Encounters of the third kind: antonyms and tertium

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Abstract. The distinction between contraries and complementaries is traditionally based on the assumption that it is possible to deny two contraries simultaneously, while this possibility does not exist for contradictories. In formal logic, this simultaneous negation is equivalent to a third term, the tertium. In research on semantic scalarity, the simultaneous negation of two contraries is considered to denote the central region where neither of the two antonymic poles apply. The lexeme whose meaning corresponds to this central region, if one exists, constitutes a third term associated with the antonymic pair. The most frequently cited examples for third terms in French are tiède, moyen and indifférent. This contribution aims to establish a typology of third terms adjoined to antonyms using three criteria: semantic relationship to the antonymic pair, type of opposition between the antonyms, and number of antonymic pairs with which third terms are associated. Through an empirical approach based on the exploitation of a French journalistic corpus, we will also highlight the morpho-syntactic properties of some unstudied third terms.

Since Aristotle, many works have been devoted to words with opposite meanings like *cold* and *hot*. Traditionally, the opposite

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lexemes are called *antonyms*. Whatever the semantic model that defines it, the relation between antonyms is based on opposition. This opposition can be described by means of the logical distinction between *contraries* and *complementaries* and modeled thanks to semantic scales whose antonyms constitute poles of tension (Jones *et al.* 2012).

The distinction between *contraries* and *complementaries* is traditionally based on the assumption that it is possible to deny two contraries simultaneously, while this possibility does not exist for contradictories. In formal logic, this simultaneous negation is equivalent to a third term, the *tertium*. Contradictories are defined by the principle of the excluded third (*tertium non datur*), as opposed to contraries (*tertium datur*) (see Blanché 1957). For example, *hot* and *cold* are contraries (*This soup is neither hot nor cold, it is lukewarm*) while *single* and *married* are considered as complementaries (**This man is neither single nor married*).

In research on semantic scales, the simultaneous negation of two contraries is considered to denote the central region where neither of the two antonymic poles apply. This central region receives different denominations according to theorists; it can be called *cut* (Ogden 1932), *zone of indifference* (Sapir 1944), *région intermédiaire* (Van Overbeke 1975) or *midinterval* (Lehrer and Lehrer 1982). The lexeme whose meaning corresponds to the midinterval, if one exists, constitutes a third term associated with the antonymic pair (e.g. *large/medium/small*). The most frequently cited examples for third terms in French are *tiède* 'lukewarm' (Blanché 1957: 195, Rivara 1993: 45 Amsili 2003), *moyen* 'medium' (Rivara 1993: 42) and *indifférent* 'indifferent' (Ducháček 1965: 62).

This contribution aims to establish a typology of third terms adjoined to antonyms. Through an empirical approach based on the exploitation of a French journalistic corpus, we will also highlight

the morpho-syntactic properties of some unstudied third terms besides the classical ones.

1. Midintervals and third terms in the literature on antonymy

In most of the studies about antonymy, midintervals and third terms are only taken into account to identify different types of antonyms. Keith and Adrienne Lehrer (1982), for example, use the relative distance of two antonyms from the midinterval as a criterion to distinguish *perfect antonyms* (*good/bad*) and *imperfect antonyms* (*excellent/bad*): "Two antonyms are perfect antonyms if they are the same distance from the midinterval; otherwise they are imperfect antonyms." (Lehrer et Lehrer 1982: 489, see also Croft and Cruse 2004: 166-167). The symmetrical position, on the semantic scale, of two antonyms relative to the midinterval is here considered as a simple criterion of canonicity: perfect antonyms are "better" antonyms than imperfect ones; they are more representative of what antonymy is.

Equidistance may also be used as a defining criterion for antonymy. Roger Chaffin and Douglas Herrmann (1984), for example, distinguish *contrary antonyms* (*hot/cold*) and *asymmetric contraries* (*hot/cool*), which are not antonyms. More specifically, *contrary antonyms* are defined as "opposed symmetrically on a continuous dimension" while *asymmetric contraries* are defined as "opposed on a continuous dimension but, as the term indicates, asymmetrically" (Chaffin et Hermann 1984: 135)[2].

According to these definitions, a pair such as Fr. *petit/immense* would be considered a pair of antonyms (albeit not an ideal representative of antonymy) by Lehrer and Lehrer (1982), but a pair of non-antonymous lexemes by Chaffin and Hermann (1984).

Concerning the third term itself, the most interesting study is that of Yorke. Adopting a psycholinguistic perspective, Yorke lists

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[2] See also Katz (1972).

fifteen different possible semantic definitions of the third term (E), some more probable than others (Yorke 2001: 180), like "E is neither P nor Q"; "E is a dynamic equilibrium mixture in which P and Q are equally present"; "E's position on the dimension P-Q is uncertain"; "P-Q is irrelevant to the construing of E" or "It is not wished to construe E in terms of P-Q". What is remarkable is that Yorke's approach incorporates the possibility that a third term could represent not only the simultaneous negation of two antonyms, but also their joint affirmation[3]. Unfortunately, Yorke neither provided a classification of these definitions himself nor gave examples to support them.

Our aim is to establish a typology regarding to Yorke's definitions and third terms often associated with antonyms in French, like *indifférence* 'indifference' and *moyen* 'medium'.

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[3] This possibility of the simultaneous truth of two antonyms is already envisaged in the logic hexagon of Blanché (1966).

2. Towards a typology of third terms

2.1. First distinction

Based on their semantic relationship with their associated antonymic pair(s), two main types of third terms can be distinguished.

The first type is exemplified by Fr. *indifférence*. This word can be defined as "absence of feeling" and constitutes the third term of all the feeling antonyms (*amour/haine* 'love/hate', *tristesse/joie* 'sadness/joy', *sympathie/antipathie* 'sympathy/antipathy', etc.). Following Coseriu's definition (Coseriu 1975: 35) of the *semantic dimension* as the criterion underlying any opposition, the meaning of *indifférence* can be defined as the negation of the entire dimension on which antonyms are opposed (FEELING). The third term is excluded from this dimension. Therefore, we say that *indifférence* is a **neutral third term**. Such is also the case, for example, of *rester* 'stay' defined by "remain not moving",

associated with all the movement antonyms like *arriver/partir* 'arrive/leave' or *monter/descendre* 'go up/go down' for example. To characterize the meaning of such third terms, Sapir's *zone of indifference* is more relevant than Lehrer's *midinterval*.

The notion of midinterval is more applicable to the second type of third terms. This type can be illustrated by Fr. *moyen*. This word constitutes the third term of all the antonymic pairs whose meaning is defined by comparison (*grand/petit* 'big/small', *vite/lentement* 'fast/slow', *jeune/vieux* 'young/old', etc.)[4]. Like the neutral third terms, *moyen* is equivalent to the simultaneous negation of two antonyms; it is therefore excluded from the semantic dimension underlying the opposition between *grand* and *petit*, for example. Neither does it intrinsically express HEIGHT; we must mention the dimension explicitly: *de taille moyenne* 'of medium height' (*grand/petit*). However, *moyen* remains a degree on the semantic scale of which *grand* and *petit* are poles. It can represent their joint

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[4] See Sapir's conception of grading (Sapir 1944: 93) and Kleiber (1976).

affirmation, because of the comparative nature of the antonyms which it relates. The meaning of *moyen*, related to *grand/petit*, can be described as "what is less small than the smallest and less large than the largest". Therefore, we say that *moyen* is an ***intermediate third term***. Both neutral and intermediate third terms can be opposed to a whole antonymic pair or to each of its members separately.

A special case to mention is that of Fr. *gris* 'grey', in relation to *blanc* 'white' et *noir* 'black'. This lexeme can be considered as both a neutral and an intermediate third term, depending on how it is used. These antonyms denote both bounded properties (see Paradis 2001), in that they each represent a specific color with a possible maximal degree of presence, and the bounds of a property, namely, this maximal degree itself: *blanc* "the brightest color, produced by the reflection of all the colors", and *noir* "the darkest color, produced by the absence of reflection of any color". *Gris* can

be used to qualify something not quite white (*du linge gris* 'grey linen', *un mariage gris* 'marriage where one of the spouses has ulterior motives, such as an inheritance or immigration rights, of which the other spouse is unaware') or not quite black (*travail gris* 'semi-illegal work', *tatouage gris* 'grey tattoo'). As the equivalent of the simultaneous negation of *blanc* and *noir* in this sense, the lexeme *gris* can be considered as a neutral third term. However, in another sense, *blanc* and *noir* can denote degrees of grey. The lexeme *gris* is used to qualify something both black and white (*des cheveux gris* 'grey hair'). Therefore, it can be considered as a special case of intermediate third term.

2.2. Two more criteria

In addition to the semantic relation between the third term and the antonymic pair, another criterion to distinguish different types of third terms is the number of pairs they are related to.

When a third term, neutral or intermediate, is related to only one antonymic pair, unlike *indifférence* and *moyen*, the meaning of this third term tends to be closer to one of the members of this antonymic pair. It is ***oriented***.

The lexemes *à mi-hauteur* 'mid-height', *à moitié vide* 'half empty' and *à moitié plein* 'half full' are neutral third terms, oriented because of the fact that they are constructed around one of the antonyms they are related to. These antonyms (*haut/bas* 'top/bottom' and *vide/plein* 'empty/full') denote bounds. Their neutral third terms are equal to the simultaneous negation of these bounds: *à mi-hauteur* "not at the lowest place and not at the highest place"; *à moitié vide / à moitié plein* "not full and not empty".

The lexeme *tiède* is an intermediate third term, equivalent to the joint affirmation of the antonyms *chaud* and *froid*. It is oriented towards the *hot* pole. The lexeme *tiède* denotes a degree of temperature defined as "less hot than hot". Contextually, *tiède* is

defined depending on the expectations of the speaker regarding the referent denoted. It can mean "less hot than expected" (*une soupe tiède* 'a lukewarm soup', *un accueil tiède* 'a lukewarm reception'), but also "less cold than expected" (*une bière tiède* 'a lukewarm beer') or "hotter than expected" (*un gaspacho tiède* 'a lukewarm gaspacho'). Corresponding to *tiède*, which is oriented towards the *hot* pole, is the lexeme *frais* 'cool', oriented towards the *cold* pole. In the uses where it can be opposed to *tiède*, the lexeme *frais* can have the value "of expected temperature" (*une bière fraiche* 'a cool/cold beer'), "less hot than expected" or "less cold than expected" (*un accueil frais* 'a cool reception').

The last criterion to distinguish different kinds of third terms is the type of opposition between antonyms. In this respect, the most interesting cases are the lexemes *à moitié ouvert* 'half open' and *à moitié mort* 'half dead', associated with *ouvert/fermé* 'open/closed' and *mort/vivant* 'dead/alive'. These antonyms are contradictories and thus cannot be simultaneously negated nor jointly affirmed.

Therefore, the lexemes *à moitié ouvert* and *à moitié mort* are neither neutral nor intermediate terms.

However, the existence of these lexemes does not affect the complementarity of the antonyms, due to the fact that they indicate that the bounds denoted by each member of these two pairs have not been reached. *Fermé* and *mort* denote the lower bound of a property, its zero degree, while *ouvert* and *vivant* denote both this property and its upper bound. These properties are constructed as scalar in discourse.

The sentence *La porte est à moitié ouverte* can then be interpreted as "the door is open but not completely". In the same way, the sentence *Il a été abandonné à moitié mort* can be interpreted as "he has been abandoned alive but not fully".

Therefore, we say that *à moitié ouvert* and *à moitié mort* are *false tertia*.

2.3. Five types of tertia

According to these three criteria (semantic relationship to the antonymic pair, number of antonymic pairs with which they are associated, and the type of opposition between the antonyms), five types of third term can be distinguished: 1) non-oriented neutral third terms (*indifférent*, *rester*) ; 2) oriented neutral third terms (*à mi-hauteur*, *à moitié vide*, *à moitié plein*) ; 3) non-oriented intermediate third terms (*moyen*) ; 4) oriented intermediate third terms (*tiède*) et 5) third terms which can be neutral and intermediate (*gris*). To these five types, we can add the false tertia (*à moitié ouvert*, *à moitié mort*).

	semantic relationship to the antonyms	number of pairs	opposition of the antonyms
non-oriented neutral third term e.g. *indifference*	simultaneous negation of the antonyms	two or more pairs	contrary opposition
oriented neutral third term e.g. *à moitié plein*	simultaneous negation of the antonyms	one pair	contrary opposition in which both antonyms denote bounds
non-oriented intermediate third term e.g. *moyen*	simultaneous negation and joint affirmation of the antonyms	two or more pairs	contrary opposition
oriented intermediate third term e.g. *tiède*	simultaneous negation and joint affirmation of the antonyms	one pair	contrary opposition
neutral and intermediate third term e.g. *gris*	simultaneous negation and joint affirmation of the antonyms	one pair	contrary opposition in which both antonyms denote bounds
false tertia e.g. *à moitié mort*	degree of the property denoted by one of the antonyms	one pair	complementary opposition in which one of the antonyms denotes a bound

3. Corpus study: morpho-syntactic properties of tertia

3.1. A press corpus to study antonymic copresence in French

The data used in the present study come from a broader set of data collected to study the discourse functions of antonymic copresence in French (Steffens forthcoming). These data, consisting of contexts which include each of the two members of selected antonymic pairs, were automatically extracted by a corpus query processor (CQP) from a lemmatized and tagged corpus constituted by the articles appearing in *Le Monde* newspaper from 1987 to 2006 and from 2009 to 2011 (575 million words).

The pairs selected for extraction consisted in the list of all the antonymic pairs identified according to the *Grand Robert* (2001), excluding pairs of converses lexemes (*vendre/acheter* 'buy/sell'), terminological antonyms that are unlikely to appear in the corpus (*acœlomate/cœlomate* 'acœlomata/cœlomata'), pairs containing supporting verbs or auxiliaries, pairs of which one or both members were too frequent and thus generated excessive noise

(*faire/détruire* 'make/destroy', *avoir/perdre* 'have/lose'), and pairs of morphemes (*hyper-/hypo-*).

Our qualitative study of antonymic copresence was not focused on the use of third terms. However, contexts in which the antonyms are used in conjunction with a third term did emerge from this data, and the following results are obtained from the analysis of these.

3.2. Results

Three main conclusions regarding the formal characteristics of third terms can be drawn from this study.

1) The most studied class of third terms are adjectives, and we did indeed find adjectival third terms in our corpus. However, we also found nouns, adverbs and verbs, for example *stagner* 'stagnate', in relation to *décliner/progresser* 'decline/increase':

« Le phénomène [la pauvreté] a touché aussi bien des pays où le revenu moyen **a décliné** (Panama, Pérou) – parfois **fortement** (Venezuela, Argentine) – sur la

période, que d'autres où il **a** seulement **stagné**, voire **légèrement progressé**, comme le Mexique ou le Brésil. » (*Le Monde* 05/05/1993, « Une décennie de pauvreté et d'inégalité croissantes », Guy Herzlich).

'The phenomenon [poverty] has affected countries in which average incomes have **declined** (Panama, Peru) - sometimes **strongly** (Venezuela, Argentina) - over the period, as well as others where it has only **stagnated** or even **slightly increased**, such as Mexico or Brazil.'

2) As well as simple words, complex nouns can also be used as the third term of a verbal antonymic pair. In such cases, the syntactic structure involving the third term tends to erase the part of speech (POS) difference directly, by using the noun as a verb, or indirectly, by incorporating the noun into a supporting verbal phrase. In the sentence below, (*subir*) *un coup d'arrêt* '(suffer) a downturn' is related to *reculer/reprendre* 'fall/pick up'.

« Après avoir **reculé** de 30 % ces deux dernières années, les ventes, qui avaient timidement **repris** ont subi un sérieux **coup d'arrêt** en avril (- 14,5 %), le printemps étant pourtant une saison généralement favorable aux ventes de deux-roues. » (*Le Monde* 31/05/2011, « Le marché français du scooter continue de souffrir », Jean-Michel Normand).

'After **falling** by 30% in the last two years, sales, which had **picked up** sharply, suffered **a severe downturn** in April (down 14.5%), although spring was generally a favorable season for sales of two-wheelers.'

3) Another complex structure which can play the third term role is a syntagm involving a negation particle. In such cases, the head of the syntagm expresses the dimension underlying the opposition of the antonyms. This dimension can be quite context-

specific, as in the first example (*ne plus verser* 'to no longer make payments', related to *réduire/augmenter* 'reduce/increase'), or more general, like in the second (*ne pas se soucier de* 'not caring about', related to *aimer/hair* 'love/hate').

« Au moment où des pays (l'Espagne, les Pays-Bas) **réduisent** leur contribution au Fonds, d'autres ne la **versent plus** (l'Italie), et beaucoup, dont la France, rechignent à l'**augmenter**. » (*Le Monde* 05/06/2011, « Sida : maintenir l'indispensable effort financier », s.a.).

'At a moment when some countries (Spain, the Netherlands) are reducing their contribution to the Fund, others (Italy) are no longer making any payments, and many, including France, are reluctant to increase [their contribution].'

« Dans le monde, vous avez trois sortes d'amis : vos amis qui vous **aiment**, vos amis qui **ne se soucient pas** de vous, et vos amis qui vous **haïssent**. » (*Le Monde* 02/09/2008, « Dans le monde, vous avez trois sortes d'amis… », Laurent Greilsamer).

'In this world, you have three kinds of friends: your friends who **love** you, your friends who **do not care about** you, and your friends who **hate** you.'

4. Conclusions

Our study serves to highlight important facts that will be useful for future research:

1) Different types of third terms can be distinguished depending on the semantic relation between a third term and its associated

antonyms, the number of antonymic pairs the third term is related to and the type of opposition between the antonyms.

2) The notions of midinterval and equidistance are only applicable to some types of third term, namely intermediate third terms.

3) Third terms show greater morpho-syntactic diversity than what has usually been described.

4) Third terms may be multi-word expressions, in which the main semantic component belongs to a different POS than its antonyms.

It must be borne in mind, however, that third terms and their discursive behavior is a research field still to be explored. Further research using other corpora, including oral data, is needed in order to thoroughly evaluate the conclusions of the present study.

References

Amsili P. (2003) « L'antonymie en terminologie : quelques remarques », *Conférence TIA'2003 : Terminologie et Intelligence Artificielle*, Strasbourg.
www.linguist.univ-paris-diderot.fr/~**amsili**/papers/TIA03.pdf

Blanché R. (1957) « Opposition et négation », *Revue Philosophique de la France et de l'étranger*, 147, pp. 187-216.

Chaffin R. & Herrmann D. J. (1984) "The similarity and diversity of semantic relations", *Memory and Cognition*, 12, 134-151.

Croft W. & Cruse A. (2004) *Cognitive Linguistics*, Cambridge, University Press.

Cruse A. (2011) *Meaning in Language: An Introduction to Semantics and Pragmatics*, Oxford, Oxford University Press.

Ducháček O. (1965) « Sur quelques problèmes de l'antonymie », *Cahiers de lexicologie*, 6, 55-66.

Grand Robert de la langue française (2001), Paris, Sejer.

Jones S., Murphy L., Paradis C., Willners, C. (2012) *Antonyms in English. Construals, Constructions and Canonicity*, Cambridge: Cambridge University Press.

Kleiber G. (1976) « Adjectifs antonymes : comparaison implicite et comparaison explicite », *Travaux de Linguistique et de Littérature*, 14, 277-326.

Lehrer A. & Lehrer K. (1982) "Antonymy", *Linguistics and Philosophy*, 5, 483-501.

Ogden C. K. (1932) *Opposition: A Linguistic and Psychological Analysis*, Bloomington, Indiana University Press.

Paradis C. (2001) «Adjectives and boundedness», *Cognitive Linguistics*, 12, 47-64.
Rivara R. (1993) « Adjectifs et structures sémantiques scalaires », *L'information grammaticale*, 58, 40-46.

Sapir E. (1944) "Grading: A Study in Semantics", *Philosophy of Science*, 2, 93-116.

Steffens M. (forthcoming), *L'antonymie. Fonctions sémantico-référentielles de la coprésence d'antonymes en français*, Louvain, Peeters, collection *Orbis Supplementa*.

Van Overbeke M. (1975) « Antonymie et gradation », *Linguistique*, 11, 135-155.

Yorke M. (2001) "Bipolarity… or Not? Some Conceptual Problems Relating to Bipolar Rating Scales", *British Educational Research Journal*, 27/2, 171-186.