to (35) have been proposed for periphrastic causative constructions such as English *have*-causatives (Bjorkman and Cowper 2013) and Icelandic indirect *let*-causatives (E.F. Sigurðsson and Wood 2021).

4.2 The *Bị*-Construction in Vietnamese

Some languages use a special construction with an auxiliary-like element to embed a predicate, where the subject of the resulting clause corresponds to a gap in the embedded predicate. Here we focus briefly on the Vietnamese *bị*-construction as an example of this, though it is arguably an East Asian areal feature. Vietnamese sentences with *bị* are shown in (39), where the DP before *bị* can correspond to the object or subject of the embedded predicate, as in (39a) and (39b), respectively, or the object of the predicate embedded deeply inside the complement to *bị*, as in (39c).

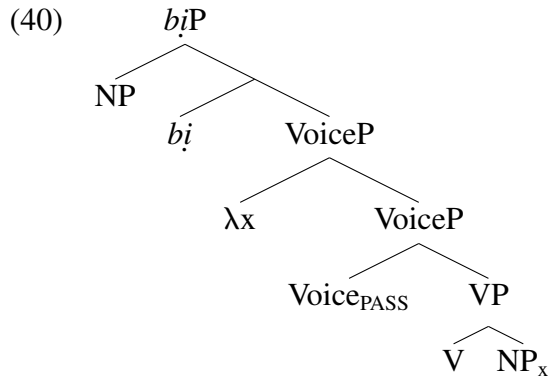
- (39) a. Nam bị (Nga) đánh.
Nam BI Nga hit
'Nam was hit (by Nga).' (Nam suffered)
- b. Nam bị xem một phim kinh dị.
Nam BI watch one film horror
'Nam watched a horror film.' (Nam suffered)
- c. Nam bị Nga báo cảnh sát đến bắt (nó).
Nam BI Nga inform police come arrest him
'Nam had Nga inform the police to come arrest him.' (Nam suffered)
- (Bruening and Tran 2015: 134, 159)

As in passives, the subject in these sentences corresponds to a gap lower in the clause, which has led some linguists to classify them as a kind of passive (e.g., Huang 1999 on *bei*-constructions in Mandarin, Cantonese and Taiwanese).²² However, others argue that this stretches the definition of 'passive' quite significantly (Simpson and Ho 2008, 2013; Bruening and Tran 2015). For one thing, the complement of *bị* may have a gap in the object position, like a passive (39a), but it may also have a gap in the subject position, like an active (39b). For another thing, the embedded subject (e.g., *Nga* in (39a)) retains subject properties and shows no sign of having undergone demotion. Thirdly, as the English translations of (39) show, the *bị* construction adds to the embedded predicate some not-at-issue meaning that the pre-*bị* DP suffered as a result of the event. And finally the 'gap' may sometimes be realised as a pronoun or name, when it is more deeply embedded inside the complement to *bị*, as in (39c).

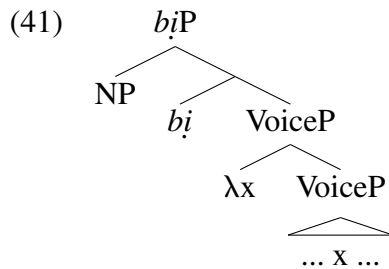
Bruening and Tran argue that *bị* is not passive itself – rather, it sometimes *embeds* a passive complement. Uniformly, *bị* introduces an argument in its specifier, and must take as its complement a VoiceP containing a λ -abstracted variable. The argument in Spec-*bị*P then obligatorily binds that variable, which may be located *anywhere* within VoiceP. *Bị* can select a passive VoiceP as its

²²There are differences between Chinese-type *bei*-constructions and Vietnamese-type *bị* constructions, which Bruening and Tran (2015), following Kim (2014), propose derive from how the subject is related to the gap – null pronoun binding (Vietnamese) vs. movement (Mandarin Chinese).

complement and bind the surviving variable in the internal argument position, leading to sentences like (39a), schematised in (40).



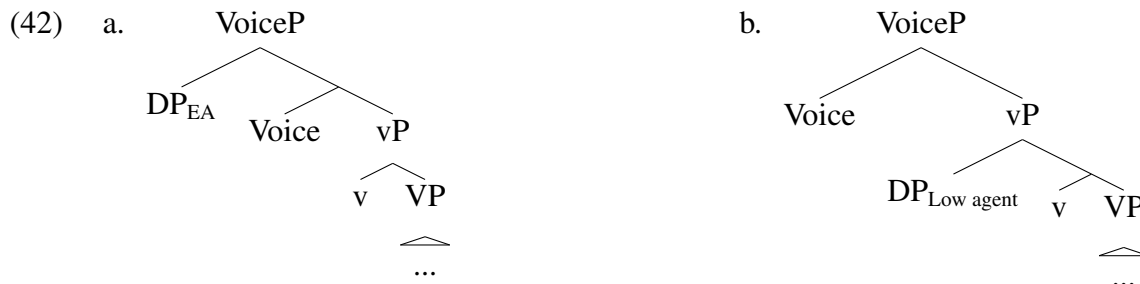
But *bi* can also select active complements, with bindable variables in other locations—possibly in the subject position as in (39a), or possibly in some more deeply embedded position as in (39c). This is schematised in (41).



In this way, *bi* is in a sense doing something outside of the theory of Voice, which validates concerns that calling *bi*-constructions ‘passive’ raises more questions than it answers. But it also validates the intuition that there is something related to Voice here. It is noteworthy that *bi* is operating exactly at the VoiceP edge, and the different apparent uses of *bi* can be understood as stemming from fairly ordinary Voice alternations, which affect where the variable that *bi* abstracts over is located. Whether this is the correct approach or not, it shows how a precise theory of Voice can offer a new angle on different kinds of constructions.

4.3 Low Agents in Deponents, Unergatives and Antipassives

In this section, we discuss some recent analyses which argue for an alternation between two structures like in (42). The structure in (42a) is active – there is an external argument in SpecVoiceP, as expected. The structure in (42b) is like a non-active in that Voice does not introduce an argument in its specifier. But in this structure, there is an agent in a ‘VP-medial’ position, such as SpecvP.



This ‘low agent’ structure has been argued to underlie a variety of constructions, including deponents, unergatives, and antipassives. We discuss these in turn.

Deponent verbs are syntactically active and morphologically not active (perhaps non-active or passive) (Müller 2013). In the Hittite example in (43), the verb is syntactically transitive but formally non-active.

- (43) n=ašta EN.SISKUR ANA NINDA.GUR₄.RA awan arḫa tepu **paršiya**
 CONN=PTC ritual.client from thick.loaf INT.away small.N.ACC.SG break.3SG.NPST.NACT
 ‘The ritual client breaks off a little (piece) from the thick loaf.’ (Yates and Gluckman 2020: 11)

Some scholars propose that this mismatch between morphology and syntax is a purely morphological affair, and that deponent verbs always have normal active syntax (Embick 1997; Yates and Gluckman 2020).²³ However, Grestenberger (2018) proposes that the morphology of deponents reveals their underlying syntax: they have a non-active Voice head, and the agent argument is introduced in the specifier of a lower head, as in (42b); see Wood (2015: 289–290) for a related approach to Icelandic ‘deponent’ middle verbs.

Tollan (2018), building on Massam (2009), proposes a similar analysis for unergatives, where unergative subjects are merged lower than transitive subjects, in a structure like (42b). Her evidence comes in large part from unergatives with cognate objects. Although canonical Samoan transitive subjects are marked with ergative case, as in (44a), unergative subjects with cognate objects retain their absolutive case-marking, as in (44b).

- (44) a. Sā fau [e le tamāloa] [le fale].
 PST build ERG DET man DET house.ABS
 ‘The man built the house.’
 b. Sā siva [le teine] ([i le siva]).
 PST dance DET girl.ABS ACC DET dance
 ‘The girl danced (a/the dance).’ (Tollan 2018: 2)

Tollan argues that ergative case is associated not with transitivity, but with the SpecVoiceP position. Unergative subjects are not ergative-marked because they are not in SpecVoiceP.

Finally, Oikonomou and Alexiadou (2022) argue that the structure in (42b) accounts for (a) the frequent syncretism between antipassive and non-active voice morphology (as with the ‘detransitivizing’ suffix *-sja* in Russian (45)), and (b) some of the semantic properties of antipassives.

- (45) a. dver’ otkryl-s’
 door open-SJA
 ‘The door opened.’
 b. sobaka kusaet-sja
 dog bite-SJA
 ‘The dog bites.’ (Basilico 2017)

²³Bobaljik and Branigan’s (2006) analysis of the Chukchi ‘spurious antipassive’ takes a similar view: a syntactically-unmotivated piece of voice morphology is inserted post-syntactically in particular active clauses, masking their syntactic Voice specification.

However, there are several different analyses of antipassive within minimalism, and the idea that the antipassive involves manipulation of the *external* argument, via the Voice head, is not the only analysis, nor indeed the most popular one. The core property of antipassives is the demotion or suppression of the *internal* argument, as in the Inuktitut pair in (46), and this has led scholars to place the locus of the antipassive alternation lower in the structure than the Voice head.

- (46) a. anguti-up arnaq kunik-taa
 man-ERG woman.ABS kiss-PART.3SG/3SG
 ‘The man is kissing the woman.’
 b. anguti kunik-si-vuq (arna-mik)
 man.ABS kiss-AP-IND.3SG (woman-OBL)
 ‘The man is kissing {someone/a woman}.’

(adapted from Spreng 2001: 157-8)

For instance, Baker’s (1988) classic analysis makes use of an abstract antipassive affix that incorporates into the verb – essentially a mirror of Baker et al.’s (1989) analysis of the passive; see also Medova (2009). More recently, scholars have proposed that both the external and internal arguments are in their usual positions in antipassives, but the internal argument is subject to a special licensing process – for instance, the merging of a special antipassive functional head (Aldridge 2004; Spreng 2012; Yuan 2018; Coon 2019). Antipassives are thus one case where the traditional concept of ‘voice’ and the theoretical understanding of Voice might not ultimately overlap, at least not entirely. While antipassive is a voice phenomenon in the typological sense, it is, like the other constructions discussed in this section, very much an open question whether antipassive alternations involve alternations in the Voice head in any meaningful way.²⁴

Returning to the main theme of this subsection, it is striking to consider the implications of the idea that some constructions involve ‘low agents’. The Voice head as we understand it was originally proposed as a way of ‘severing’ the external argument from the argument structure of the lexical verb, and agents are the most prototypical external arguments. The claim has always been that this ‘severance’ is both semantic and syntactic. But if agents can be introduced lower, than why do languages make use of a Voice head at all? How do language learners acquire the difference between ‘Voice’-agents and lower agents? Do ‘low agents’ have distinct semantic properties that can be connected to the absence of a Voice head in their licensing? Despite the ‘severance’ of the external argument, Wood (2016) and Wood and Marantz (2017) emphasise that there is actually a close connection between the interpretation of Voice and that of its complement (see also Harley and Noyer 2000), which is different from, say, (high) Appl(icative) heads, for example. So it is not as though we can simply assume that low agents are sensitive to the verb while Voice agents are not.

The questions raised by ‘low agent’-type analyses are intriguing as a part of the broader project to extend our understanding of functional heads in general, and Voice in particular, in novel directions. This project also includes causatives, *bi*-type constructions, and many others that we lack space to discuss.

²⁴For further discussion of generative approaches to antipassives, we refer the reader to Spreng (2010) and Polinsky (2017).

5 Conclusion

The properties that connect a variety of voice phenomena together under a theory of a single functional head, or perhaps a small set of related functional heads, are a result of general properties that can vary across functional heads. The Voice head can be present or absent; it can require a syntactic specifier, or not; it can assign case to a DP in its specifier or its complement, or not; and it can introduce a thematic interpretation, or not. In this sense, Voice is not special; these are properties that many functional heads have. Other heads can require specifiers, assign case, or take a meaningful or expletive interpretation. What makes Voice special or distinct, it appears, is that it is the highest argument-introducing head, ‘topping off’ the syntactic representation of an event and its participants, sitting at the boundary between the verb phrase and the inflectional domain. In fact, this is the defining feature of Voice in Wood and Marantz (2017), who argue that all argument-introducing heads, including Voice, Appl, p, Poss and even some prepositions, are instantiations of a single functional head called *i** in different structural positions.

Cross-linguistic comparison of Voice phenomena can be quite challenging, and perhaps, as suggested by a reviewer, even more challenging than other areas of morphosyntax. We can only speculate on why might this be. Comparative syntax involves, in part, identifying the morphemes of one language that correspond to the morphemes of another language, and this can be quite challenging (Kayne 2013: 136–137). The Voice head can appear in the form of a clearly separable affix; a distinct light verb; a reflexive pronoun; or a set of phi-features identifying either the external argument or the internal argument. It can also be expressed by affecting the realisation of other material around it, for example triggering readjustments on the phonology of nearby roots or allomorphs of inflectional heads like tense, aspect, agreement or verbalizing heads. Once again, this issue is not specific to the Voice head. Other heads can be realised as affixes, separate function words, agreement features, or by triggering readjustments on or allomorphy of nearby heads. However, at least two factors may make Voice particularly challenging. First, since it tops of the ‘first phase’, it is sensitive to the idiosyncrasies of particular lexical verbs, but since it is at the edge of the phase, it is sensitive to material in the inflectional domain as well. This results in a lot of lexically-conditioned allomorphy and allosemy, even in the most systematic cases. Second, there are other ways of achieving effects that are similar to the effects of manipulating Voice, and those other ways are also morphologically underdetermined, so it can be easy to misanalyse a phenomenon.

A precise understanding of which phenomena can be attributed to the properties of a functional head at this boundary can lead us to more fine-grained set of questions and answers that can be applied to other phenomena, and here there comparative perspective is crucial. We saw earlier that the distinction between passives and active or quasi-active impersonals is not obvious, but it is important. Another, specific case in point comes from the literature on Austronesian languages, which have a system of verbal morphology, often referred to as ‘voice’, that indicates which argument is privileged in some way. One view is that these are genuine Voice alternations, triggered by distinct Voice heads with different argument-licensing properties (Aldridge 2004). Another view, however, is that Austronesian voice alternations do not really involve Voice at all, but rather index A’-phenomena (Chen 2017). Debates like this once again highlight the challenge in cross-linguistic comparison, since we need in-depth analysis and argumentation for each language before we even know for sure what (apparent) voice phenomena should be connected together under a theory of Voice. But these kinds of debates are also the source for some of the most exciting research top-

ics going forward, with new discoveries waiting around every corner. As we uncover more details about the properties of Voice cross-linguistically, as well as what *isn't* Voice, we will move further from a traditional distinction between 'active', 'passive', 'middle' and the like, and instead identify the more fundamental building blocks that languages make use of to express and encode the presence, absence, and interpretation of arguments in general, not just traditional external arguments.

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