APPLIED SEMANTICS OF DETERMINERS:
GERMAN *jeder*, FRENCH *chaque/tout*, SPANISH *cada/todo*

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1. Introduction

The title of this paper, "Applied Semantics of Determiners", is almost a contradiction in terms. After all, the semantics of determiners – i.e. the research on the meaning of articles and words functioning as such – is part of referential semantics. And referential semantics is certainly among those linguistic disciplines which is least application-oriented.[1]

To provide just one example: I, an insignificant exponent of this discipline, have repeatedly yielded to the temptation to engage in theoretical questions of a subtle nature yet lacking in practical relevance. Thus I developed a theory of definiteness and indefiniteness and dealt with the different forms of genericity (Lavric 1989, 2000a); I followed the ramifications of Generalized Quantifier Theory and interpreted the indefinite article as a double existential quantifier.

As for the first person to set foot on Mars, I speculated that he/she can only be definite and inexistent at the same time because he/she is situated in a two-tier opaque context. And finally, I entered the labyrinth of possible worlds and occupied myself with the question of what will happen to the murderer of Smith if it should in retrospect be revealed that Smith in fact has not been murdered at all (Lavric 1997a)…[2]

All of those problems are intellectually fascinating, but there is no doubt that someone who e.g. wants to learn a foreign language will not necessarily find them very thrilling.

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[1] For an overview of reference semantics see the excellent anthology by Geiger (1995).

[2] Lavric 1990 and 1996a. The case of Smith's murderer is of course about Donnellan's (1966/1971) famous distinction.

Within the scope of the semantics of determiners, however, there are still enough questions with regard to which a solid linguistic description can significantly facilitate language learning. This paper is supposed to prove, by means of two examples, that the semantics of determiners can be applied to hands-on language teaching. In detail, this paper is about demonstrative determiners with restrictive relative clauses – this example, however, serves mainly to exemplify the method – while the main part deals with a topic which is known to be particularly difficult, namely the singular totalisers in German, French and Spanish: Ger. *jeder* as compared to Fr. *chaque/ tout* and Sp. *cada/todo*.

Our starting point will be errors which can be interpreted as L1 interferences.[3] We shall try to explain those errors with the help of a structuralist-style contrastive semantics of determiners, along the lines, e.g., of Coseriu (1973), Vater (1963/1979), Schifko (1975 and 1992).

2. Methodology (demonstratives with restrictive relative clauses)

The first error example is a three-fold one:[4]

(1)   Le premier impact [d'un accident] est celui du point de vue de *ces institu-
        tions *qui doivent financer* *ces frais *qui sont directement liés aux accidents*.
        [...]
        *Ces frais *qui se trouvent à gauche* sont les frais directement liés à
        l'accident

        The first impact of an accident is the one that affects those institutions that
        have to finance those expenses that are directly related to the accident.
        The expenses shown on the left are the expenses directly related to the acci-
        dent.

This is of course about determiners in noun phrases with restrictive relative clauses. Both the explanation and the respective rule are simple; what I would like to point out in this example (which is located halfway between syntax and semantics) is the way how to get there.

This way is via another example and it is that example by means of which I want to exemplify my semantic method:

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[3]   For error analysis and the notion of interference, see e.g. Rattunde (1977), Flament-Boistrancourt (1985), James (1990), Vogel (1990), Henrici and Zöfgen (1993).

[4]   The fact that the same mistake occurs three times in this student's text shows that it is a competence mistake, i.e. that there is a wrong rule stored in the interlanguage.

(2)   J'étais entré dans le bonheur,
qui est de faire <u>le</u> métier *qu'on aime*

Ich genoß nun das Glück, das darin besteht,
daß man <u>jene</u> Arbeit macht, *die man gerne tut*

Comencé a disfrutar de la felicidad que supone
dedicarse a <u>la</u> profesión *que a uno le gusta*

I had found happiness,
that comes from doing the type of work that one likes to do

(HPP 180-183)

The example is taken from the corpus of my postdoctoral thesis (Lavric 2000b), and one can see that this corpus is trilingual: it consists of texts with translations (half of them literary and the other half everyday texts). In this case, the original text is in French – and therefore comes first – the translations are into German and Spanish. (The other two directions of translation are of course also represented in the corpus.) The applied method is first and foremost a translation comparison.[5] Example 2 is relevant for our first error example in so far as it includes a noun phrase with a restrictive relative clause and in its present form also provides the explanation of the error: in German, a restrictive relative clause can be signaled by a demonstrative determiner, namely by *jener*; the student has by analogy tried to do the same in French. One can already provide the learner with a rule of thumb here: in French, restrictive relative clauses cannot be signaled by a demonstrative determiner, one has to use the definite article.

Linguistically, however, this rule is still unsatisfactory because it does not completely and explicitly represent the situation in both languages; moreover, Spanish is still missing to render the comparison a triple one. How is a restrictive relative clause signaled in Spanish? Example 2 shows: by the definite article, as in French. There is a parallel between the two Romance languages, which are in opposition to German, at least in example (2).

Unfortunately however, this result is totally incorrect. Mere translation comparison has led us astray in this case. With a mere translation comparison, one is far too much subject to the coincidences of translation, and that is why I systematically supplement the translation comparisons by commutation tests in all three languages. This means that in the same slot, I test all other determiners of the relevant language and note those which lead to the same meaning as the original text. I adapted this method from Vater (1963/1979), adding the contrastive dimension myself.[6] The

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[5]   The founder of this method is of course Mario Wandruszka (1969 and 1971). See also the recent symposium held in the course of the the Romanistentag Osnabrück 1999 (Albrecht / Gauger forthcoming).

[6]   For a justification and explanation of the combined method (translation comparison + commutation tests), see among others Lavric forthcoming.

commutation test restores the whole range of paradigmatic possibilities in both languages; one not only compares what is there in the text, but also what could have been there in this slot of the text while maintaining its meaning. The result for our example (2):

(2')   J'étais entré dans le bonheur,
        qui est de faire le métier *qu'on aime*

        Ich genoß nun das Glück, das darin besteht,
        daß man jene Arbeit macht, *die man gerne tut*
            daß man diejenige Arbeit macht, *die man gerne tut*
            daß man die Arbeit macht, *die man gerne tut*

        Comencé a disfrutar de la felicidad que supone
        dedicarse a la profesión *que a uno le gusta*
            a aquella profesión *que a uno le gusta*

There are three forms yielding the same meaning in the same slot in German, two in Spanish and only one in French. And thus we can with the help of this characteristic example lay down all possibilities to signal a restrictive relative clause in the systems of the three languages:

1.   In all three languages, there is the option of the definite article.
2.   In addition, there are possibilities with demonstrative determiners in German and Spanish: Sp. *aquel*, Ger. *jener* and *derjenige*.[7]
3.   In French, there is no possibility to signal a restrictive relative clause by a demonstrative determiner.[8] This constraint is probably related to the fact that French does not really have a distal demonstrative,[9] while both Ger. *jener* and Sp. *aquel* are distal demonstratives.[10]

So this would be the precise result of an empirically-based interlingual systems comparison, which the combination of translation comparison and commutation test allows for. Although the rule of thumb for the student remains the same, we can now

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[7]   *Derjenige* is actually confined to this function and cannot be used otherwise. (Sometimes it also marks restrictive attributes in a form other than that of the relative clause).

[8]   There are exceptions to this rule which correlate with clearly describable stylistic effects; see Lavric (1996(b)), (1997(b)) and (1998).

[9]   *Ce...-là* can only be used with explicit or implicit contrast.

[10]   Strictly speaking, the proximate demonstratives *dieser* and *este* are marked for non-restrictivity (= appositionality) of the following relative clause. The distal demonstratives are actually unmarked and thus theoretically comprise both possibilities (restrictivity or appositionality); in fact, however, they are used to mark restrictivity in the overwhelming majority of cases. (Strictly speaking, the definite article also embodies both possibilities). See chapter 3.4.7. in Lavric (2000(b). 900-905).

predict that e.g. German-speaking learners of Spanish will not make any interference errors with such examples, but that their transfer attempts will be successful[11].

3. The contrastive problem of singular totalisers

That much for demonstratives with restrictive relative clauses and for the contrastive method used. The second and main part of this paper deals with singular totalisers: Fr. *chaque* versus *tout*, Sp. *cada* versus *todo*, Ger. *jeder*, but also *jeglicher* and *jedweder*. For speakers of German, these forms pose a problem in French and Spanish alike, as shown by the following error examples:

(3)   *Chaque demandeur d'emploi qui va à l'office pour s'immatriculer est registré et enregistré dans les statistiques

Every job-seeker that comes to the office to seek registration is entered into the register and added to the statistics

(4)   ...la clause de la nation la plus favorisée. Cette clause qui garantit que *chaque concession accordée à un pays membre, est aussi valable pour tous les autres pays membres du GATT

...the most-favoured-nation-clause. This clause which guarantees that each concession accorded to one member state is applied to all other member states of GATT as well...

(5)   La CEE a établi une limite de quantité dans la domaine des céréals. *Chaque excédent représenterait une diminution du prix

The EEU has established a quantitative limit in the cereals domain. Any surplus would mean a falling of the price

(6)   En Austria *cada estudiante puede ir a la universidad si tiene la selectividad y nada más

In Austria every student is admitted to university if he has passed his A-levels, with no additional qualification being required

(7)   *Cada empresa que quiere importar ciertos productos necesita un permiso especial del ministerio de hacienda

Every company that wants to import certain products needs to obtain a special permit from the ministry of finance
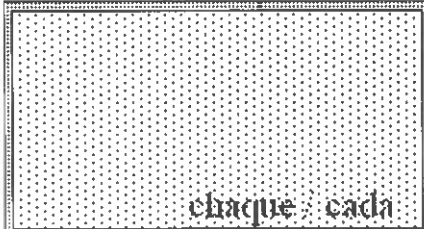
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[11] In addition, one could predict that Spanish-speaking learners of French will face problems similar to those of German-speaking ones when confronted with this matter, while native speakers of French will probably tend to exclusively use the definite article with restrictive relative clauses and thus convey the so-called "over-indulgence" phenomenon (Levenston (1972)) – out of several varieties the one similar to the mother tongue is preferred, which, however, is obviously not too troublesome.

(8)   Nuestros expertos resolverán *cada problema que puede presentarse en su
       sistema informático

       Our experts will solve any problem that might arise in your informatics sys-
       tem

The reason for these errors can be located in the learners equating Ger. *jeder* with
chaque/cada, while most of the time not using *tout/todo* at all. Here we have a virtu-
ally classical example of a "divergent learning structure":[12] *chaque/cada* and *tout/
todo* share the functional area of Ger. *jeder* between them in a rule-governed way.
Compared with German, this accounts for an additional differentiation which has to
be newly acquired when learning French or Spanish.[13]

Table 1. An additional differentiation

Three preliminary remarks:

–   Firstly, *chaque* and *cada* on the one hand and *tout* and *todo* on the other
       hand are, according to my findings, in fact, complete synonyms.
–   Secondly, in my corpus, *jeder* is the exclusive translation equivalent of
       both *chaque/cada* and *tout/todo*.
–   Thirdly, however, this does not mean that German has fewer singular total-
       isers than Spanish or French. There are after all the rarer forms *jeglicher*
       and *jedweder*, which we should not lose sight of.

What about the difference between *chaque/cada* and *tout/todo*? Experienced lan-
guage teachers advise their students to translate Ger. jeder with *tout/todo* in case of a
general statement holding true for all possible and future cases as well. This corre-

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[12] This term can be found in Fehse, Nelles and Rattunde (1977) ("divergente Lernstruktur"); Gnutzmann (1972) speaks of "divergence" ("Divergenz"). For this kind of structures with the L2 being more subtly structured than the L1, see also Lavric (2000(c)) (with numerous examples from business language).

[13] In such cases, the foreign language learner is required to bring into existence new distinctions, i.e. to acquire additional cognitive differentiations or – to use the words of Flament-Boistrancourt (1985) – he has to restructure the world in a new way.

lates exactly with that aspect of differentiation which has been most perceived in the literature, namely the 'worlds' dimension.

4. The 'worlds' dimension

Drawing on Martin (1983), one can formulate the difference as follows: the referents of a noun phrase including *chaque/cada* exist in a real world (see example (9)), while the referents of a noun phrase including *tout/todo* exist in a possible world, e.g. in a counterfactual or hypothetical world (see example (10)) – or even in several or all possible worlds:[14]

(9)   (*The text describes a scene of punishment from the perspective of the victim.*)
     Es dauerte lange, mit <u>jedem</u> Schlag wollte er aus der Haut fahren
         mit *<u>jeglichem</u> / *<u>jedwedem</u> Schlag

     Cela dura longtemps, à <u>chaque</u> coup il était sur le point d'éclater
             *à <u>tout</u> coup

     Duró mucho todo aquello y <u>cada</u> golpe le hacía reventar de rabia
             *<u>todo</u> golpe

     It lasted a long time, and with every lash (of the whip) he came close to ex-
     ploding with rage

                                                        (Inn 105/98)

(10) El ejercicio de la tutela es incompatible con el de <u>todo</u> cargo o representación
     política

                     *de <u>cada</u> cargo o representación política

     Die Ausübung der Vormundschaft ist unvereinbar mit <u>jedem</u> politischen
     Amt oder <u>jeder</u> politischen Vertretung
         <u>jeglichem</u> / <u>jedwedem</u> politischen Amt
         oder jeglicher / jedweder politischen Vertretung

     L'exercice de la tutelle est incompatible avec celui de <u>toute</u> charge ou
     représentation politique
         *<u>chaque</u> charge ou représentation politique

     Exercising the office of tutor (to the king) is incompatible with any political
     function or office

                                                        (Con 49/45/42)

     One can thus ascribe to *chaque/cada* the semantic feature [RW] ('real world'), to
tout/todo – and also to Ger. *jeglicher, jedweder* – the semantic feature [PW] ('possi-

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[14] For the concept of possible worlds see also Martin (1987) and subsequently Lavric (1990) and (1995).

ble world').[15] Ger. *jeder* comprises both areas.

Table 2. Real world versus possible worlds

[RW]	[PW]
chaque / cada	tout / todo / jeglicher, jedweder

jeder

Still, the opposition is in fact a trifle more complicated. Since noun phrases including *chaque/cada* and *tout/todo* are plural referents, combinations of the 'worlds' features are also possible. There are e.g. hypothetic-generic statements, i.e. statements involving all referents in all possible worlds, although one cannot be sure that they relate to referents in the real world as well. This would be equivalent to the feature combination [± RW] [+ PW]. The determiners typically used in such cases are *tout/todo*, while *chaque/cada* are not possible:

(11)   Toda variación en las cantidades abonadas deberá ser solicitada por carta, télex o fax
       *Cada variación

       Tout changement des quantités fixées à l'abonnement devra être sollicité par lettre, fax ou télex
       *Chaque changement

       Jede Änderung der abonnierten Beträge muß schriftlich vorgenommen werden
       Jegliche / Jedwede Änderung

       Any change in the subscribed quantities has to be requested in writing (by letter, telex or fax)

                                                                                (S-Fil)

Still, there are also cases where there are positively some referents in the real world, but where it is not clear, or irrelevant, from the context whether there exist referents in possible worlds as well. The features structure in these examples would be [+ RW] [± PW]. In such cases, *chaque/cada* and *tout/todo/jeglicher, jedweder* are possible, but they yield different respective interpretations, i.e. different readings:

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[15] Strictly speaking: 'referents exist in the real world' versus 'referents exist in a possible world / in possible worlds'.

(12)   Jede Reise verwandelt das Spießbürgerliche in unserer Brust in etwas
       Weltbürgerliches und Göttlich-Städtisches
            Jegliche / jedwede Reise

       Tout voyage transforme en nos cœurs l'élément petit-bourgeois en un
       sentiment de cosmopolitisme et d'appartenance à la Cité de Dieu
            Chaque voyage

       Cada viaje contribuye a que de pequeñoburgueses que somos nos
       convirtamos en ciudadanos del mundo y en habitantes de la ciudad de
       Dios
            Todo viaje

       Every journey transforms the petit-bourgeois element within us into some-
       thing more cosmopolitan and divinely urban
                        (HPP 92-93, quoted from the German writer Jean Paul)

In this example, the variant with tout/todo/jeglicher, jedweder rather carries over-
tones of a generic truth, i.e. an eternal truth valid for all possible worlds, while the
same sentence with *chaque/cada* represents universality rather than genericity, i.e.
an empirically ascertained universal truth. (Ger. *jeder* embodies both possibilities).

The critical point is the possible worlds. As soon as referents are involved in pos-
sible worlds, *tout/todo* have to be used, whereas *chaque/cada* are not possible. For
tout/todo this is equivalent to the feature combination [± RW] [+ PW], which can be
realised as either [+ RW] [+ PW] or [− RW] [+ PW]. With *chaque/cada* on the other
hand, existence of referents in possible worlds is excluded, the referents can only ex-
ist in the real world. The relevant feature combination is [+ RW] [− PW].

Thus we can draw up a detailed and comprehensive table of possible uses of
chaque/cada and *tout/todo/jeglicher, jedweder* in the 'worlds' dimension:

Table 3. The 'worlds' dimension in detail

[+ RW] [− PW]	[+ RW] [± PW]	[− RW] [+ PW]
chaque / cada	tout / todo / jeglicher, jedweder	

jeder

The overlap in the area of [+ RW] [± PW] shows that *chaque/cada* resolve the
ambiguity in the relevant examples, e.g. (12), towards [+ RW] [− PW], while *tout/
todo/jeglicher, jedweder* resolve it towards [+ RW] [+ PW].

5. The 'access' dimension

So much for the 'worlds' dimension. The difference between *tout/todo* and *chaque/cada*, however, is not exhaustively accounted for by this dimension. There is yet another dimension which is at least equally relevant. I call this dimension 'access'. The fundamental opposition here is the one between global and distributive access, expressed by the semantic features [+ DISTRIBUTIVE] versus [– DISTRIBUTIVE], or, [+ GLOBAL].

[+ DISTRIBUTIVE] means that the reference set is split into unit subsets, [+ GLOBAL] means that the reference set can only be looked at as a whole. What we have here, therefore, is an opposition between {a}, {b}, {c} etc. and M = {a, b, c, ...}.

This opposition constitutes the difference between plural and singular totalisers, i.e. between *tous les/todos los/alle, sämtliche* on the one hand and *chaque, tout/cada, todo/jeder, jeglicher, jedweder* on the other hand. The singular totalisers are restricted to [+ DISTRIBUTIVE], the plural totalisers can also occur with [– DISTRIBUTIVE] or, [+ GLOBAL]. In ambiguous contexts, only the latter retain the ambiguity:

(13)   Cada abonado recibirá un número de abono
             Todo abonado recibirá un número de abono
             Todos los abonados recibirán un número de abono

        Jeder Abonnent erhält eine Nummer
             Alle Abonnenten erhalten eine Nummer

        Chaque abonné recevra un numéro d'abonnement
             Tout abonné recevra un numéro d'abonnement
             Tous les abonnés recevront un numéro d'abonnement

        Each subscriber is allocated a number
             All subscribers are allocated a number
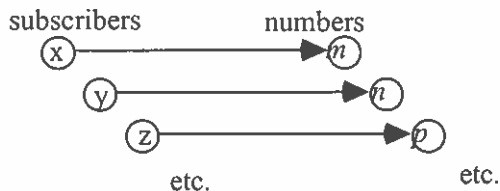
                                                                    (S-Fil)

fig. 1 for ex. 13:
Jeder Abonnent erhält eine Nummer
(Each subscriber is allocated a number)

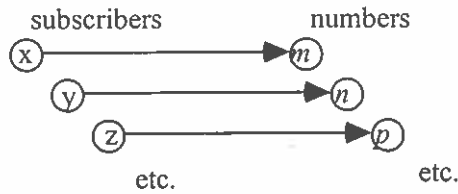With singular totalisers, interpretation is necessarily distributive:

fig.2 for ex. 13:
Alle Abonnenten erhalten eine Nummer
(All subscribers are allocated a number)

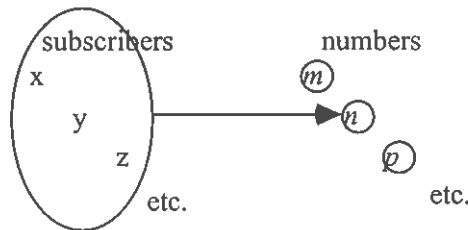With plural totalisers, ambiguity of distributive or global interpretation is retained:

fig.3 for ex. 13:
Alle Abonnenten erhalten eine Nummer
(All subscribers are allocated a number)

Here is a schematic representation of the behaviour of singular and plural totalisers in the opposition [+/– DISTRIBUTIVE]:

[– DISTRIB.]	tous les / todos los / alle, sämtliche
[+ DISTRIB.]	chaque, tout / cada, todo / jeder, jeglicher, jedweder

Table 4. Singular and plural totalisers and distributivity

Thus, *chaque/cada* and *tout/todo* are marked as [+ DISTRIBUTIVE]. They do not, however, represent the pole distributivity in the same way. Because there are certain kinds of examples which, due to access, show a strong affinity for *chaque/cada* and in which neither *tout/todo* nor Ger. *jeglicher, jedweder* can occur.

Firstly, examples with differentiating and comparing predicates:

(14)   (The conversation takes place in a forest. Kreisleiter Gorbach addressing his
        servant:)
        Jedes Gemüt reagiert da anders, wenn es vor die Natur tritt. Der eine
        verstummt, der andere redet einfach weiter, pietätlos
           *Jegliches / jedwedes Gemüt

        Chaque être devant la nature réagit différemment. L'un se tait, l'autre ne
        s'arrête pas de parler; manque de piété
           *Tout être

        Cada persona reacciona de manera distinta cuando se encuentra ante la
        naturaleza. El uno se queda mudo, el otro sigue sencillamente hablando,
        sin piedad
           *Toda persona

        Every individual reacts differently when entering the presence of mother na-
        ture. There are those who fall silent, and those who continue talking, without
        any sense of piety

                                                                    (Wal 25/27/22)

(15)   ...el aumento de la afición al coleccionismo hace que cada Exposición
        Nacional se vea enriquecida, en relación con las anteriores, en espacio y
        calidad
           *toda Exposición Nacional

        ...die Zunahme der [...] Sammlerleidenschaft macht, daß jede nationale
        Ausstellung sich im Vergleich zu den vorangegangenen raum- und
        qualitätsmäßig bereichert sieht
           *jegliche / *jedwede nationale Ausstellung

        ...l'augmentation de l'intérêt porté aux collections fait que chaque Exposi-
        tion Nationale se voit enrichie, par rapport aux précédentes, en espace et
        en qualité
           *toute Exposition Nationale

        ...the increasing craze for collecting stamps explains why every national exhi-
        bition finds itself richer in terms of space and quality compared with the pre-
        vious ones

                                                                    (S-Fil)

Secondly, examples with quantitative attributions:

(16)   ...la consommation moyenne de chaque Français s'élève à 1600 litres [d'eau]
        par jour
                           *de tout Français

...kommt der Durchschnittsverbrauch <u>jedes</u> Franzosen auf 1600 l [Wasser] pro Tag

<div align="center">*<u>jegliches</u> Franzosen</div>

...el consumo medio de <u>cada</u> francés alcanza los 1600 litros [de agua] diarios

<div align="center">*de <u>todo</u> francés</div>

...the average consumption of every Frenchman amounts to 1600 litres (of water) daily

<div align="right">(HPP 134-135)</div>

And thirdly, examples the context of which strongly <u>dis</u>courages a distributive reading:

(17)　El importe a devolver se corresponderá con el tipo que grava la mercancía, aplicándose sobre el IMPORTE UNITARIO de <u>cada</u> artículo

<div align="center">*de <u>todo</u> artículo</div>

Der rückzuerstattende Betrag entspricht dem Auflagetyp der Ware, der für den EINHEITSPREIS <u>jedes</u> Artikels festgesetzt wird

<div align="center">*<u>jeglichen</u>/*<u>jedweden</u> Artikels</div>

Le montant remboursé correspondra au taux appliqué sur la marchandise en question, et ce sur le PRIX UNITAIRE de <u>chaque</u> article

<div align="center">*de <u>tout</u> article</div>

The import to be refunded will be equal to the tax rate attracted by the goods in question as it applies to the unit price of every article

<div align="right">(TVA)</div>

The differentiating and comparing predicates (14, 15) would suggest the feature [+ DIFFERENTIATING] for *chaque/cada*, while *tout/todo* represent the opposite feature [+ EQUATING].[16] Examples (9), (12) and (13), however, show that *chaque/cada* can be used in equating contexts as well. It therefore seems that the opposition would have to be represented as follows:

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[16]　This means that *tout/todo* is used to refer to something the referents have in common; see above, examples (10) to (13) and particularly (11), as well as the following examples:

(18)　...dans la civilisation du négoce dont relèvent nos exemples, <u>toute</u> vente est supposée procurer un bénéfice
　　...in the world of commerce world to which our examples refer, each sale is supposed to generate a profit

<div align="right">(Ans 25)</div>

(19)　...<u>todo</u> posesivo equivale a de + pronombre personal, pero no al contrario
　　...every possessive is equivalent to de + personal pronoun, but the opposite is not true
<div align="right">(PD 79)</div>

Table 5. Tentative distinction between [+EQUATING] and [+DIFFERENTIATING]

[+ DISTRIB.]	[+EQUA.]	tout / todo / jeglicher; jedweder
	[+ DIFF.]	chaque / cada / jeder

The examples of the quantitative attributions (16), however, force us to revise this table once more. Because although they are of the equating type – a common characteristic is referred to – they still only allow for the series *chaque/cada/jeder*, while the series *tout/todo/jeglicher, jedweder* is not possible. The line between [+ EQUATING] and [+ DIFFERENTIATING] therefore has to be drawn at a deeper level; that is why it does not coincide with the line between the two totaliser series and cannot be used to account for their differentiation:

Table 6. The real borderline between [+ EQUATING] and [+ DIFFERENTIATING]

[+ DISTRIB.]	[+EQUA.]	tout / todo / jeglicher; jedweder
	[+ DIFF.]	chaque / cada / jeder

The real key is provided by the examples of the third type, i.e. such as (17), in which the context strongly discourages a distributive interpretation. Only *chaque/cada* (and Ger. *jeder*) can bring about a distributive reading in such opposite contexts. They thus represent distributivity in a very strong variant, which I, using a term by Choe (1987) and Gil (1995), would like to call [+ DISTRIBUTIVE KEY]. *Tout/todo/ jeglicher, jedweder* on the other hand represent a weaker variant of distributivity, which I call [+ INDIVIDUAL], and in which the distributive interpretation has to be supported by the context.

Table 7. [+ INDIVIDUAL] versus [+ DISTRIBUTIVE KEY]

[+ DISTRIB.]	[+INDIVIDUAL]	tout / todo / jeglicher; jedweder
	[+ DISTR. KEY]	chaque / cada / jeder

Chaque/cada/jeder of course still retain the feature [+ DISTRIBUTIVE KEY] even in those examples where [+ INDIVIDUAL] would suffice. In the area overlapping with *tout/todo/jeglicher, jedweder* they still have the more powerful feature, which in such cases is just redundantly strong.

I want to close these thoughts on totalisers in the 'access' dimension with a table comprising all features which have been examined and taken into consideration:

Table 8. Totalisers on the 'access' dimension

[– DISTRIB.]		tous les / todos los / alle, sämtliche	
[+ INDIVIDUAL]	[+ EQU.]	tout / todo / jeglicher, jedweder	
[+ DISTR. KEY]	[+ DIFF]	chaque / cada / jeder	

6. The interaction of both dimensions

At this point, one could return to the 'worlds' dimension and say with regard to a number of the examples examined, that if *chaque/cada* are the only possible totalisers here, it is because we are in the real world. Wrong! (17) is already a hypothetic-generic example incorporating possible worlds, and so are the following two examples of quantitative attributions:

(20) (Extract from a bilateral treaty on tariff quotas:)
Die Erhöhung wird zu jedem Kontingent hinzugezählt
*jeglichem/*jedwedem Kontingent

L'augmentation est ajoutée à chaque contingent
*à tout contingent

El aumento se añadirá a cada contingente
*a todo contingente

The increase will be added on to each quota

(CEE)

(21) Die Erhöhung beträgt zu Beginn jedes Jahres 25%
*jeglichen/*jedweden Jahres

Le rythme d'augmentation est de 25% au début de chaque année
*de toute année

El ritmo de aumento será del 25% al inicio de cada año
*de todo año

The rate of increase is 25% at the beginning of every year

(CEE)

This means, however, – and this finding is quite spectacular – that the 'access' dimension here overrules the 'worlds' dimension! I.e. in case [+ DISTRIBUTIVE KEY] has to be expressed, only *chaque/cada* can be used, even if possible worlds are also involved. The final table therefore has to look like the following:

Table 9. Totalisers on the 'worlds' and the 'access' dimension.

'worlds' dimension → 'access' dimension ↓		[+ RW] [− PW]	[+ RW] [± PW]	[− RW] [+ PW]
[− DISTRIB.]	[+ EQU.]	tous les / todos los / alle, sämtliche		↓ jeder
[+ INDIVIDUAL]			tout / todo / jeglicher; jedweder	
[+ DISTR. KEY]				
	[+ DIFF.]	chaque / cada		

7. Evaluation of the method

Is the mentioned rule of thumb, to use *tout/todo* instead of *chaque/cada* in case of general statements including all possible and future cases, right? The answer is: yes, but. Our error examples (3) to (8) can be explained by that. But the rule is simply not exhaustive enough. The reason for this is that *chaque/cada* also have to be used in possible worlds, whenever distributivity has to be explicitly signalled through the determiner: namely with differentiating predicates, with quantitative attributions and in contexts which would in themselves discourage distributive interpretation.

However, looking at these problems from an interlingual point of view and in the wider context of the determiner paradigm – i.e. asking the question across language boundaries in the context of possible commutations – makes it possible to formulate a much simpler rule: *tout/todo* have to be used whenever and only when Ger. *jeglicher, jedweder* would be possible as well.[17] Indeed, it was shown that the 'zone' of *jeglicher, jedweder* is identical to that of *tout/todo* in both the 'worlds' and the 'access' dimension. This identity, however, could not have been discovered by means of a mere translation comparison, since in the trilingual corpus I used, all occurrences of both *chaque/cada* and *tout/todo* were always rendered as *jeder*. By including the possible commutations, however, one can restore the complexity of the German system, whose more rare totalisers comprise some forms which can be used

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[17] The two forms do not show complete solidarity since *jeglicher* probably carries overtones of a types/sorts-reading (see Lavric 2000(b)). Together, however, they completely cover the area of *tout/todo*.

in exactly the same contexts as *tout/todo*. Thus, German can provide an important clue about understanding and learning the French or Spanish system.

Strictly speaking, the description that has been developed here far exceeds the requirements of error explanation. It shows the problematic forms to be parts of a complex system, parts which can be compared in minute detail by means of a table divided according to semantic features and oppositions. By applying the combined contrastive method, it is possible to generate a comprehensive map of determiner meanings in three different languages. Such a map can make new equivalents visible and thus lead to better, systematically supported equivalence rules. It becomes obvious that structural-contrastive insights can, particularly in so error-prone an area as the singular totalisers, be of significant help in learning and teaching foreign languages.

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[18] All emphasis in the examples is mine, E.L.