Rudin constructions in Romanian: identity of relations via multiple *wh*-clauses

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OVERVIEW In this paper, we describe and analyze the syntactic and semantic properties of an understudied non-interrogative *wh*-construction requiring multiple *wh*-expressions, to which we refer as 'Rudin constructions'. We show that they differ from other multiple *wh*-constructions studied to date and argue that they denote identity between the extensions of two relations.

DATA The multiple *wh*-construction we investigate is illustrated in (1)-(2):

(1) a. Trăncănește [**cine ce**   vrea].   b. Mănâncă [**cine ce**   vrea].   *(Rudin 2008:260)*
        blabs   who what wants   eats   who what wants
      'Everyone's blabbing whatever they want.'   'Let everyone eat whatever they want.'

(2) La picnicul de duminică a mâncat [**cine ce mâncare** a pregătit]. *(Caponigro & Fălăuș 2022:55)*
      at picnic-the of Sunday has eaten   who what food   has prepared
      'At the picnic on Sunday each person ate the food (s)he prepared.'

This is a typologically rare construction that, on the other hand, is extremely productive in Romanian, with the bracketed clause allowing for two or more (argument or adjunct) *wh*-expressions. Following Caponigro & Fălăuș (2022), we use the label "Rudin construction" since to the best of our knowledge Catherine Rudin was the first scholar to describe it (Rudin 1986, 2007, 2008). It has been largely neglected since with the exception of recent semantic analyses (Caponigro & Fălăuș 2020, 2022, Nicolae 2020).

COMPARISON WITH OTHER *WH*-CONSTRUCTIONS Semantically, the sentences in (1)-(2) are similar to multiple *wh*-**correlative clauses** (Dayal 1996, Brașoveanu 2012), which are also very productive in Romanian (3):

(3) a. [**Cine ce** vrea], *acela aia* mănâncă.   b. [**Cine ce** mâncare a pregătit], *acela aia* mănâncă.
        who what wants that-one that eats   who what has prepared that-one that eats
      'Everyone eats whatever they want.'   'Everyone eats the food they prepared.'

Syntactically however, correlatives differ from Rudin constructions. First, in correlatives the *wh*-clause is obligatorily left-dislocated, whereas in Rudin constructions the *wh*-clause always follows the main clause. Second, the *wh*-expressions used in a correlative clause have corresponding anaphoric (typically demonstrative) markers in the matrix clause, as shown in (3) above.

We also show that Rudin constructions exhibit differences with the kind of multiple *wh*- **free relative clauses** (FRs) studied in Caponigro & Fălăuș (2020), illustrated in (4):

(4) Bunica   a împachetat [**ce cui**   dă   de Crăciun].
      Grandma   has wrapped   what who.DAT gives for Christmas
      'Grandma wrapped the things she'll give to the appropriate people on Christmas.'

The first difference lies in the relation between the *wh*-expressions and the two predicates. In (1)-(2), each *wh*-expression is related to an argument of *both* the matrix and the embedded predicate: the people blabbing/eating are the ones that want to blab/eat and the things they blab/eat are the things they want to blab/eat (1). In contrast, multiple *wh*- FRs satisfy only one argument of the matrix predicate and the lower *wh*- is in no way related to the matrix predicate. E.g., in (4) the receiver of the gifts is an argument of the predicate 'give' and not an argument of the predicate 'wrap'. The second difference is semantic: multiple *wh*- FRs are referential, like definite DPs, whereas Rudin constructions seem to be akin to universal/free choice quantifiers.

We conclude that, at least in Romanian, Rudin constructions cannot be reduced to any other kind of multiple *wh*-constructions attested in the language and require a different analysis.

SYNTACTIC ANALYSIS Rudin constructions are always biclausal, with two fully tensed clauses:

(5) Diseară la petrecere __ mănâncă __ [**cine₁ ce₂** __₁ aduce. _₂].
       tonight at party   eat   who what   brings
   'Tonight at the party each person will eat what (s)he brings.'

In (5) for instance, each of the two clauses has a fully inflected transitive verb ('eat', 'bring'). Both predicates are missing their subject and object arguments—highlighted with underscores. The bracketed clause (Clause₂) is introduced by two (bolded) *wh*-expressions that are linked to its missing subject and object—highlighted with the subscripts "1" and "2". The other clause (Clause₁) doesn't have any overt clause-internal marker correlating with its missing subject or object—highlighted with plain underscores without subscripts. Crucially, if either argument in Clause₁ is realized, the whole sentence becomes fully unacceptable, as shown in (6):

(6) a. *<u>Maria</u> mănâncă _ [**cine₁ ce₂** _₁ aduce _₂]. b.*_ mănâncă <u>desert</u> [**cine₁ ce₂** _₁ aduce _₂].
        Maria eat   who what brings   eat   dessert who what brings

This is due to the fact that in a Rudin construction Clause₁ and Clause₂ must have the same number and kind of missing constituents—at least two. If not, the whole construction is ungrammatical, as shown in (6) where Clause₁ has only one missing argument, whereas Clause₂ has two missing arguments (and corresponding *wh*-expressions). In (7), we illustrate the opposite situation: Clause₁ has only one missing argument (the subject), while Clause₂, with a transitive predicate, has two missing arguments. Moreover, the two clauses in a Rudin construction also need to match in terms of the kind of missing arguments: in (8), both predicates require a subject and an object, but crucially the predicate in Clause₁ requires a direct object, while the predicate in Clause₂ an indirect object. The combination of the two results in unacceptability.

(7) * __ Vine [**cine₁ ce₂** __₁ aduce __₂].   (8) * _ A atacat __ [**cine₁ cui₂** __₁ îi   place __₂].
        comes who what   brings   has attacked who who.DAT CL.3SG likes

The two clauses of a Rudin construction do not have the same syntactic status. Clause₂ always occurs to the right edge of Clause₁ and—we show—behaves likes an adjoined *wh*-clause (a CP). Clause₁, which always occurs first (left-most), allows for topicalized constituents or moved *wh*-constituents and acts as the main clause, determining the semantic and pragmatic features of the whole Rudin construction: if Clause₁ is declarative, then the whole Rudin construction is declarative, as in all the examples above. If Clause₁ is interrogative, as in (9), or imperative (10), then the whole Rudin construction will be interrogative or imperative, respectively.

(9) <u>Când</u> a mâncat [**cine ce**   a   adus]?   (10) Mănâncă [**ce   când** pregătesc]!
      when has eaten who what has brought   eat.IMP.2SG what when prepare.1SG
   'When did everyone eat what they bring?'   'Eat whatever I prepare whenever I prepare it!'

SEMANTIC ANALYSIS We argue that Rudin constructions assert (or question or demand) identity between the extensions of two *n*-place relations (i.e., sets of ordered pairs)—one relation being denoted by the Clause₁, the other being denoted by Clause₂, as schematized in (11).

(11) $[[\lambda x_1 \lambda x_2 \ldots \lambda x_n \textbf{Clause}_1(x_1, x_2 \ldots x_n)]]^{w0} = [[\lambda x_1 \lambda x_2 \ldots \lambda x_n \textbf{Clause}_2 (x_1, x_2 \ldots x_n)]]^{w0}$ $n \geq 0$

The sentence in (5) for example is interpreted as asserting that each eater at the party tonight eats only the food that (s)he brings. I.e., the sentence asserts the identity between the set of ordered pairs of <eater, eaten-food> associated with the first clause and the set of ordered pairs <food-bringer, brought-food> associated with the second clause. Given the variable number and nature of missing *wh*-constituents within a Rudin construction (i.e., two or more arguments or adjuncts), the notion of identity and the type of relation involved need to be flexible. In the proposed implementation, we show that identity can be established between relations of variable *n*-ary and variable semantic type, as long as they are the same across the two relations associated with the two clauses involved in a Rudin construction.

Rudin constructions seem to be attested in other Balkan languages, but their properties remain understudied. The data described and analyzed in this paper pave the way for further crosslinguistic investigation on Rudin constructions and a comprehensive typology of multiple *wh*-constructions.