Introduction

In this work I would like to propose that the different types of relative clauses (RCs) attested cross-linguistically – externally Headed post-nominal, externally Headed pre-nominal, internally Headed, double-Headed, Headless (or 'free'), correlative, and adjoined (Dryer 2005) – can all be derived from a single, double-Headed, universal structure via different, independently motivated, syntactic operations – movement, deletion (non-pronunciation), and replacement by a proform – with 'raising' or 'matching'.[1]

With 'raising' I refer to derivations where the overt Head is the internal Head, which raises to the Spec,CP of the RC (Kayne 1994: ch. 8), causing the deletion of the external Head. With 'matching' I refer instead to derivations in which the overt Head is the external Head. The term 'matching' will actually cover a number of distinct cases here. In one (see Lees 1960, 1961; Chomsky 1965; Sauerland 1998, 2003; Hulsey & Sauerland 2006, among others) the internal Head is a full match of the external Head, and is deleted completely, under identity (non-distinctness) with the external Head, as in constructions displaying invariant relativizers (Italian *che*, English *that*, etc.), or partially deleted, stranding a determiner/modifier, as is arguably the case in the Italian art. + *qual-* non-restrictives and English *which* non-restrictives, discussed in §3.1[2] (as well as in the kind-defining RCs discussed in §3.2). In other cases the internal Head is represented by a proform (see Montague 1970; Partee 1976; Chomsky 1973, 1977; Jackendoff 1977; Heim & Kratzer 1998, among others). This proform can be an overt *wh*-pronoun moved to the Spec,CP of the RC, as is arguably the case in

[1] The analysis shares the idea that both 'raising' and 'matching' are needed with Carlson (1977), Åfarli (1994), Sauerland (1998, 1999, 2003), Aoun & Li (2003) and other works cited in fn. 1 of the Appendix, though it differs from them in assuming a single, double-Headed, structure for both, compatible with Antisymmetry.

[2] In non-integrated non-restrictive RCs the overt internal Head may also be only loosely related semantically to the external one (see §3.1).

Italian RCs with *cui* (§2.1.2.1), in English restrictive RCs with *who/which/where/*etc. (see §2.1.2.2), and in similar constructions in other languages, or an overt 3rd person pronoun in situ, or ex situ, as in languages like Hebrew making use of resumptive pronouns (see §4.3), or a PRO as in (some) participial relative clauses (see §3.4), or an overt (or silent) 1st and 2nd person pronoun in argument position, as in certain non-restrictive RCs modifying 1st and 2nd person pronouns (see §3.1.8). These different options seem to depend on the semantic type of the relative clause involved (whether it is 'amount/maximalizing', 'restrictive', 'non-restrictive', or 'kind-defining'), in turn related to the different height of the respective merger within the nominal extended projection (see §3.5)[3], as well as on the match or mismatch between the external and the internal Heads. For example, in restrictive RCs, only when the internal Head exactly matches the external one (which is smaller than DP as it is the portion of the nominal extended projection c-commanded by the RC, merged below strong determiners and above weak ones, called here dP) will deletion be licit (in the possible presence of an invariant relativizer). Whenever the internal Head is instead bigger than the external one, because it is a full (oblique) DP/KP or a DP/KP inside a PP, no deletion will be possible, for lack of identity, and a relative *wh*-phrase or a resumptive pronoun or epithet (preceded by a preposition) will be employed.

Some movement operations (like the relative clause internal Ā-movement that builds an operator-variable structure in some languages) are specific to the relative clause construction, others (like the movement of the external Head that yields the post-nominal position of the RC) appear instead to be tied to the word order type of the language (head-initial, head-medial, or non-rigid head-final).

In Chapter 1, after briefly introducing the cross-linguistic syntactic and semantic typologies of relative clauses, I present what I take to be the unique, double-Headed, structure underlying all attested types of relative clauses in both the 'raising' and the 'matching' derivations.

Under the assumption which I tried to motivate in Cinque (2003, 2009a), briefly summarized here in §1.4, that RCs are merged in a specifier modifying (immediately c-commanding) the external Head (pre-nominally, if order is part

[3] Non-restrictives (attached above DPs) have an external Head (which includes strong determiners) bigger than that of restrictives (which only includes weak determiners), while participial RCs have an even smaller external Head.

of narrow syntax)[4], the different 'matching' derivations to be discussed will prove to be compatible with Antisymmetry.

Chapter 2 is the core of the volume as it attempts to illustrate in more detail how the cross-linguistic attested types of restrictive and maximalizing RCs can be derived from the single double-Headed structure made available by Universal Grammar (UG), under 'raising' and 'matching'.

Chapter 3 will then consider the derivation, from the same double-Headed structure, of other types of RCs (finite non-restrictive, kind-defining, infinitival, participial), as well as their (external) Merge positions, which are distinct from each other and from that of the restrictive and maximalizing RCs.

Chapter 4 recapitulates the different 'strategies' with which the internal Head can be represented (as a gap, in the possible presence of an invariant relativizer, as a relative pronoun, as a full or partial repetition of the external Head, or as a resumptive pronoun or epithet) and considers how these different forms interact with the 'raising' and 'matching' derivations.

Chapter 5 addresses a number of residual cases (including 'hydras', RCs with split antecedents, and 'double dependence' RCs) and some of the questions they raise, some of which will remain open.

The Appendix reviews several phenomena which appear to suggest that a 'raising' derivation is not sufficient to derive all types of RCs.

[4] The question whether linear order is determined in narrow syntax, or only at the PF interface, is still a moot question (see Chomsky, Gallego & Ott 2017/2019 and Kayne 2018, among others). The present proposal is compatible with either possibility provided that the (meaningless) movements 'required to yield the proper hierarchies' (Chomsky 2004: 110 and n. 27) that determine the different linear orders of languages under Kayne's (1994) Linear Correspondence Axiom (LCA) are part of narrow syntax. For possible evidence that some meaningless movements should be permitted in narrow syntax, see Cinque (2018).