

## Combien est-on à plusieurs? / How many are ‘several’?

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### Map of the talk

1. How can we locate *plusieurs* w.r.t. quantity? Bacha’s (1997) problem (section 1)
2. Factoring out the problems: restriction and argumentative orientation (section 2)
3. *Plusieurs* as a layered item (section 3 and 4)

**Convention** : *plusieurs* noted as *several* (although they are probably not equivalent).

### 1. What quantity for *plusieurs*? (Bacha’s problem)

#### 1.1 Bacha (1997):

*Plusieurs* is problematic because it cannot refer to a small quantity nor to a large quantity (1).

- (1) a. *Seules ?? plusieurs personnes ont compris l’allusion*  
Only several persons understood the hint
- b. *Seules quelques personnes ont compris l’allusion*  
Only some/a few persons understood the hint
- c. *L’univers contient ?? plusieurs particules*  
The universe contains several particles
- d. *L’univers contient beaucoup de particules*  
The universe contains many particles

1.2 So what? Maybe *plusieurs* = ‘not a lot and not just a few’. Conflicts with (2).

- (2) a. *L’examen n’était pas si difficile puisque plusieurs étudiants ont eu la note maximale*  
The exam was not that difficult since several students got an A
- b. *L’examen n’était pas si difficile puisque les étudiants qui ont eu la note maximale ne sont # ni très nombreux ni en petit nombre*  
The exam was not that difficult since the students who got an A are neither many nor just a few
- c. *Plusieurs étudiants ont compris mais ils ne sont pas nombreux*  
Several students caught the point but they are not many

- d. *Les étudiants qui ont compris ne sont ni très nombreux ni en petit nombre, mais ?? ils ne sont pas nombreux*  
The students who caught the point are neither many nor just a few, but they are not many

1.3 So, Bacha’s problem is not illusory. Bacha’s proposal:

- (3) *Plusieurs* means a small/moderate quantity like *quelques* ( $\approx$  *some*, *a few*) but has a positive *argumentative orientation* (OA) (Anscombe & Ducrot 1983).

‘Positive’ = oriented towards large quantities (Bacha 1997:p. 52). (1a) strange because *only* presents *several persons* as oriented towards small quantities. (1b) strange because the universe does not contain a small quantity of particles.

#### 1.4 Problems

Generally speaking, the difference between meaning and AO is elusive in Bacha’s analysis. With a meaning + AO combination, how do we know which one is selected to contribute to the semantics of a phrase?

- If *plusieurs* and *quelques* have the same meaning, one might conclude from (1b) that *seul* is able to see meaning. Two possibilities.
- *Seul* sees only meaning, not AO. However this predicts that *plusieurs* is appropriate since its meaning is the same as *quelques*.
- Possible answer: *seul* ‘sees’ AO when it exists (as with *plusieurs*), otherwise it sees the meaning.
- New problem. In (4), there is an argumentative relation between A and B.<sup>1</sup> Yet *quelques* and *plusieurs* pattern alike. Does *quelques* have an AO after all? Which one?

- (4) a. *Ce n’est pas si mal (= A) puisque quelques étudiants ont compris (= B)*  
It’s not too bad (=A) since some/a few students have caught the point (= B)
- b. *Ce n’est pas si mal (= A) puisque plusieurs étudiants ont compris (= B)*  
It’s not too bad (=A) since several students have caught the point (= B)
- c. *C’est pas terrible (= A) puisque (?? quelques + ?? plusieurs) étudiants ont compris (= B)*  
It’s not too good (=A) since (some/a few + several) students have caught the point (= B)

<sup>1</sup>One might dispute that there is an argumentative relation in (4). This would not square well, however, with any version of argumentation theory I know of: scales: Anscombe & Ducrot 1983, Ducrot 1980 *topoi*: Anscombe 1995, semantic hubs : Carel & Ducrot 1999, Carel 2001, Ducrot 2001.

- d. *C’est pas terrible (= A) puisque seuls (quelques + ?? plusieurs) étudiants ont compris (= B)*  
It’s not too good (=A) since only (some/a few + several) students have caught the point (= B)
- e. *(Quelques + Plusieurs) étudiants ont compris, donc ça n’est pas si mal*  
(Some/A few + several) students caught the point, so it’s not too bad
- f. *(Quelques étudiants ?? (seulement) + Plusieurs étudiants) ont compris, donc ça n’est pas terrible*  
((Only) some/a few students + several students) caught the point, so it’s not too good

**1.5** The case of *plusieurs* and *quelques* is not isolated: *peu* (little, adv.) (Ducrot 1972), *un peu* (a little) (Ducrot 1972), *presque* (almost) and *à peine* (hardly, barely) (Ducrot 1972, 1973, 1980, Jayez 1987, 1988) raise similar questions.

**a.** Some data

- (5) **Context:** eating some food is a sign of improvement
- a. *Il a seulement (un peu + peu) mangé*  
He only ate (little + a little) food
- b. *Il va mieux puisqu’il a (?? peu + un peu) mangé*  
He is better since he ate (little + a little) food
- c. *Il ne va pas mieux puisqu’il a (peu + ?? un peu) mangé*  
He is not better since he ate (little + a little) food
- (6) a. *Il a seulement presque fini son repas*  
He only almost finished his meal
- b. *Il va mieux puisqu’il a presque fini son repas*  
He is better since he almost finished his meal
- c. *Il ne va pas mieux puisqu’il a ?? presque fini son repas*  
He is not better since he almost finished his meal
- d. *Il a seulement à peine fini son repas*  
He only barely finished his meal
- e. *Il va mieux puisqu’il a ?? à peine fini son repas*  
He is better since he barely finished his meal
- f. *Il ne va pas mieux puisqu’il a à peine fini son repas*  
He is not better since he barely finished his meal

**b.** Main claim: the data in (4), (5) and (6) correspond to the cross-influence of:

- (i) two environment types: restrictive adverbials like *seul(ement)* and consequence/justification discourse relations,
- (ii) two semantic structures for determiners: flat and layered.

## 2. Environments

### 2.1 *Seul(ement)*

**a.** The standard analysis of *seul(ement)* ( $\approx$  *only*<sup>2</sup>) (Ducrot 1972).

- (7) If  $\mathcal{P}$  is a set of properties (a generalized quantifier),
- a. *Seul*  $\mathcal{P}$   $Q$  asserts that  $\forall x(\neg\mathcal{P}(x) \Rightarrow \neg Q(x))$ .
- b. *Seul*  $\mathcal{P}$   $Q$  presupposes that  $\forall x(\mathcal{P}(x) \Rightarrow Q(x))$ .

**b.** Argumentative sensitivity of *seul(ement)* (Ducrot 1980, Nølke 1983) and *only* (Horn 1996). Very clear in certain cases (8).

- (8) a. *Seul un petit nombre d’étudiants s’est inscrit*  
Only a small number of students registered
- b. *Seul un ?? grand nombre d’étudiants s’est inscrit*  
Only a large number of students registered

Ducrot (1980:25) notes that if  $\phi$  is a plausible argument for  $\psi$ , *Seul(ement)*  $\phi$  becomes a plausible argument for  $\neg\psi$ . So, we have (9).

- (9) *Seul(ement)* inverts the argumentative orientation of the proposition it applies to ( $\approx$  Ducrot 1980).

**c.** (9) does not entail that  $\phi$  is itself ‘negative’ or ‘positive’ (e.g. that it refers to a small or large quantity). This is a potential problem in view of (8): how do we explain the difference?

**d.** In argumentative terms: *seul(ement)* demands a negatively oriented subject NP.

Problem: Ducrot (1980) correctly assumes that *quelques* has a positive orientation (see (4a)) but we have (1b). The observation can be extended.

- (10) a. *Seuls (les + certains) étudiants de première année se sont inscrits*  
Only (the + certain) first year students registered
- b. *La soirée a eu du succès puisque (les + certains) étudiants de première année sont venus*  
The party was a success since (the + certain) first year students came
- c. *La soirée n’a pas eu de succès puisque (# les + # certains) étudiants de première année sont venus*  
The party was not a success since (the + certain) first year students came  
[Possible interpretation: the first year students (predictably) spoiled the party]

**e.** Explanation by alternative semantics: Under the standard analysis,

<sup>2</sup>See in particular Horn 1969 for the parallel analysis of *only*.

*seul(ement)* requires that a set of alternatives be conceivable (see Ducrot 1972 and Rooth 1996 inter al.). Klinedinst (2004) proposes that the proposition modified by *only* is low on ‘the’ (= some appropriate) scale of alternatives. This accounts directly for the fact that:

- (i) items that are associated with low positions are possible (11a).<sup>3</sup>
  - (ii) Items that are associated with context-dependent scale positions are possible (11b).
  - (iii) Items that are associated with high positions are infelicitous.
- (11) a. *Seul (un petit nombre + peu + ...) d'étudiants se sont inscrits*  
Only (a small number of + few) students registered
- b. *Seul(s) (quelques + la moitié des + 40% des + ...) étudiants se sont inscrits*  
Only (some/a few + one half of the + 40% of the + ...) students registered
- c. *Seuls (??beaucoup d' + ??la majorité des + ??la plupart des + ...) étudiants se sont inscrits*  
Only (many + the majority of + most + ...) students registered

- The contrast in (12a) may be explained, following (Corblin 2004), by assuming that a definite NP can refer to a group, whereas the universal quantifier forces reference to the parts/atoms of this group.

- (12) a. *Seuls (les + ??tous les) étudiants de première année se sont inscrits*  
Only (the + all the) first year students registered
- b. *Seul le groupe des premières années s'est inscrit*  
Only the first year student group registered

f. Items that convey an indication of superiority w.r.t. some (possibly contextually given) threshold will be anomalous with *seul(ement)*, because they exclude low values for this threshold.

- (13) *Seuls (??plus de + ??au moins) 10 étudiants se sont inscrits*  
Only (more than + at least) 10 students registered

IF *plusieurs* conveys a similar piece of information and *seul* sees this kind of information, the incompatibility with *seul* is normal.

### g. Conclusion

The first environment, *seul(ement)* selects ‘low’ or ‘indeterminate’ NPs. This intersects but does *not* coincide with argumentative orientation (contra Horn 1996).

### 2.2 Consequence and justification discourse relations

a. They illustrate intuitively AO (4, 5b,c, 6b-f). Jayez (1987, 1988, 1998)

<sup>3</sup>I disagree with Nølke (1983:129-130) on this point.

and Merin (1996, 1999, inter al.) have argued that AO is an *informational* phenomenon.<sup>4</sup> In a nutshell,

- (14) A is an argument for B iff the addition of A to an information state where A is not established (genuine update with A) raises the probability of B (Merin) or any proof of A can be integrated (as a subproof) in a relevant proof of B (Jayez).<sup>5</sup>

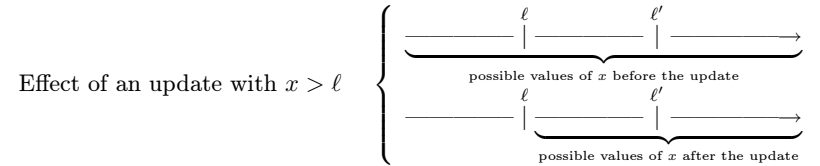
I will stick to the probabilistic framework in this talk because it is more flexible, developed and well-understood than the proof-theoretic approach. More work is required to compare it to the (allegedly) more general plausibility calculus (Friedman & Halpern 2001). A crucial result needed here is recorded in (15).

- (15) Let  $\dot{+}$  note the operation of eliminative update.<sup>6</sup> Let  $s$  (an info. state) be a set of possible worlds,  $s_\phi$  the set of worlds where  $\phi$  is true, if  $s' = s \dot{+} \phi$ ,  $s' \neq s$  and  $s' \neq \emptyset$ , then  $P_s(\phi) < P_{s'}(\phi)$ .

### b. AO

As made clear in (Merin 1997), AO does not (necessarily) produce *conclusive* pieces of argumentation.

- But, it accounts for the well-known intuitive phenomenon of ‘orientation’ (‘direction’, ‘scalarity’, etc.), in particular with threshold-comparison items. Informally, the fact that a value  $x$  is  $> \ell$  ( $\ell$  = the threshold) increases the probability that  $x$  is superior to any  $\ell' \geq \ell$  (because the set of situations that make  $x > \ell'$  false decreases).



- (16) Let  $(O, \leq)$  be a linear order such that  $x = o_i$  for any  $o_i \in O$  is represented in the info. state, then any update with  $x > \ell$  (resp.  $x < \ell$ ) raises the probability of  $x > \ell'$  for any  $\ell' \geq \ell$  (resp. of  $x < \ell'$  for any  $\ell' \leq \ell$ ).

- It also accounts for the observation by Jayez (1988) that existential information has the same AO as universal quantification.

- (17) *(Quelques + certains + tous les) étudiants ont réussi, donc l'examen n'était pas si difficile*

<sup>4</sup>*Information* is not to be confused with what Ducrot called *informativité*, which concerns the description of the states of affairs that make up a/the world.

<sup>5</sup>Here ‘relevant’ means what it means in *relevance logic*, i.e. excluding left weakening: if  $\Sigma \vdash B$  it does not follow that  $C, \Sigma \vdash B$  for any  $C$ , unlike in classical logic.

<sup>6</sup>I.e., as usual,  $s \dot{+} \phi = \{w : w \in s \ \& \ w \models \phi\}$ .

(Some/A few + certain + all the) students passed, so the exam was not that difficult

(18) The update of  $s$  with  $\exists x\phi(x)$  raises  $P_s(\forall x\phi(x))$  for any expression  $\phi$ .

• Together, these two aspects explain why *quelques* and *plusieurs* are (dis)similar.

(i) they behave in the same way when AO only is at stake, because they are both probability raisers.

(ii) They behave differently when relative position on a scale is at stake (the case of *seul(ement)*).

• More work is needed to determine the relation between AO as *potential* inference (this talk) and AO as *plausible* or *linguistic* inference (Carel 1999, Carel 2001, Ducrot 2001, Friedman & Halpern 2001, Jayez & Rossari 1999)

### 3. Flat and layered items

**3.1** It has long been observed that certain lexical items don’t have a uniform semantic structure: they contribute information at (at least) two levels. Examples: *only* (Horn 1969), *peu* and *un peu* (Ducrot 1972), *presque* and *à peine* (Ducrot 1972, 1973, 1980, Horn 1996, Jayez 1987, 1988).

General schema: asserted information + implicated information.

**3.2** Generalizing slightly Ducrot’s (1972) *loi d’enchaînement* (“connection law” or CL), Jayez (1987, 1988) notes that discourse connection through discourse relations such as consequence or justification can only make use of asserted content (20).

(19) **CL** (Ducrot 1972, p. 81)

Discourse relations triggered by coordinating conjunctions different from *et* (*and*), subordinating conjunctions different from *si* (*if*) or by the content of discourse segments cannot be based on presupposed material.

(20) Discourse relations based on the information state of one particular agent are problematic when they are based on non-asserted material.

(20) is mainly relevant to presuppositions and conventional implicatures.<sup>7</sup>

**3.3** Assuming (19) or (20) (or whatever version seems relevant) we predict that presuppositions and conventional implicatures may be difficult to access through standard discourse relations (justification, contrast, etc.).

**a.** Why? Jayez & Rossari (2004) and Jayez (2004a,b) argue that conventional implicatures are not standard updates ( $\approx$  not updates of the common ground) from an epistemic perspective. So the operations that target the

<sup>7</sup>The general problem of discourse linking across several discourse dimensions is complex and cannot be addressed here, see (Jayez 1988, pp. 158–163, Geurts and Maier 2003) for some suggestions.

common ground, e.g. justification, contrast, direct contradiction, etc., can be perceived as irrelevant.

**b.** Indices for non-asserted information in the literature: non asserted info. cannot be directly refuted by *Non* (*No*) (Jayez & Rossari 2004, Potts 2003) nor by *C’est faux* (*It’s false*), cannot enter implicative relations conveyed by conditional sentences, or constitute frontier for discourse attachment (Jayez & Rossari 2004).

**c.** However, the *Non/C’est faux* test is not watertight, because it is based on the default interpretation rather than on an explicit completion<sup>8</sup>. Cf. (21) vs (22).  $A \rightsquigarrow B$  = the default interpretation of A is B.

- (21) A – *Il a un peu mangé*  
He ate a little  
B – *Non + C’est faux*  
No + It’s false  
 $\rightsquigarrow$  He (practically) did not eat  
 $\not\rightsquigarrow$  He ate a lot  
A – *L’examen était un peu difficile*  
The exam was a little difficult  
B – *Non + C’est faux*  
No + It’s false  
 $\rightsquigarrow$  The exam was not difficult  
 $\not\rightsquigarrow$  The exam was (really / very) difficult

- (22) A – *Il a un peu mangé*  
He ate a little  
B1 – ( $\#$  *Non + #C’est faux*), *il a beaucoup mangé*  
(No + It’s false) he ate a lot  
B2 – (*Non + C’est faux*), *il n’a pas mangé du tout*  
(No + It’s false) he didn’t eat at all

- (23) A – *L’examen était un peu difficile*  
The exam was a little difficult  
B1 – ( $\#$  *Non + #C’est faux*), *il était très difficile*  
(No + It’s false) it was very difficult  
B2 – (*Non + C’est faux*), *il n’était pas difficile*  
(No + It’s false) It was not difficult

**d.** This talk: a more robust test (i.e. that does not evaporate under completion). *Au contraire* (*on the contrary*) forces antonymy, *je trouve/crois que* (*I find<sup>9</sup>/believe that*) forces an opinion reading. A similar test with *quand*

<sup>8</sup>The difference is not unexpected in view of Jayez’s (1988) remark that conversational moves can be treated as multidimensional events licensing rather unconstrained deictic processes.

<sup>9</sup>In its ‘opinion’ sense, as in *I have many girlfriends but out of all of them I find that she is the most interesting and caring* (Google).

*même* (still, however) leaves antonymy out (useful for distinguishing simple AO).

In all the examples that use *au contraire* and *quand même*, B’s answer is supposed to be an objection to A (not a comment, or a follow-up)

- (24) A – *Il a beaucoup mangé*  
He ate a lot  
B1 – *(Au contraire) moi je trouve qu’il a (quand même) ?? un peu mangé*  
(On the contrary + Still), I find that he ate a little bit  
B2 – *(Au contraire) moi je trouve qu’il a (quand même) peu mangé*  
(On the contrary + Still), I find that he ate little  
A – *L’examen était vraiment difficile*  
The exam was really difficult  
B1 – *(Au contraire) moi je trouve qu’il était (quand même) ?? un peu difficile*  
(On the contrary + Still), I find it was a little difficult  
B2 – *(Au contraire) moi je trouve qu’il était (quand même) peu difficile*  
(On the contrary + Still), I find it was not much difficult

#### e. *Plusieurs*

• Provisional hypothesis: (25), to be made more precise in (39), section 4. Note that condition 1 echoes the comparative origin of the Old French *plu(i)sor* (< *pluriores*), which, however, was compatible with the definite article and meant essentially *many* or *most* (Buridant 2000:172-174).

- (25) *Plusieurs* is 2-layered:  
1. *Plusieurs P Q* asserts that the number of *P*-ers that *Q* is superior to a certain threshold  $\ell$ .  
2. *Plusieurs P Q* communicates that this number is ‘small’.

#### • Tests

- (26) A – *Beaucoup d’étudiants ont réussi*  
Many students passed  
B1 – *(Au contraire) moi je crois qu’il y en a (quand même) ?? plusieurs*  
(On the contrary + Still), I believe there are several students  
B2 – *(Au contraire) moi je crois qu’il y en a (quand même) peu*  
(On the contrary + Still), I believe they are few

(26B1) clumsy because B objects to A on the basis of the fact that there are more students than a certain threshold-quantity.

- (27) If *a* produces a proposition A that is intended to raise the probability of B, an objection to *a* w.r.t. B, can be any proposition that lowers the probability of A or of B.

- (25) explains the observation by Corblin (2002b inter al.) that *plusieurs*:  
(i) is not appropriate with approximators such as *exactement* (*exactly*) or *à peu près* (*about*): *plusieurs* does not assert the existence of a precise quantity;  
(ii) nor with *au plus*, which conflicts with the AO.

The observation extends to other 2-layered items.

- (28) A – *Beaucoup d’étudiants ont eu la note maximum*  
Many students got an A  
B – *(Au contraire), moi je crois que (?? plusieurs + ?? quelques + ?? plus de 5 ?? au moins 5 + peu + moins de 5 + au plus 5) (d’) étudiants (quand même) l’ont eue*  
(On the contrary + Still), I believe that (several + some/a few + more than five + at least 5 + few + less than 5 + at most 5) students got it
- (29) A – *Peu d’étudiants ont eu la note maximum*  
Few students got an A  
B – *(Au contraire), moi je crois que (plusieurs + # [quelques] + plus de 5 + au moins 5 + ?? moins de 5 + ?? au plus 5) étudiants (quand même) l’ont eue*  
(On the contrary + Still), I believe that (several + some/a few + more than five + at least 5 + less than 5 + at most 5) students got it
- (30) A – *Il a plus de 20 ans*  
He is more than 20  
B – *(Au contraire), je pense qu’il a (quand même) (?? presque + # [à peine] + moins de) 20 ans*  
On the contrary + Still, I think he is (almost + barely + less than) 20
- (31) A – *Il a moins de 20 ans*  
He is less than 20  
B – *(Au contraire), je pense qu’il a (quand même) (# [presque] + ?? à peine + plus de) 20 ans*  
(On the contrary + Still), I think he is (barely + almost + more than) 20

#### • Difference between *au contraire* and *quand même*.

- (i) Both convey an idea of opposition/contrast.  
(ii) In addition, *au contraire* marks either logical antonymy ( $\phi$  vs  $\neg\phi$ ) or vectorial opposition in a vector space semantics (Faller 2000, Zwarts 1997, Zwarts & Winter 2000).

Intuitively, this means that scalar positions must be symmetrical:

$$p_1 \longleftarrow | \longrightarrow p_2$$

The boxed # occurrences above concern cases where this requirement is not fulfilled, hence a possible anomaly with *au contraire*.

f. *Quelques* as a flat item

- (i) *Quelques* refers to a small/moderate quantity (32a).
- (ii) It is compatible with *seul*: so, it does not assert that the quantity it refers to is high on some relevant scale (32b).
- (iii) It has the AO effect that characterizes existentials: so, it asserts existence (32c).
- (iv) Conclusion: *quelques* has a general form  $\lambda P, P'. \exists X (P(X) \ \& \ C(|X|) \ \& \ P'(x))$ , where  $X$  is a set and  $C$  is some condition on  $X$ 's cardinal.

- (32)
- a. *Quelques supporters, ?? à peu près deux cents, ont envahi la pelouse*  
Some/A few fans, about 200, invaded the playground
  - b. *Seuls quelques étudiants ont compris*  
Only some/a few students caught the point
  - c. *L'examen n'était pas si difficile, puisque quelques étudiants ont réussi*  
The exam was not that difficult since some/a few students passed

#### 4. How small is small (or vague is vague)?

4.1 Corblin (1987, 1997, 2002a,b) and Paillard (2002) group together and contrast the three indefinites *quelques*, *plusieurs* and *des*. Their main judgments are summarized in (33).

- (33)
- a. *Au plus (?? des + ?? plusieurs + ?? quelques) N*  
At most (Plural morpheme + several + some/a few) N [Corblin]
  - b. *Seuls (?? des + ?? plusieurs + quelques) N*  
Only (Plural morpheme + several + some/a few) N [Paillard]
  - c. *Sauf (?? des + ?? plusieurs + ?? quelques) N*  
Except (Plural morpheme + several + some/a few) N [Paillard]
  - d. *(Environ + Exactly + À ... près + ... ) (?? des + ?? plusieurs + ?? quelques) N*  
(About + Exactly + ...) (Plural morpheme + several + some/a few) N [Corblin, Paillard]
  - e. *Les (?? plusieurs + quelques) N*  
The (several + few) N [Paillard]
  - f. *Un ou (?? des + plusieurs + ?? quelques) N*  
One or (Plural morpheme + several + some/a few) N [Bacha, Paillard]
  - g. *(Plusieurs + ?? Quelques) des N*  
(Several + A few) of the N [Paillard]
  - h. *(Des + Plusieurs + ?? Quelques) N différents*  
(Plural morpheme + Several + Some/A few) different N [Paillard]

lard]

- i. *Ces animaux sont (des + ?? quelques + ?? plusieurs) baleines*  
These animals are (plural morpheme + a few + several) whales [Corblin]<sup>10</sup>

#### 4.2 Trimming out the data

a. I ignore data that might reflect categorial differences: *plusieurs* cannot be adjectival (33e) and *quelques* cannot be pronominal (33g).

b. Dobrovie-Sorin and Laca (2003), (elaborating on Attal 1976, Bosveld–de Smet 1997, Dobrovie-Sorin 1997 inter al.) show that (at least) some uses of *des* in French parallel bare N's in Romance languages and should accordingly be ignored in certain environments where they are *not* indefinites in a strong sense (33i).

c. (33a,b) have already been discussed.<sup>11</sup>

d. (33c): *plusieurs* out because of its AO (*sauf ?? plus de 4 étudiants (except more than 4 students)*). *Des* better if the partitive interpretation emerges. So the problem is the accessibility of the partitive interpretation.

- (34) *Tout le monde a protesté, sauf des étudiants qui n'avaient pas lu le texte*  
Everybody objected except some students who had not read the text

e. I have no explanation for the *un ou ...* observation (33f) but maybe it is not quite robust.

- (35) *Selon les cas un étudiants ou quelques étudiants pourraient s'inscrire*  
Depending on circumstances, one student or a few students might register

f. Concerning (33h), (i) the observation should ideally be coupled with a semantic analysis of *différent(s)* (see Laca & Tasmowski 2001, Tovena & Van Petheghem 2003), (ii) the oddness disappears in other, similar, environments and (iii) *certain*s gives rise to a similar observation.<sup>12</sup>

- (36)
- a. *Quelques N variés*  
Some/A few various N
  - b. *Quelques N, tous différents*  
Some/A few N, all mutually different
  - c. *Certains N ?? différents*  
Certain different N

<sup>10</sup>I adapted an example from Corblin (1987) to get rid of a possible quantity effect.

<sup>11</sup>I disagree with Corblin's judgment about *au plus quelques* and *au moins plusieurs*, which don't sound odd to me.

<sup>12</sup>Since it is usually assumed that *certain*s entails individuation, the fact that *certain* behaves like *quelques* is problematic for Paillard's claim that *quelques* entails non-individuation, a property which he believes to be responsible for its incompatibility with *différents*.

### 4.3 Vagueness

**a.** Corblin and Paillard both assume that the semantics of *des*, *quelques* and *plusieurs* results from their ‘vagueness’.

Corblin: the ‘indefinites’ are not members of the series of numbers and cannot help us to contrast the reference set and the domain set.

Paillard: *des* and *plusieurs* are vague but *quelques* refers to a (referentially) fixed and (informationally) unspecified quantity.

**b.** Two observations and the final version of the proposal

- *quelques* and *plusieurs* can be used as an answer to a how-many question.

(37) A – *Combien d’étudiants se sont inscrits?*

How many students did register?

B – (*Plusieurs* + *Quelques uns* + ?? *Des étudiants*)

(Several + A few ones + Students)

This shows that *plusieurs* is not ‘more unspecified’ than *quelques*, and that the frontier, if any, separates *des* and the other two, as suggested by Corblin.<sup>13</sup>

- The vagueness is not significantly proportional and, in this respect, *quelques* and *plusieurs* are similar to interval indicators (‘between  $m$  and  $n$ ’). (38d) is strange even if the range of companies is the world.

(38) a. *Des étudiants, en (petit + grand nombre), se sont inscrits*

Students –(a few + many) students– registered

b. (*Quelques* + *Plusieurs*) *étudiants, en (petit + ?? grand) nombre se sont inscrits*

(Some/A few + Several) students –(a few + many) students– registered

c. *Des officines, au nombre de 321 à l’heure actuelle, proposent un hébergement web gratuit*

Some small companies, 321 at the moment, offer free web hosting

d. (?? *Quelques* + ?? *Plusieurs*) *officines, au nombre de 321 à l’heure actuelle, proposent un hébergement web gratuit*

(A few + Several) small companies, 321 at the moment, offer free web hosting

e. (*Quelques* + *Plusieurs*) *officines, au nombre de 32 à l’heure actuelle, proposent un hébergement web gratuit*

(A few + Several) small companies, 32 at the moment, offer free web hosting

- Proposal: *des* has no quantitative import of any kind, *quelques* and *plusieurs* are vague. In terms of fuzzy functions, this means that *quelques* and *plusieurs* use a type  $\mathbb{N} \rightarrow \mathbb{R}$ .

<sup>13</sup>Corblin notes that *des* is numerically the vaguest of the three items, but this presupposes that it is an indefinite.

(39) a. *Plusieurs P Q*

Asserted content :  $|P \cap Q| > \ell$  for some integer  $\ell$ .<sup>14</sup>

Implicated content:  $\exists X(X = P \cap Q \ \& \ f_{pl}(|X|) \approx 1)$ , where  $f_{pl}$  is an appropriate fuzzy function such that  $f_{pl}(0) = f_{pl}(1) = 0$

b. *Quelques*

Asserted content:  $\exists X(X = P \cap Q \ \& \ f_{ql}(|X|) \approx 1)$ , where  $f_{ql}$  is an appropriate fuzzy function such that  $f_{ql}(0) = f_{ql}(1) = 0$ .

## 5. Consequences and perspectives

- Distinction between flat and layered items, connection with argumentation and presupposition (back to Ducrot 1972 taking into account more recent frameworks).
- Incorporation of quantity and vagueness in a more precise way (taking layers into account).
- A larger set of alternatives for studying the status of *des* and of ‘indefinites’.
- Fuzzy functions are popular or unpopular depending on what ideology of vagueness you consider. Here I (safely?) borrowed one of the ‘official’ approaches (fuzzy functions). Smith (2001) proposes a very brilliant defense of fuzziness (with a different technical apparatus). Still, I am not convinced that we should really measure vagueness in a strong sense (i.e. match real numbers and sets). But I have nothing else to propose, even something (vaguely) stupid.

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<sup>14</sup>I would personally set  $\ell$  to 2 by default. However, this may vary with speakers. Moreover the value is probably context-dependent (see the possible adjustments with *au contraire*). The fuzzy functions  $f_{pl}$  and  $f_{ql}$  should not be proportional, as explained just before.

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