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# Scenarios of equivalence - The case of *quelque*

Jacques Jayez and Lucia M. Tovina

**Abstract** The French existential determiner *quelque* is examined in relation to the notion of equivalence. This notion, formalised as *Equity* in (Jayez and Tovina, 2008), is the explicit characterisation of a widespread intuition concerning free choice and epistemic items, according to which members of a set are presented as equivalent with respect to some relevant criterion or dimension. Equivalence is a unifying notion that enables us to embrace the different aspects of the distribution of *quelque* and turn them into a coherent whole.

The paper discusses the epistemic component of *quelque* and draws attention to its evidential property, which is exploited in accounting for the subtle interplay between the determiner and the types of nouns it combines with. It is then argued that the seeming positive polarity of *quelque* derives from the conventionalised effect of a processing interaction between its existential quantifier status and the epistemic implicature it conveys. By taking into account the pressure of processing mechanisms on the stabilisation of use, we are able to explain the otherwise puzzling fact that several epistemic determiners with unrelated morphology in different languages exhibit a converging behaviour with respect to negation. Finally, a closer look at diachronic data reveals that the anti-specificity of *quelque* is present already in the early stages of the life of the item.<sup>1</sup>

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Jacques Jayez  
ENS de Lyon and L2C2, CNRS, e-mail: jacques.jayez@ens-lyon.fr

Lucia Tovina  
Université de Paris 7, e-mail: tovena@linguist.jussieu.fr

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## 1 Introduction

In this article, we look at the French determiner *quelque*—an existential indefinite somewhat literary or formal in many of its uses—in relation to the notion of equivalence.<sup>2</sup> This notion, formalised as *Equity* in (Jayez and Tovena, 2008) and already present in the characterisation of the referentiality of an interpretation provided in (Jayez and Tovena, 2005), is the explicit characterisation of a widespread intuition concerning free choice items (FCIs) as well as epistemic items, according to which members of a set are presented as equivalent with respect to some relevant criterion or dimension. In this sense, the notion may offer a minimal characterisation of free choice and epistemic elements across languages.

The notion of Equity is spelled out in section 2, where it is set against the backdrop of the general discussion on FCIs. Next, we observe that *quelque* occurs in several constructions and structures in French, which can be divided into three categories. *Quelque* enters subordinating constructions, it can be a negative polarity determiner, and it can be an epistemic determiner that conveys ignorance. These cases are examined in the first three subsections of section 3. Their global equivalence profile is underscored. Putative exceptions to the characterisation proposed for epistemic *quelque* are defused in two steps in subsection 3.4. First, habituals are reduced to one more case of using inferential knowledge. Second, the notion of trope, from the philosophical tradition, is elaborated into two subtypes, i.e. internal and external tropes, useful to capture the split between abstract nouns like *beauty* and *courage* in combination with *quelque*. Finally, aspects of the interaction with negation are discussed in subsection 3.5 and accounted for with the help of the epistemic properties of *quelque*. Last, the study of the evolution of this determiner across time is launched in section 4, where the role of equivalence emerges again. Section 5 concludes the article.

## 2 Equivalence among candidates

Over the last twenty years, the ever growing amount of work published on FCIs has revealed their empirical diversity. It has also raised the question of whether all the phenomena connected with free choiceness have really something in common. In this section, we do not claim to provide a definitive answer to this question. More modestly, we propose that a significant part of the phenomena grouped under the ‘free choice’ label share indeed a common facet, which is a form of equivalence that we call *Equity*.<sup>3</sup>

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<sup>2</sup> Although our work on free choice and epistemic determiners has progressed since the time of the original 2008’s version of this paper, we cannot include here all the detailed changes and additions that would be relevant. So, we will focus on what is essential to the description of *quelque*.

<sup>3</sup> For the sake of clarity, in characterising the intuitively appealing notion of equivalence, we stick to the terminological choice adopted in previous work (Jayez and Tovena, 2008), where we have

Intuitively, Equity corresponds to the fact that the members of a set are mutually ‘equivalent’ with respect to some criterion or along some dimension. The use of *any* in modal contexts provides a typical illustration. Suppose that (1a) is issued in a context where the speaker wants the addressee to pick a card from a pack. Then, *any* signals that it does not matter which card is picked, or, in other words, that there is no privileged card (which *must* be picked) or forbidden card (which *must not* be picked). Similarly, if (1b) describes the status of printers within a network, *any* emphasises that no printer is out of reach. All cards and all printers are equivalent with respect to the property of being picked or being reached.

- (1) a. Pick any card  
b. Any printer can be reached

Far from being a peculiarity of *any*, the notion of Equity turns out to be an essential ingredient of the description of many FCIs, under at least three externally different forms. First, there is *referential* Equity, which precludes reference to a particular individual or a particular subset of individuals from a given set (Jayez and Tovena, 2005) and is conducive to modal variation (Giannakidou, 2001; Jayez and Tovena, 2005). Second, Equity is not limited to the referential uses of FCIs. It concerns also epistemic elements. *Epistemic* Equity corresponds to ignorance, that is, to the fact that all individuals are epistemically interchangeable, or, equivalently, that the precise identity of those that satisfy a given property is unknown (Alonso-Ovalle and Menéndez-Benito, 2003; Farkas, 2002; von Stechow, 2000; Jayez and Tovena, 2006; Tredinnick, 2005). This is the phenomenon sometimes also referred to by the term of ‘referential vagueness’ in recent work. Whether epistemic elements are simply a particular (epistemic) case of FCIs is debatable. We will propose an answer to this question in section 3.3.2. Finally, Equity concerns also affective uses of FCIs. Affective values such as indifference and depreciation are frequently mentioned in connection with ignorance (von Stechow, 2000; Jayez and Tovena, 2002; Tredinnick, 2005; Van de Velde, 2000).

Equity can be formulated in a very general, noncommittal way. Let  $S$  be a set of situations (alternatives, worlds, etc.) and  $D$  a set of individuals. Each individual of  $D$  can occur in a situation of  $S$  or not. So,  $S$  represents a set of possible choices for the members of  $D$ .

- (2) Let  $S$  be a set of situations and  $D$  a set of individuals,  $choices(S, D)$  denotes the set of sets of pairs  $\langle s, a \rangle$ , where  $s \in S$  and  $a \in D$ .

For instance for  $S = \{s_1, s_2\}$  and  $D = \{a, b\}$ , the members of  $choices(S, D)$  can be described by the following matrix, where each empty cell at  $(i, j)$  can be 1 (meaning that  $\langle i, j \rangle$  is in the choice) or 0 (meaning that  $\langle i, j \rangle$  is not in the choice).<sup>4</sup>

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called *Equity* the combination of the two constraints discussed in this section. The definition of Equity is recalled in (29) below.

<sup>4</sup> If one thinks of situations as worlds, choices amount to complete answers to a constituent question, in the partition style of analysis by Groenendijk and Stokhof.

	$a$	$b$
$s_1$		
$s_2$		

In this example,  $choices(S, D)$  contains 16 possible choices. Borrowing the language of modal logic, we use the following abbreviations.

- (3) If  $h \in choices(S, D)$ ,  $\Box_h a$  notes the fact that  $\langle s, a \rangle \in h$  for every  $s \in S$ .  $\Diamond_h a$  notes the fact that  $\langle s, a \rangle \in h$  for some  $s \in S$ .

For a given choice  $h$ , the notion of equivalence can be implemented with the help of two distinct but compatible constraints that we call *No Winner* and *No Loser*. No Winner says that no individual can be chosen in every possible situation (no individual is ‘imposed’). No Loser says that no individual can be excluded from any possible situation (no individual is ‘excluded’). Clearly, the two constraints are independent since neither one entails the other.<sup>5</sup>

- (4) a.  $h$  satisfies No Winner iff  $\neg\Box_h a$  for every  $a \in D$ .  
 b.  $h$  satisfies No Loser iff  $\Diamond_h a$  for every  $a \in D$ .

Returning to free choiceness, it is straightforward that examples like (1a) are interpreted as jointly satisfying No Winner and No Loser. The set of situations  $S$  stands for the possible evolutions of the current situation at speech time. Since every card can be chosen or left out, no card can be left out in all evolutions (No Loser) and no card can be chosen in every evolution (No Winner).

Ignorance and indifference signal that the identity of an individual is unknown or does not matter. Therefore, items that convey that kind of value enforce No Winner. For instance, the French determiner *un quelconque* can express ignorance as well as indifference. (5a) entails that the speaker cannot identify the solution that Paul found. So, for every (reasonable) solution which is a possible candidate, that is, which satisfies the open proposition ‘Paul found solution  $x$ ’ at some epistemic alternative, it is not the case that this candidate satisfies the open proposition at *every* epistemic alternative (No Winner). Similarly, in (5b), the speaker makes it manifest that she does not care about which card will be picked, so, if the possible situations represent all the situations that are compatible with the speaker’s preferences, no card shows up at every alternative (No Winner).

<sup>5</sup> The joint effect of these constraints always rules out the choices where no individual at all is ever chosen and where all individuals are chosen everywhere, but also a number of intermediary cases, depending on the cardinality of  $S$  and  $D$ . In the example in hand, ten more choices are eliminated and only the following four survive.

$a$	$b$	$a$	$b$	$a$	$b$	$a$	$b$				
$s_1$	0	0	$s_1$	1	1	$s_1$	1	0	$s_1$	0	1
$s_2$	1	1	$s_2$	0	0	$s_2$	0	1	$s_2$	1	0

We remain neutral as to whether these choices are collected at some point into a single object, be it a conjunction or disjunction of alternatives.

- (5) a. Paul a trouvé une solution quelconque  
       ‘Paul found some solution or other’  
       b. Tu peux prendre une carte quelconque  
       ‘You may pick some card or other’

Certain FCIs impose No Loser as well (e.g. English *any* and French *n’importe quel* and *un quelconque*). We will return in more detail to this point in section 3.3.

### 3 Three *quelque* and their global equivalence profile

*Quelque* occurs in several constructions and structures in French. They can be divided into three categories. First *quelque* enters two different subordinating constructions and there is also a companion structure with *quel que*. Second *quelque* can be a negative polarity determiner, labelled *quelque*-NPI hereafter. Finally, *quelque* can be an epistemic determiner that conveys ignorance, labelled *quelque*-E hereafter. We consider these three cases in turn.

#### 3.1 Unconditional *quelque*

*Unconditional* constructions comprise all those constructions that express the independence of a proposition with respect to a set of alternatives, as per Zaefferer (1991), see also (Gawron, 2001; Rawlins, 2008). They are illustrated in (6) for English. In all cases, the proposition expressed by the main clause, that we have to change our plans and that the person in question will get a particular office, is true regardless of which alternative is true in the set of alternatives introduced by the other clause. In all these structures, an interrogative component seems to be responsible for introducing the alternatives.<sup>6</sup>

- (6) a. Whether you agree or not, we have to change our plans  
       b. Whether Mary, Joan or Louise will be hired, she will get the office next to mine  
       c. Whoever the company will hire, he will get the office next to mine

*Quelque* is found in two different unconditional constructions, that we describe cursorily. The first is the structure *quelque* ADJ<sub>*i*</sub> *que* NP V-SUB *e<sub>i</sub>* [<sub>S</sub> ...], illustrated in (7).<sup>7</sup>

<sup>6</sup> In addition to differences in the technical implementation of alternatives, the three mentioned proposals can be distinguished by the importance they assign to *scales*. Gawron grants a central role to them, in contrast to Zaefferer and Rawlins.

<sup>7</sup> *Que* is the direct object form of the relative pronoun in French. V-SUB is a predicative verb in the subjunctive, and *e<sub>i</sub>* notes a gap.

- (7) a. *Quelque fatigué que Paul soit, il finira le travail*  
 ‘However tired Paul is, he will finish the job’  
 b. *Quelque embarrassé que Paul se soit trouvé, il n’a rien dit*  
 ‘However embarrassed Paul found himself, he did not say anything’

The second is the structure  $[XP \textit{quelque} N]_i \textit{que} [S\text{-SUB} \dots e_i \dots] [S \dots]$ , illustrated in (8).

- (8) a. *Quelque fatigue que Paul ressent, il finira le travail*  
 ‘Whatever tiredness Paul may feel, he will finish the job’  
 b. *Pour quelque raison que Paul ait fait ça, son attitude est inadmissible*  
 ‘Whatever reason Paul had to do that, his behaviour cannot be tolerated’

These structures are felt as formal. A more current construction is  $\textit{quel}_\alpha \textit{que être-SUBJ}_{\alpha'} NP_\alpha [S \dots]$ , illustrated in (9).<sup>8</sup>

- (9) a. *Quelle que soit la fatigue de Paul, il finira le travail*  
 ‘However tired Paul is, he will finish the job’  
 b. *Quel que soit son âge, c’est inadmissible*  
 ‘No matter how old he is, this cannot be tolerated’

In the three structures, the order between the clause containing *quelque* and the  $[S \dots]$  clause is ‘free’. For convenience, only the order  $[S \dots \textit{quelque} \dots] [S \dots]$  is showed. We discuss two aspects of these structures. The first is characterised in negative terms but is important in the context of the paper. In these constructions, *quelque* or *quel que* do not necessarily convey ignorance. For instance, in (7a), the speaker may have a very precise knowledge of the degree to which Paul is tired and of the circumstances that explain his being tired. In (8b), the speaker may know the reason why Paul behaved the way he did. As for (9b), the age may be overtly given in the same sentence, as shown by example (10), which is perfectly natural.

- (10) *Paul n’a que trois ans, mais quel que soit son âge, c’est inadmissible*  
 ‘Paul is only three years old, but, no matter how old he is, this cannot be tolerated’

The second aspect is the particular value conveyed by the unconditional structure. According to Zaefferer (1991), an unconditional structure deconditionalises a proposition  $q$ , i.e. it converts  $q$  into the proposition that the holding of any one of a given set of propositions  $\mathbf{P}$  is sufficient for the holding of  $q$ , where  $\mathbf{P}$  exhausts the set of options that are taken into consideration. Thus,  $q$  is unconditional on the question which one of the members of  $\mathbf{P}$  happens to be true. With this starting point in mind, we consider the following examples.

<sup>8</sup> *Être* is the equivalent of the *be* copula.  $\alpha$  and  $\alpha'$  are sets of agreement features. Specifically,  $\alpha$  includes number, gender and person (set to 3rd),  $\alpha'$  includes only number and person since French does not mark gender on a finite verb.

- (11) a. Quel que soit l'entraîneur que l'équipe aura, elle gagnera le championnat  
 'Whatever coach the team will have, they will win the championship'  
 b. #Quel que soit l'entraîneur compétent que l'équipe aura, elle gagnera le championnat  
 'Whatever competent coach the team will have, they will win the championship'

The characterisation introduced so far does not seem to predict the contrast between (11a) and (11b). (11a) entails that the identity of the coach does not affect the future victory. (11b) entails that the identity of the competent coach does not affect the future victory. Why should a restriction to competent coaches (instead of coaches in general) create a difference in acceptability? For instance, compare (11) to a similar pair with a FCI determiner instead of an unconditional structure. No contrast is observed in (12).

- (12) a. L'équipe gagnera le championnat avec n'importe quel entraîneur  
 The team will win the championship with any coach  
 b. L'équipe gagnera le championnat avec n'importe quel entraîneur compétent  
 The team will win the championship with any competent coach

However, it is possible to account for the contrast in (11) by exploiting the common intuition of 'deconditionalisation' with respect to a set of propositions. We assume for simplicity that unconditionals are based on sets of mutually exclusive alternatives, involving exactly one individual each, along the lines of (Rawlins, 2008). Suppose that we have a set of individuals  $\{a_1 \dots a_n\}$  that provides the values of coaches and competent coaches for (11a) and (11b). The alternatives proper can be described by a set of world-assignment pairs as in (13), where  $\exists!$  notes the exactly-one quantifier.<sup>9</sup>

- (13) Alternatives for (11a)  
 $\{\langle w, g \rangle \mid w \models \exists!x(\textit{coach}(x)) \ \& \ g(x) \in \{a_1 \dots a_n\} \ \& \ w, g \models \textit{coach}(x)\}$   
 Alternatives for (11b)  
 $\{\langle w, g \rangle \mid w \models \exists!x(\textit{coach}(x) \ \& \ \textit{competent}(x)) \ \& \ g(x) \in \{a_1 \dots a_n\} \ \& \ w, g \models \textit{coach}(x) \ \& \ \textit{competent}(x)\}$

For each alternative relative to (11b), we have that  $w, g' \not\models \textit{coach}(x) \ \& \ \textit{competent}(x)$ , for every  $g'$  such that  $g'(x) \neq g(x)$ . At this point there are two possibilities. (i) We can interpret the sentence as meaning that the team will win the championship, provided it has a competent coach. In this case, the 'alternatives' all contain  $\textit{competent}(a_i)$  and it is unclear why the property of competence should be mentioned at all as a

<sup>9</sup> If we want to relax the condition that each alternative uses exactly one individual, we can rephrase the definitions given in (13) in the following way:  $\{\langle w, G \rangle \mid G \subseteq \mathbb{G} \ \& \ \forall g \in G(g(x) \in \{a_1 \dots a_n\} \ \& \ w, g \models \phi(x))\}$ , where  $\mathbb{G}$  is the set of assignment functions and  $\phi$  is the property of interest, i.e.  $\lambda x.\textit{coach}(x)$  or  $\lambda x.\textit{coach}(x) \ \& \ \textit{competent}(x)$ . We don't discuss here the choice between the two options on alternatives because it is mostly irrelevant to our concerns.



resource for constructing alternatives, since they are constructed only on the basis of the property of being a coach.<sup>10</sup> (ii) We can interpret the sentence as pointing to alternatives genuinely based on *both* properties. In that case, we may let in the set of alternatives situations where there are several coaches but only one is competent. This is pragmatically odd because a team has in general only one (main) coach. So, we should eliminate such alternatives. However, we may also let in the alternatives competent and incompetent non-coaches, which makes unclear again why the property of being competent was mentioned in the first place. Summarising, whatever the interpretation is, we face problems managing the alternatives, which are ill-defined or implausible. The previous examples are improved when there is a salient set of competent coaches, among whom one person can be chosen in each alternative.

A similar effect is observed with expressions whose interpretation relies on mutually exclusive alternatives, as in (14). Again, these examples are improved if some set of competent coaches is highlighted by the context

- (14) a. L'identité de l'entraîneur importe peu. De toute façon, ils gagneront le championnat  
'Who the coach is does not matter much. Anyway, they will win the championship'
- b. #L'identité de l'entraîneur compétent importe peu. De toute façon, ils gagneront le championnat  
'Who the competent coach is does not matter much. In any case they will win the championship'
- c. L'entraîneur peut bien être untel ou untel, ça ne change rien  
'The coach may be Mr. So and So, it does not make any difference'
- d. #L'entraîneur compétent peut bien être untel ou untel, ça ne change rien  
'The competent coach may be Mr. So and So, it does not make any difference'

In the context of this paper, unconditionality can be seen as a particular case of Equity, since it amounts to presenting all situations of a certain type as equivalent with respect to the truth of a certain proposition (the 'conclusion' of the unconditional structure). An indirect piece of evidence in favour of the relationship between Equity and unconditionality is provided by the concessive value, frequently observed for *quelque* in unconditional constructions. Since the truth of the conclusion remains unaffected by the variation in alternatives, a concessive value can emerge if the alternatives are ranked along some scale. The speaker then conveys the idea that the conclusion is true *even* in those situations where it is the most unlikely, that is, those situations that are the most unfavourable to the proposition. This raises the question of whether the concessive value is pragmatic or conventional. One may postulate that a likelihood scale is conventionally associated with the constructions

<sup>10</sup> It is of course possible to mention this property *outside of* the characterisation of alternatives, as in *L'équipe gagnera le championnat quel que soit l'entraîneur, pourvu qu'il soit compétent* ('The team will win the championship whoever the coach is, provided he is competent').

in hand, as Lee and Horn (1994) have done for *any* and as Gawron (2001) has proposed for Universal Concessive Conditionals (UCCs) with *wh-ever*.<sup>11</sup> UCCs were introduced by König (1986), who explicitly appeals to the relation between the protasis of a conditional referring to ‘a suitable extreme value on some scale’ and the conditional having a concessive interpretation (König, 1986, p. 238).

However, since concessivity is not always present with unconditional structures (see (15) and its English counterpart (16)), we prefer a more abstract analysis, based on the idea of a set of alternatives, parameterising the very general configuration of Equity in a way specific to unconditional structures.

- (15) A – C’est Jean qui a donné le colis  
 B – Non, c’est Paul  
 C – Bon, quelle que soit la personne, il faut partir
- (16) A – It was John who gave the parcel  
 B – No, it was Paul  
 C – Listen, whoever it was, it’s time to go

### 3.2 *quelque-NPI*

French has a negative polarity complex determiner *quelque N que ce soit*, that we label *quelque-NPI*. *Quelque-NPI* is to be found in negative, interrogative and conditional environments (17).

- (17) a. Paul n’a pas fait quelque effort que ce soit  
 ‘Paul made no effort whatsoever’  
 b. Est-ce que Paul a fait quelque effort que ce soit?  
 ‘Did Paul make any effort whatever?’  
 c. Si Paul fait quelque effort que ce soit, les choses iront mieux  
 ‘If Paul makes any effort whatsoever, the situation will clear up’

It is out in assertive sentences, whether episodic or not (generic, habitual, etc.), cf. (18).

- (18) a. \*Paul a fait quelque effort que ce soit  
 ‘Paul made any effort whatsoever’  
 b. \*Quelque effort que ce soit est toujours louable  
 ‘Any effort whatsoever is always laudable’  
 c. \*Habituellement, Paul faisait quelque effort que ce soit  
 ‘Usually, Paul made any effort whatsoever’

The distribution captured in this array of uses may motivate a characterisation as NPI. One can make sense of it if one sees *quelque que ce soit* as an end-of-scale

<sup>11</sup> UCC is the term used by Gawron for unconditionals. As mentioned in footnote 6, Gawron, like Zaefferer and Rawlins, uses alternatives, but his alternatives are ordered rather than flat ones.

determiner which points to lowest values and requires downward-monotone environments to warrant pragmatic inference, see (Horn, 1972, 1989; Fauconnier, 1975; Israel, 2001). Since *quelque* alone (without the *que ce soit* part) has a very different distribution (see next section), the source of scalarity is probably the *que ce soit* part. This part creates a rhetorical effect of widening or emphasis, maybe because of the subjunctive or of a simple effect of insistence, as confirmed by the fact that (19a,b) are perceived as weaker than (19c,d).

- (19) a. Il n'a fait aucun effort  
 b. Il n'a pas voulu faire d'effort  
 c. Il n'a fait aucun effort que ce soit  
 d. Il n'a pas voulu faire quelque effort que ce soit

Superficially, *quelque*-NPI implements No Loser. In fact, it behaves as a universal quantifier that takes scope over the operators it can combine with. The relevant operators are *non-veridical* in the sense of Zwarts (1995) (see also (Giannakidou, 1998)). A propositional operator  $Op$  is non-veridical when  $Op(\phi) \not\Rightarrow \phi$ . Negation, the question operator and the conditional operator are well-known examples of such operators. For space reasons, we do not discuss here the different possibilities that are available at the moment to capture operator-sensitivity in the syntax-semantics interface<sup>12</sup>. We limit ourselves to a general, theory-independent, definition, given in (20).

- (20) Assume that we have a construction  $Op([\text{S} \dots \text{quel N que ce soit} \dots])$ , where  $Op$  is a non-veridical operator,  $N$  expresses property  $P$  and  $[\text{S} \dots]$  proposition  $\phi$ . We define the domain of  $N$ -objects,  $D_P$  to be  $\{x \mid P(x)\}$ , that is, the domain of individuals that satisfy the property  $P$  denoted by the noun. Let  $x$  be the variable bound by *quelque*-NPI in the logical form of  $\phi$ . Then, the construction communicates that an interpretation  $M$  is appropriate only if, for every  $g$  such that  $g(x) \in D_P$ ,  $M, g \models Op(\phi(x))$ .

### 3.3 *quelque-E: Ignorance and evidentiality*

When it occurs as an autonomous determiner, *quelque* precludes an interpretation where the referent of the NP is identified by the relevant epistemic agent. Furthermore, it is also an *evidential* determiner, in that it qualifies the mode of information available to the agent<sup>13</sup>. Its anti-specificity is a side-effect of evidentiality. In order to distinguish it from the two previous cases, the *quelque* determiner is noted *quelque-E*, where E is mnemonic for epistemic and evidential.

Let us consider ignorance first. *Quelque* requires that the epistemic agent does not know which individual satisfies the description provided by the sentence. First,

<sup>12</sup> See (Shan, 2004) and (Kratzer, 2005) for examples of the 'continuation-based' style vs. the 'pointwise function application' style.

<sup>13</sup> This section draws on (Jayez and Tovena, 2008).

ignorance can be defined as in (21), where it is said that agent  $A$  does not know which individual satisfies the description  $\Delta$  if and only if no individual satisfies  $\Delta$  in all the epistemic alternatives she entertains, simplifying a little the issue and adapting from (Jayez and Tovenà, 2006).

- (21) Let  $A$  be an agent and  $\Delta(x)$  a set of formulas in the free variable  $x$ . Note  $M, a \models \Delta(x)$  the fact that  $M, g_a^x \models \Delta(x)$  for some  $g$ . At  $w$ ,  $A$  does not know which individual satisfies  $\Delta(x)$  whenever there is no  $a$  such that, for all the epistemic alternatives  $w_i$  of  $A$  in  $w$ ,  $w_i, a \models \Delta(x)$ .

One might object that this definition of ignorance is not exactly what we need. It is compatible with a situation where  $A$  believes that no individual satisfies  $\Delta$ . Intuitively, one does not describe a situation where an agent believes that no individual satisfies property  $\Delta$  as an ‘ignorance’ situation. This intuition does not raise a mere terminological issue. We will see in section 3.5.1 how to address this concern in a principled way, without modifying (21).

An alternative, more syntactic definition, is given in (22).

- (22) Let  $A$  be an agent and  $\Delta(x)$  a set of formulas in the free variable  $x$ . At  $w$ ,  $A$  does not know which individual satisfies  $\Delta(x)$  whenever  $\neg \exists x(w \models \Box_{\text{Bel}, A} \Delta(x))$

Then, *quelque* specifically requires that the agent does not know which individual satisfies the description provided by the sentence, as defined in (23).

- (23) **C-ignorance** (after (Jayez and Tovenà, 2008))  
For a (modal) tripartite form  $Op([\textit{quelque-E}]_x[P][P'])$ , where  $Op$  is a (possibly null or complex<sup>14</sup>) modal operator, an interpretation assigned to an agent  $A$  is appropriate only if it is compatible with the fact that  $A$  does not know which individual satisfies  $Op(P(x) \& P'(x))$ .

Constraint (23) accounts for the oddity of (24), for instance, where the value of  $x$  is supposed to be unknown to the speaker, who is the default epistemic agent, although the very same speaker is most probably able to identify the friend she met.

- (24) ??Hier, j’ai rencontré quelque amie

(23) is a No Winner constraint. If  $S$  is the set of epistemic alternatives, and the set of individuals considered is the denotation of  $P$ , i.e.  $P$  is the restriction set,  $\text{choices}(S, P)$  is defined by:  $\{h \mid \langle s, a \rangle \in h \text{ iff } a \text{ satisfies } P \text{ and } P' \text{ in } s\}$ . Then (23) forbids  $\Box_h a$  for every  $a$  in the restriction.

Next, the epistemic agent cannot use perceptual or hearsay evidence to get the existential proposition corresponding to the sentence containing *quelque*. This ban concerns the source of information, hence it is evidential in nature. The constraint can be expressed in positive terms by saying that *quelque* marks *inferential eviden-*

<sup>14</sup> We call a modal operator ‘complex’ when it is a stack of elementary modal operators, as when one uses  $\text{Bel}_a K_b \text{Bel}_a [\phi]$  to code ‘a believes that b knows that a believes that  $\phi$ ’.

*tiality*, as the ultimate source of information is an inferential process by the speaker, see (25).<sup>15</sup>

- (25) **C-inference** (Jayez and Tovenà, 2008)  
 A form [*quelque*]<sub>x</sub> [*P*] [*P'*] is appropriate only under interpretations where the epistemic agent *infers*, i.e. has no direct evidence, that  $\exists x(P \& P')$ .

Note that this does not prevent the speaker from feeding an inferential process with perceptual or hearsay evidence, e.g. inferring something from what she sees. Furthermore, no explicit independent marking of evidentiality in the clause is required. Whenever an inferential evidential interpretation is available, *quelque* is fine, see (26).

- (26) Il y a de la lumière dans le bureau; quelque idiot a oublié d'éteindre  
 'The light is on in the office; some idiot forgot to switch it off'

Note also that *quelque* does not commit the speaker to a particular modal force, as shown by (27).<sup>16</sup>

- (27) a. Yolande a peut-être rencontré quelque ami  
 'Perhaps Yolanda met some friend or other'  
 b. Yolande a nécessairement rencontré quelque ami  
 'Yolanda necessarily met some friend or other'

### 3.3.1 Connections between the constraints

As mentioned above, ignorance and evidentiality, as expressed in *C-ignorance* (23) and *C-inference* (25), are not related in some way such as asymmetric or mutual entailment. The entailment from *C-ignorance* to *C-inference* does not go through. If the relevant agent *A* does not know which individual satisfies description  $\Delta$ , generally she does not have direct access to this piece of information, but indirect access is not barred. As for the opposite direction, suppose that agent *A* can infer that some individual satisfies  $\Delta$  in a situation *s*. *A* might be in a position to infer *which* individual satisfies  $\Delta$ . Then, situation *s* would violate *C-ignorance*.

But the conclusion that there is no logical relation between *C-ignorance* and *C-inference* is not the end of the story, since the two constraints are related pragmatically. When a situation conforms to *C-inference*, using an indefinite makes the ignorance interpretation most plausible, as evidenced by the contrast in (28). While (28b) is not impossible, it is more difficult to interpret than (28a).

- (28) a. Yolande a rencontré une amie, Louise  
 'Yolanda met a friend, Louise'

<sup>15</sup> We follow Aikhenvald (2005) in assuming that evidentiality is about the linguistic marking of the source of information, not of its validity or reliability.

<sup>16</sup> The relation of evidentiality to modality is a well-known open issue. We do not base evidentiality on modal status.

- b. # Yolande a dû rencontrer une amie, Louise  
‘Yolanda must have met a friend, Louise’

### 3.3.2 Ignorance and Equity

Following the strong characterisation of free choiceness defended in (Jayez and Tovena, 2006, 2008) and recalled in (29), *quelque* does not qualify as an FC item, since it obeys No Winner but not No Loser, see (30).

- (29) **Equity** A tripartite form [FCI] [ $P$ ] [ $P'$ ] is compatible with an interpretation  $I$  only if:
- A. any member of  $P$  can be  $P'$  under interpretation  $I$  (No Loser constraint)
  - B. any member of  $P$  can be  $\neg P'$  under interpretation  $I$  (No Winner constraint)
- (30) a. Yolande a probablement rencontré quelque amie, qui n’était pas Marie  
‘Yolanda probably met some friend or other, who was not Marie’
- b. ??Yolande a probablement rencontré quelque amie, Marie  
‘Yolanda probably met some friend or other, (namely) Marie’

The fact that *quelque* obeys No Winner is predicted by *C-ignorance*. As for No Loser, there is no reason why *quelque* should conform to it if its sensitivity to ignorance is a consequence of its evidential side, as we argue.

However, if we base the definition of free choiceness on Equity only, the presence of a constraint of ignorance gets more weight and *quelque* can then be seen as an FC item. There are two options at this point. One may think that the distinction is merely a terminological matter, or insist that Free *Choice* Items must be intuitively connected with a choice among individuals and that this requirement leads one to impose No Winner, in order to preserve the possibility of unrestricted choices.

## 3.4 Fine-tuning the *E* profile of *quelque-E*

In this section we discuss two seeming violations of the constraints *C-ignorance* and *C-inference*. In the case of habituals, the latter constraint seems to be violated. In the case of abstract mass nouns, both constraints seem to be flouted.<sup>17</sup>

### 3.4.1 Habituals

Culioli (1982) observed that *quelque* is fine in habituals, see (31). Can the working of constraints *C-ignorance* and *C-inference* predict this behaviour? Habitual sentences obey *C-ignorance*, as shown by (32).

<sup>17</sup> This section draws on (Jayez and Tovena, 2008).

- (31) L'après-midi, elle allait habituellement voir quelque ami  
'In the afternoon, she usually visited some friend or other'
- (32) ??A l'époque, je voyais toujours Yolande avec quelque amie, Marie  
'At that time, I used to see Yolanda with some friend or other, Mary'

But *quelque* is fine in habituales where no inference seems to be drawn, see (31) where *C-inference* seems to be violated because the epistemic agent may have witnessed the events she refers to. In effect, the crucial factor in habituality is the existence of some sort of inference from particular occasions to a regularity. Habituality judgements present a series of particular occasions as a law-like repetition. Under this view, *C-inference* is not violated in (31) since the speaker infers the habitual proposition. On the contrary, a limited non-inferential repetition is expected not to be compatible with *quelque*, see (33).

- (33) ?J'ai vu sept fois Yolande rencontrer quelque ami  
'I saw Yolanda meet some friend or other seven times'

### 3.4.2 Tropes

In non-inferential episodic sentences, *quelque*, combined with count nouns or concrete mass nouns, apparently produces a result that is not as good as when it combines with abstract mass nouns, see the contrast in (34). The abstract mass nouns under consideration denote external qualities (beauty), feelings (irritation) and dispositions (intelligence).

- (34) a. \*Yolande a bu quelque eau  
'Yolanda drank some water'  
b. Yolande a montré quelque courage.  
'Yolanda showed some courage'  
c. Il y a quelque hypocrisie à prétendre cela.  
'There is some hypocrisy in this claim'

Second, as noted in (Jayez and Tovenà, 2002), with such nouns, there is a diminutive flavour. In this, *quelque* is similar to *un certain* 'a certain', see (35).

- (35) a. Yolande a montré un certain courage.  
'Yolanda showed some courage'  
b. Il y a une certaine hypocrisie à prétendre cela.  
'There is some hypocrisy in this claim'

For instance, in (34b) and (35b), the speaker implies that she is not sure that Yolanda showed courage to a high degree or in a strong form. This corresponds to a Q-implicature (Horn, 1989) triggered by the indefinite. By indicating that Yolanda exhibited a particular degree or form of courage, the speaker implicates that, for all she knows, Yolanda did not show higher degrees or clearer forms of courage. How-

ever, *un certain* and *quelque* no longer behave the same when they are combined with some abstract nouns, as illustrated in (36).

- (36) a. Deux individus [...] qui se caractérisaient par une certaine laideur<sup>18</sup>  
 ‘Two persons [...] who were characterised by a certain ugliness’  
 b. #Deux individus [...] qui se caractérisaient par quelque laideur  
 c. Il avait une certaine claudication quand il marchait  
 ‘He had a certain limp when he walked’  
 d. #Il avait quelque claudication quand il marchait

The NP complements in (36) denote particularised properties exhibited in particular spatio-temporal settings. These instantiations of properties are usually analysed as *tropes* (Williams, 1953; Campbell, 1990; Maurin, 2002; Moltmann, 2007), i.e. particular entities that can enter similarity classes corresponding to abstract properties, like Yolanda’s kindness (in the kindness class) or the colour of my car (in the colour class).

For contrasts like those in (36), we set up a new distinction into *external* and *internal* tropes. External tropes are directly observed by agents. This is the case for ugliness or limp. Internal tropes correspond to internal states or processes of which only certain effects can be directly observed. For instance, courage and hypocrisy may show in behaviour (language, gestures, actions, etc). An agent who witnesses the symptoms of an internal trope may not know what trope it is. This distinction between a trope and its manifestation makes room for an inference from the latter to the former. In the terms of (25), the speaker infers that some trope exists.

Note that the distinction between two kinds of tropes has lexical correlates, as exemplified in (37).

- (37) a. ??Marie a montré de la beauté / laideur  
 ‘Mary showed beauty / ugliness’  
 b. Marie a montré du courage / de l’intelligence  
 ‘Mary showed courage /intelligence’

### 3.5 Interaction with negation

#### 3.5.1 Computing implicatures under negation

*Quelque* has a particular profile with respect to negation (Corblin, 2004). It exhibits a behaviour similar to that of *some* and other positive polarity items (PPI), (e.g. Baker, 1970; Szabolcsi, 2004). First, it is infelicitous in the immediate scope of anti-additive operators, whose definition is recalled in (38), as shown in (39). Example (39) is anomalous if *quelque* has narrow scope, thus negation seems to work as an antilicensor for *quelque*.

<sup>18</sup> Excerpt from: <http://blog.lefilmfrancais.com/index.php?2006/05/25/2888-paolo-sorrentino-realisateur-de-lamico-di-famiglia>



- (38)  $O$  is antiadditive  $=_{df} O(a \vee b) = O(a) \wedge O(b)$   
 (39) Yolande n'a pas dû trouver quelque fichier  
 'Yolanda must have not found some file'  
 ??[neg > *quelque*] vs. [*quelque* > neg]

Next, wherever negation is extraclassal (40a), or there is another NPI-intervener, e.g. *toujours* in (40b), or the combination of clausemate negation with *quelque* is in the scope of a higher operator, e.g. (40c), then *quelque* is fine. Again, this is reminiscent of the standard behaviour of PPI antilicensors.

- (40) a. Je ne pense pas que Yolande ait trouvé quelque fichier  
 'I don't think that Yolanda has found some file'  
 $\Rightarrow$  I don't think that Yolanda has found any file  
 b. Yolande ne trouvait pas toujours quelque excuse  
 'Yolanda didn't always find some excuse'  
 $\Rightarrow$  Sometimes, Yolanda didn't find any excuse  
 c. Je suis étonné que Yolande n'ait pas trouvé quelque fichier  
 'I am surprised that Yolanda didn't find some file'

*Quelque* can also occur in the scope of a negative quantifier like *personne* ('nobody') or –more marginally– *rien* ('nothing').

- (41) a. Personne n'a fait quelque remarque  
 'Nobody did some commenting'  
 b. En général, rien dans son attitude ne suscite quelque critique  
 'In general, nothing in his behaviour causes some criticism'

Moreover, as noted by Baker, antilicensors have the special property of seeing their effect 'undone' by another antilicensor stacked upon them, see (42). We will adopt the often used term of *rescuing* in such cases.

- (42) a. Je ne pense pas que Yolanda n'ait pas fait quelque remarque  
 b. I don't think that Yolanda didn't make some remark

Observations of this kind have led Szabolcsi (2004) to propose an analysis in terms of feature activation, that we will not discuss here. Instead of arguing for or against some form of licensing and antilicensing, we take the behaviour of *quelque* described in this subsection to be an instance of the more general problem of computing implicatures. Two pieces of evidence add support to this line of analysis. First, *quelque* and *some* are very similar as to their behaviour with respect to negation. They also share the ignorance profile that we have described with the help of constraint (23), see (Farkas, 2002).<sup>19</sup> Second, the convergence with the data in (43),

<sup>19</sup> The crosslinguistic set of items with this type of behaviour is broader. For instance, Spanish *algo* ('something'), akin to *algún*, has a very similar distribution. See (Alonso-Ovalle and Menéndez-Benito, 2003) for the epistemic character of *algún*.

where we use the French complex determiner *je ne sais quel*, lit. ‘I don’t know what’, can hardly be accidental.<sup>20</sup>

- (43) a. Yolande n’a pas trouvé je ne sais quel fichier  
b. Je ne pense pas que Yolande n’ait pas trouvé je ne sais quel fichier

Examples (43a) and (43b) have the same readings as their counterparts with *quelque*. In particular, the paraphrase ‘Yolanda didn’t find any file’ is not available for (43a) whereas it is for (43b). Again, it is striking that this (transparently) ignorance-based determiner patterns with *quelque* and *some*.

Can we account for this double parallelism? In (Jayez and Tovena, 2008), we have proposed that the epistemic restrictions on *quelque* (C-ignorance and C-inference) are a *conventional implicature*, in the sense of Potts (2005). The semantics of *quelque* is thus divided into two parts. The first one concerns the *at-issue* content, in the sense of Potts, and is an existential quantifier. The second one is the implicature. For clarity, we first use a semi-formal expression, where the at-issue content and the implicature are linked by a free variable  $y$ .

- (44) *quelque*  $P P'$ :  
a. at issue content =  $\phi : \exists x(x = y \& P(x) \& P'(x))$   
b. conventional implicature =  $y$  is not identified and  $\phi$  is only inferred

Conventional implicatures have a projection behaviour analogous to that of presuppositions. For instance they are not affected by negation and interrogation. Following the general direction of Potts’ analysis, we assume that expressions that have a projective content, such as a presupposition or conventional implicature, can be represented as a product  $\langle \textit{at-issue content}, \textit{projective content} \rangle$ . Under this format, *quelque* can be represented as (45).

- (45)  $[[\textit{quelque}]] = \lambda P, P'. \langle P(x) \& P'(x), \textit{no-direct-evidence}_A(P(x) \& P'(x)) \& \neg \exists x(\Box_{\text{Bel}_A}[P(x) \& P'(x)]) \rangle$

Suppose that a negative operator is applied to the representation in (45). It bears only on the first term of the pair (at-issue content), thus entailing that there is no individual that satisfies the restriction and the scope, giving the result in (46).

- (46)  $\lambda P, P'. \langle \neg(P(x) \& P'(x)), \textit{no-direct-evidence}_A(P(x) \& P'(x)) \& \neg \exists x(\Box_{\text{Bel}_A}[P(x) \& P'(x)]) \rangle$

Why should this be offending? The fact that an agent has no direct evidence of  $\phi$  and does not know which individual satisfies  $\phi$  does not contradict  $\neg\phi$ . So, it is unlikely that the solution to our problem is straightforwardly truth-conditional. In contrast, let us consider a (neo-)Gricean solution based on lexical alternatives. It is often assumed that, given a set of lexical competitors which are all truth-conditionally

<sup>20</sup> French has also pronominal forms such as *je ne sais qui / quoi / où / quand / comment / pourquoi / PP<sub>interrog</sub>*, ‘I don’t know who / what / where / when / how / why’, which have the same distribution as the determiner.

compatible with the situation to be described, the choice of an item over the others is significant in at least two ways. The item may carry a presupposition or implicature that is satisfied or has to be conveyed to the hearer. Alternatively, it may be the case that the item does *not* carry a presupposition or implicature carried by at least one other item in the set, thus its use may convey the presumption that the presupposition or implicature in question is not satisfied. The reader is referred to (Spector, 2007) and (Sauerland, 2008) for some illustrations.

In the case of *quelque*, it is clear that, when compared to a standard indefinite like *un* in French, there is no point in using *quelque* apart from the aim of communicating that the epistemic limitations it conveys are satisfied. Consider now the system of truistic constraints in (47), which express that an agent who believes that no individual satisfies  $\phi$  has no direct evidence that  $\phi$  is satisfied at all (47a) and does not believe that a particular individual satisfies  $\phi$  (47b).

- (47) a.  $\Box_{\text{Bel},A} \neg \exists x \phi(x) \Rightarrow \text{no-direct-evidence}_A(\phi(x))$   
 b.  $\Box_{\text{Bel},A} \neg \exists x \phi(x) \Rightarrow \neg \exists x (\Box_{\text{Bel},A} \phi(x))$

If we assume that an agent  $A$  who asserts the proposition that no individual satisfies  $\phi$  is taken to believe precisely such a proposition, we conclude that, by using *quelque* with a clausemate negation,  $A$  chooses an item whose implicature is entailed by the at-issue content she communicates. Why would  $A$  select *quelque* in the first place, since its implicature is guaranteed and cannot be doubted unless one cancels the at-issue content, which is impossible without an explicit correction? Either the implicature is redundant or the at-issue content is challenged. Both cases make the interpretation difficult or even impossible.

The implicature-based idea may be specified in two markedly different ways. The allergy of ignorance determiners to negation might be the result of an on-line pragmatic inference, or else it might be a conventionalised property, which probably derives from a pragmatic tension between the negated at-issue content and the implicature, but has been ‘frozen’ in usage. In the following, we are going to argue in favour of the latter option and we start by discussing the former option first.

Suppose we were to assign the anomaly of epistemic determiners in the scope of clausemate negation to a form of pragmatic on-line reasoning. In addition to the usual risk of making overly strong predictions across languages, we would face a fundamental problem. As we saw above, epistemic determiners are possible when they occur in a non-negative embedded clause (40a) or in the scope of a negative quantifier (41). To get a clear idea, consider a simple example like *It is not possible that Yolanda found some file*. This example entails that, in every accessible world relative to the possibility modality, Yolanda didn’t find any file. So, certainly, the speaker believes that Yolanda didn’t find any file. As a result, the constraints in (47) apply and predict that epistemic determiners have their implicature trivially entailed by the at-issue content sentence. Even in those cases where the implicature is not entailed but rather implied, one may wonder why the speaker would bother communicating an implicature which is anyway satisfied by another implicature conveyed by her discourse. For instance, with *I don’t think that Yolanda found some file*, although I don’t explicitly deny that Yolanda found a file, I imply that it is very

unlikely to me. So why should I bother to indicate that the files that have been found are unknown, since they don't even exist? In other terms, it seems that in many cases of higher clause negation, the implicature is as superfluous as with clausemate negation. Therefore, there is no reason why the latter configuration, where epistemic determiners are problematic, should be less appropriate than the former, where the same determiners are not or are significantly less so. One can extend the argument to negative quantifiers. Clearly, with *Nobody made some remark*, the inference or ignorance implicature is irrelevant since, to repeat, no remark was made.

A second reason to doubt that we have an on-line pragmatic effect is the basic (but important) observation that certain pronouns deriving from epistemic determiners (i) have a distribution similar to that of their parent determiners but (ii) do not convey an epistemic implicature. This is the case for the *quelque* series, *quelqu'un*, *quelque chose*, *quelque part*, and its *some* counterpart *somebody*, *something*, *some-where*.

- (48) a. Yolanda a rencontré quelqu'un, son prof de gym  
 b. Yolanda met somebody, her gym coach  
 c. ?Yolanda n'a pas rencontré quelqu'un  
 d. ?Yolanda didn't meet somebody

Finally, we note that a similar distribution is observed with N-words like *personne* ('nobody') or *rien* ('nothing'). They are incompatible with verbal negation and compatible with higher clause negation and negative quantifiers.<sup>21</sup> We are not aware of any implicature-based treatment of N-words. If an account that captures the similarities between epistemic determiners and N-words is felt desirable, it is dubious that it can be based on an on-line epistemic implicature.

- (49) a. ??Yolanda n'a pas vu personne / rien vu  
 'Yolanda didn't see nobody / nothing'  
 b. Il n'est pas vrai que Yolanda n'a vu personne / rien vu  
 'It is not true that Yolanda saw nobody / nothing'  
 c. Personne n'a rien dit  
 'Nobody said nothing'  
 May mean: 'everybody said something' (double negation) or 'nobody said anything' (negative concord)

Let us now explore the option of viewing the allergy of ignorance determiners to negation as a conventionalised property. Following the general architecture postulated in (Vasishth et al., 2008), we propose a general constraint, formulated in (50) below. This constraint uses the notion of *retrieval*. Recent theories of sen-

<sup>21</sup> For negative quantifiers, we ignore the orthogonal issue of negative concord in French, see (Corblin and Tovena, 2001, 2010; de Swart, 2010) on this question.

Leaving negative concord considerations aside, notice that sentence (49a) is marginal. If accepted, it belongs to a colloquial register and has only a double negation reading. On the contrary, (49b) is acceptable and belongs to standard French, and only has a double negation reading. As an aside, recall that *ne* in the subordinate clause in (49b) does not contribute negation in everyday's French.

tence processing (Bornkessel-Schlesewsky and Schlewsky, 2009; Vasishth and Lewis, 2006) distinguish between (forward) expectation and retrieval. Typically, a morpheme creates an expectation when it is perceived as incomplete and forward-looking, for instance because it lacks an argument or an attachment site (for an adjunct). Retrieval concerns incomplete morphemes that are backward-looking, for instance verbs that lack their subject. In sentences of the form ‘It is not true that S’, the matrix clause expects an embedded clause. Negation is treated at the level of the matrix clause and the embedded clause is treated independently, except (i) if it contains an item that triggers a retrieval or (ii) if the matrix clause puts some constraint on the embedded clause. Case (i) is illustrated by NPIs, which look for a licensor on their left, and may find it in a matrix clause (*It is not true that Yolanda saw anybody*). Case (ii) is illustrated by tense/mood concord phenomena in verbal systems.

Concerning NPIs and PPIs (jointly referred to as XPIs), we follow Vasishth et al. (2008) in assuming that XPIs in general trigger a retrieval of negative or positive elements on their left. For example, when a PPI is encountered, certain ‘relevant’ elements on its left are checked in order to see whether they have a [+positive] feature, where ‘relevance’ may depend on the PPI and/or the grammar of the language under consideration. We assume that PPIs must check verbs and NPs in a family of languages including English and French. It has been observed that XPIs can be ‘licensed’, that is, give rise to acceptance by subjects and to normal reaction times, by ‘incorrect’ licensors, which have the required feature but do not c-command the XPI, provided the pseudo-licensor is sufficiently near to the XPI (Drenhaus et al., 2005; Vasishth et al., 2008). This suggests that proximity is an essential factor in licensing (or the illusion of licensing). Constraint (50) allows a PPI to retrieve the necessary positive feature locally. It is deliberately limited since we lack experimental cross-linguistic evidence.

- (50) In (at least) certain languages, the retrieval of the [+positive] feature can be done locally.

Constraint (50) predicts that the only case where a PPI is excluded is in the immediate scope of a verbal negation, for the languages where it applies. Concerning double negation, if the two negations cancel, the retrieval gets a [+positive] feature. The net result depends on the success of the cancellation. We expect, for instance, that a long distance cancellation is more problematic, as confirmed by the contrast in (51). This is due to the fact that forward expectation and retrieval are affected by memory decay, a fact which may lead a subject to lose interpretation resources in the course of processing.

- (51) a. Je ne pense pas que Yolande n’ait pas remarqué quelque chose  
 ‘I don’t think that Yolanda didn’t notice something’  
 b. ?Je ne pense pas que Paul croit que Marie a dit que Yolande n’a pas remarqué quelque chose  
 ‘I don’t think that Paul believes that Mary said that Yolanda didn’t see something’

Summarising our claims, we have argued that it is unlikely that the observed pattern results from an on-line calculation of implicatures. However, we have also argued that, in the case of epistemic determiners, it is the epistemic implicature which is responsible for their positive polarity profile, which has been grammaticised and is subject to general limitations on retrieval distance. We refer the reader to (Jayez and Tovena, 2008) for additional comments and to (Jayez and Tovena, 2010a) for a discussion of different patterns of interaction between at-issue and non-at-issue content.

### 3.5.2 Further questions about negative contexts

The approach to the *quelque* determiner presented in the previous subsection leaves open the issue of the status of *quelque N que ce soit* and *quelque chose/un/part* vis-à-vis negation. First, note that *que ce soit* can be used to strengthen (widening) negative determiners or pronouns like *aucun* (no) or *personne* (nobody) (52). Very generally, it demands an NPI environment (53).<sup>22</sup> However, unexpectedly, example (53b), containing the adverb of sentential negation *pas*, is not entirely natural for all speakers. This is unexpected because sentential negation is the prototypical NPI licenser.

- (52) a. Paul n'a eu aucun remord (que ce soit)  
'Paul didn't have any regret'  
b. Paul n'a vu personne (que ce soit)  
'Paul did not see anybody'
- (53) a. ??Paul a dû avoir quelque remord que ce soit  
'Paul must have felt any regret'  
b. % Paul n'a pas eu quelque remord que ce soit<sup>23</sup>  
c. Paul a-t-il eu quelque remord que ce soit?  
'Did Paul feel any regret whatsoever?'  
d. Si Paul a eu quelque remord que ce soit, ...  
'If Paul felt any regret whatsoever, ...'

Second, as for *quelque chose/un/part*, the following contrast is unexpected too, which shows that the tag *que ce soit* diminishes the grammatical status of the sentence instead of improving it.

- (54) a. Personne n'a vu quelque chose / quelqu'un  
'Nobody saw anything'  
b. Personne n'a été quelque part  
'Nobody went anywhere'  
c. Paul n'a pas vu quelque chose / quelqu'un  
[wide scope preferred: there is something, somebody ... ]

<sup>22</sup> The situation does not seem to be entirely parallel for *quel qu'il soit*, that we leave aside.

<sup>23</sup> The sign '%' marks variation among speakers.

- d. Paul n'a pas été quelque part  
[wide scope preferred]
- e. ?Paul n'a pas vu quelque chose que ce soit
- f. Je doute que Paul ait vu quelque chose  
'I doubt that Paul saw anything'

In short, one can observe that, although in general i) *que ce soit* improves sentences that provide an NPI environment, and ii) *quelque* resists the combination with standard negation in all cases, this is true to various degrees. In order to make sense of these data, one has to realise that *quelque chose* is not markedly different from *un N* (a N), as confirmed by the data in (55)–(56). The sentences in (55) show the contrast between acceptable *de N* and marginal *un N* in the scope of clausemate negation *pas*, and the sentences in (56) show that *un N* is fully grammatical under higher clause negation, i.e. when *pas* is in the superordinate clause (56a), or when clausemate negation is expressed by an N-word (56b).

- (55) a. Paul n'a pas eu d'accident quand il était jeune  
'Paul had no accidents when he was young'
- b. ??Paul n'a pas eu un accident quand il était jeune  
[intended: Paul had no accidents. OK with (i) a denial interpretation or (ii) an emphatic<sup>24</sup> interpretation: 'not a single']
- c. Dans le menu à 10 euros, il n'y a pas de dessert  
'In the menu at 10 euros, there is no dessert'
- d. ??Dans le menu à 10 euros, il n'y a pas un dessert  
[intended: no dessert. OK under an emphatic interpretation 'not a single']  
'In the menu at 10 euros, there isn't a dessert'
- (56) a. Je ne pense pas que Paul ait eu un accident quand il était jeune  
[no emphatic reading required]  
'I don't think that Paul had an accident when he was young'
- b. C'est bizarre, dans aucun menu il n'y a un dessert  
[no emphatic reading required]  
'It is odd, all the menus do not have dessert'

In these examples, the cardinal reading 'one' of *un* is involved when necessary, in view of the context, in order to allow a combination with negation. Since this reading is not available with *quelque chose*, the denial interpretation is the only option in cases parallel to (55). For instance, the sentence *Il n'est pas arrivé quelque chose à Paul quand il était jeune* is strange or is interpreted as a denial.

Thus, *quelque chose* behaves like a standard indefinite in French, minus the cardinal reading. This leads us to conclude that *quelque chose* is NOT *quelque + chose* in modern French. The variation on examples like (53b) might be attributed to the coexistence of two structures. Some speakers perceive a collocation of the form *quelque N que ce soit* with an NPI behaviour, and accept the sentence. Others see

<sup>24</sup> A *concessive* reading in other terminologies: 'not even one'.

the sentence as a combination of *quelque* plus a negative polarity tag *que ce soit*. This analysis may trigger a semantic conflict since the two parts have different constraints with respect to negative environments.

## 4 Remarks on the evolution of *quelque*

In this section, we present some facts and questions in relation with the evolution of *quelque* in Old and Middle French. We have used texts and excerpts from 1100 to 1550, drawn from the two databases *Base du Français Médiéval* (BFM) and *Frantext*.<sup>25</sup> We will comment only on the results from BFM, because they concern an earlier period than Frantext and the data in Frantext are not essentially different as to the types of use. The bulk of the texts spans the 1350-1550 period. Our goal is to discuss the main uses of *quelque* and see whether they fit and, if so, how, into the general picture that emerges from the previous sections.

### 4.1 Origin

It is tempting to see *quelque* as the aggregation of an existing construction: *quel N que S*. According to Buridant (2000, § 493, p. 598), the combination *quel que* initially had two properties. i) It belonged to a general system of relative-paired expressions (and it is called *relatif en emploi couplé* ‘relative in a paired usage’ by Buridant), where a relative pronoun has an indefinite-like form as antecedent. Together, they constitute an indefinite relative clause that tends to freeze into a fixed form (called *locution couplée à antécédent en ‘quel’* ‘paired expression with *quel* as antecedent’ by Buridant). ii) It had a concessive value. For Buridant, the structure of *quel que* is as in (57).

(57) *quel N que S*  
antecedent rel. clause

The reason for analysing *que* as a relative pronoun, rather than the complementizer *que*, is the existence of alternating forms *quel qui* (subject morphology) / *que* (direct object morphology) / *où* (locative morphology), see (58).<sup>26</sup> Beside *quel* and its animate/inanimate variants, other antecedents are *que* and *quant* (how much/what),

<sup>25</sup> Access to Frantext can be obtained through a subscription procedure, see <http://www.frantext.fr/>. The original texts of the BFM <http://bfm.ens-lyon.fr/> are available only to the members of the Elico project, see <http://elico.linguist.jussieu.fr/>.

<sup>26</sup> The examples of this section include (a) the text, as found in the BFM or in Frantext, (b) the name of the author or of the work—if the author is unknown, (c) the date provided by the BFM or by Frantext, (d) an approximate translation in modern French, (e) an approximate English translation.



see the examples (59)<sup>27</sup> from Buridant. The possible antecedents all look like wh-elements, although Buridant does not specify it.

- (58) et en quel lieu ou il soit en avroit il molt grant duel, s'il le savoit [BFM, Lancelot-Graal or Lancelot en prose, unknown author, beginning of 13th century]  
 'et en en quelque lieu qu'il soit il en aurait grande douleur s'il le savait'  
 'and, in whichever place he would be, he would have much pain if he knew'
- (59) a. Tant ala que mons, que valees, // Que grans, que petites jornees, // Qu'en France vint a que que paine [Buridant, LettrePJ]  
 'Il parcourut si longtemps et les montaignes et les vallées, par des grandes et des petites étapes quotidiennes, qu'il arriva en France au prix de grands efforts'  
 'He went over mountains and valleys for so long, in long and short daily stretches, that he reached France with great efforts'
- b. Oblié ont et tot perdu // Quan qu'il avoient fait lessus [Buridant, Eneas]  
 'Elles ont perdu le moindre souvenir de tout ce qu'elles avaient fait là-haut'  
 'They have lost any memory of what they did up there'

The *quel* element is an interrogative or correlative element that introduces a variable ranging over a domain of N-individuals. Indeed, Foulet (1919) underlines the pervasive character of the combination of interrogative words with *que* to signal indeterminacy in Old French. The *que* + S element is found in the subjunctive, as in other similar constructions (Buridant, 2000, § 279, p. 350).<sup>28</sup> Buridant's presentation and corpus examples suggest that the *quel* N *que* structure has a universal-like interpretation. Quer (1998, p. 202) claims that the subjunctive in free relatives may convey some widening of the domain, like FCIs. Although the connection with FCIs remains to be investigated in more detail, it can be argued that the use of the subjunctive signals a form of widening, so that the N-individuals under consideration include individuals that occupy lowest or highest positions on some scale(s) of typicality, relevance, appropriateness, etc. It is then reasonable to conjecture that the concessive interpretation is a side-effect of the subjunctive mood, in some cases at least.<sup>29</sup>

In Old French, one can find at least three different structures: *quel* N rel. pronoun, as illustrated in (58), *quelque* N rel. pronoun, illustrated in (60), and *quelque* N, illustrated in (61). Regarding the orientation of the scale, we observe that *quel que* and *quelque que* could denote high values as well as low values. Example (59a) above offers a clear case where the denoted value is unambiguously high.

<sup>27</sup> The '/' sign marks the end of a verse.

<sup>28</sup> Christiane Marchello Nizia (p.c.) has drawn our attention to the fact that the verb of the subordinate clause is not necessarily in the subjunctive form, pace Buridant.

<sup>29</sup> Whether the concessive interpretation was grammaticalised or felt as an implicature in Old French and subsequent stages is an open question.

- (60) qui tant a meffait que jamais n'est digne de estre amé, quelque vaillance qui soit en lui [BFM, Chroniques et conquêtes de Charlemagne, David Aubert, 1458]  
 'qui a si mal agi qu'il n'est jamais digne d'être aimé quelle que soit sa vaillance'  
 'who has behaved so badly that he does not deserve to be cherished, however brave he is'
- (61) car il n'est pas hon qui ne peche, tourjorz a chascuns quelque teche [BFM, Roman de la rose, Jean de Meun, between 1269 and 1278]  
 'Car il n'y a pas d'homme qui ne pêche. Toujours chacun a une tache quel-conque'  
 'For there is no man without sin. Everybody has some stain'

There is little doubt that *quelque* and *quel + que* are semantically analogous, but the details of their evolution are not clear. Combettes (2004), following Foulet (1919), mentions for *quel que* the analogy with *qui que*, *que que*, etc. However, as noted by Foulet, the main difficulty is to understand how such a construction gave birth to a regular determiner *quelque* as in (61). Foulet proposes that the 'creation' of the *quelque* determiner is due to an extended use of a quasi-idiomatic expression *à quelque paine = à quelle peine que ce soit*, with the meaning 'whatever difficulty it caused'. This paraphrase is not a retrospective fantasy, since an equivalent expression exists in the texts, e.g. *Non obstant Helsis se sauva, a quelque paine que ce fust, et entra dedens Brunebier* (BFM, Chroniques et conquêtes de Charlemagne, David Aubert, 1458), 'In spite of that, Helsis escaped, however difficult it was, and entered Brunebier'. Other similar expressions, such as *à quelque ennui* 'with much pain' or *à quelque meschief* 'with much misfortune', can be found but they are much less frequent. Foulet's hypothesis is not impossible in view of the high frequency of *à quelque paine* in our corpora, at a period (before 1350) where *quelque* did not seem to be frequent as a full determiner. However, the reasons why this idiom emerged and was so successful are rather obscure.

## 4.2 Main uses

We now turn to the main issue. How was *quelque* used in the period between 1200 and 1550? We focus on four points, which are particularly relevant to the problems studied in the previous sections.

First, the concessive use is well-represented and is not very different from what is found in subsequent stages of the French language, including the present stage. Occurrences are more frequent after 1450, but earlier texts contain some of them, e.g. (62).

- (62) et encore ferons nous pis se nous ne tuons le roy, quelque asseurement que nous li aions donné [BFM, Mémoires ou Vie de saint Louis, Jean de

Joinville, 1307].

‘et nous ferons encore plus mal si nous ne tuons pas le roi, quelque assurance que nous lui ayons donnée’

‘and we will act even more badly if we do not kill the king, whatever promise we have made to him’

Second, *quelque* as a determiner becomes more and more frequent but can be found already in early texts. Most interpretations are habitual, generic or ‘intentional’ (i.e. in the scope of a modal operator). The different possibilities are illustrated below.

1. Iteration, habituality, etc.

- (63) Male Bouche qui riens n’esperne trueve a chascune quelque herne [BFM, Roman de la rose, Guillaume de Lorris, 1227].

‘Male Bouche, qui n’épargne rien, trouve à chacune un défaut quelconque’

‘Bad Mouth, who pardons nothing, finds some weakness in everybody’

2. Generic sentences:

- (64) au temps que Fortune est amie de quelque homme et qu’elle l’a mis en aucun estat, alors il trouvera de faulz amis sans nombre [BFM, Jean de Saintré, Antoine de la Sale, 1456].

‘Dès que Fortune devient l’amie d’un homme quelconque et qu’elle l’a placé dans une position sociale quelconque, il trouvera d’innombrables faux amis’

‘As soon as Fortune makes friend with some man and establishes him in some social position, he will find innumerable false friends’

3. Purpose clauses

- (65) Qant ce vint au quatrime jour, et que euls et lors cevas furent tout rafresqi et en grant volenté de ceminer avant pour trouver quelque aventures, il se departirent [BFM, Chroniques, Jean Froissart, 1385]

‘Quand ce fut le quatrième jour et qu’eux-mêmes et leurs chevaux furent entièrement reposés et très désireux d’avancer pour rencontrer une aventure quelconque, ils partirent’

‘When the fourth day came and they and their horses had rested and they desired to move forward in order to go through some adventure, they left’

4. Future possibilities

- (66) a. et fault que malgré moi je me tiengne en ce lieu jusquez j’aye quelque bonne nouvelle [BFM, Chevalier de la Charrette ou Lancelot, Chrétien de Troyes, 1176]

‘Et, à mon corps défendant, je dois rester ici jusqu’à ce que je reçoive une bonne nouvelle quelconque’

‘And, unwillingly, I must stay here until I have some good news’

- b. Encores veul et vous commande que tous les jours de quelque Pater noster ou autre oroison vous servez [BFM, Jean de Saintré, Antoine de

la Sale, 1456].  
 ‘De plus je veux et ordonne que vous disiez tous les jours quelque Pater Noster ou quelque autre prière’  
 ‘Moreover, I want and command that you say some Pater Noster or some other prayer everyday’

##### 5. Conditional sentences

- (67) si vous l’apportez en quelque lieu [BFM, *Cent nouvelles nouvelles*, unknown author, 1462]  
 ‘si vous l’apportez en un lieu quelconque’  
 ‘If you bring it in some place’

These examples and many similar ones show that, as early as in the 12th century, *quelque* was not necessarily concessive. *Quelque* N was an anti-specific indefinite determiner used to refer to an undetermined individual satisfying the description given by N. If the concessive use comes first, we conjecture that the anti-specific use exploits directly the equivalence introduced by the concession. In the concessive use, the individuals that satisfy a certain property *P* are ranked along a scale which assigns to each one a certain plausibility to cause or facilitate a given state of affairs. Then, their equivalence is the result of a well-known pragmatic implicature: if the candidate that is the least likely to induce the state of affairs does so, so do the other candidates. Under the anti-specificity regime, all *P*-individuals are equivalent, but this does not follow from a scale-based implicature. Rather, all *P*-individuals are equivalent with respect to some other property or some proposition. Equivalence is primarily conceived in relation with the properties mentioned in the sentence. However, certain examples show that, as early as around 1400, the ignorance value emerges. Intuitively, this amounts to using the epistemic state of the speaker as the source of a modal operator (68).

- (68) Si s’en va et fait mauvese chiere, dont sa femme cognoist bien qu’il y a quelque chose [BFM, *Quinze joies de mariage*, unknown author, 1400].  
 ‘Cependant il s’en va et fait la tête, du coup sa femme se rend bien compte qu’il y a un problème quelconque’  
 ‘However he goes and makes a face, hence his wife realises that something is wrong’

An additional (open) question is why the non-concessive determiner had only existential uses. The concessive structure made room for existential and universal interpretations. For instance, in the following example, the preferred reading is clearly universal.

- (69) Franceis furent mult orgueilleus, mult cruels e mult damagos, par quel que leu que il passoent [BFM, *Roman de Rou*, Wace, c. 1170]  
 ‘Les français furent extrêmement arrogants, cruels et nocifs dans tous les lieux qu’ils traversaient’  
 ‘The French were very arrogant, harsh and obnoxious wherever they went’

This is never the case with the determiner. For instance, the clause *Fortune est amie de quelque homme*, adapted from (64) cannot mean ‘Fortune makes friend with every man’. This impossibility is expected if the determiner has an ignorance value, since the truth of the generic sentences would entail the truth of the sentence for every individual, thus contradicting the requirement of ignorance. However, this seems to be also the case with the *quelque N que ce soit* form. There is no instance of a generic sentence of the form *P(quelque N que ce soit)*, where *P* is a property assigned to every N-individual. We have no convincing explanation for this restriction to existential values. The literature on FCIs shows that the general problem of articulating or distinguishing between existential and universal readings is difficult and a matter of dispute, see (Dayal, 2005; Giannakidou, 2001; Horn, 2001; Jayez and Tovenà, 2005, 2010b). In the case of *quelque*, it seems that, even in concessive uses, the universal value is not possible in strictly episodic sentences, without any iteration<sup>30</sup> or habitual interpretation.

More work is needed to trace more precisely—if possible—the origin of the *quelque* determiner and the reasons why it had only a restricted ability to quantify universally.

Finally, telling apart concessive structures and the determiner in these early stages is not as easy a task as in modern French. We already saw that *à quelque paine* was concessive and did not mean ‘with some pain’ but rather ‘however painful it was’. As expected, the concessive structure can be used in the scope of negation (70). A similar concessive use of bare *quelque* exists in the scope of negation, as illustrated in (71). Other examples are more difficult to analyse and one can hesitate between a ‘reduced’ concessive structure and a genuine anti-specific use.

- (70) sans estre empeschiés, arestés ou molestés en quelque manière que ce soit [BFM, Chronique, Enguerrand de Monstrelet, 1441]  
 ‘sans être retenus, retardés ou importunés de quelque manière que ce soit’  
 ‘without being held, delayed or troubled in any way’
- (71) a. onques en nul sens ce n’avint qu’en si biau vergier n’ eüst huis ou eschiele ou quelque pertuis [BFM, Roman de la rose, Guillaume de Lorris, 1227]  
 ‘Il n’est absolument jamais arrivé qu’un jardin aussi beau n’ait de porte ou d’échelle ou aucune ouverture que ce soit’  
 ‘It absolutely never happened that so beautiful a garden had no door, no ladder or no opening whatsoever’
- b. adviser que ne soiés devant quelque seigneur ou dame [BFM, Jean de Saintré, Antoine de la Sale, 1456].  
 ‘veiller à ne se placer devant aucun seigneur ou dame’  
 ‘to avoid putting oneself before any lord or lady’

Anyway, it must be emphasised that we did not find any occurrence where *quelque* i) is clearly anti-specific and not concessive and ii) is in the scope of a clausal negation

<sup>30</sup> This is the interpretation of (69), where the verb *passoent* ‘went through’ has imperfective morphology.

or *sans* ('without'). E.g. in (72) the concessive interpretation is by far the most natural ('without any injure, no matter how small it could be').

- (72) il se trouva tout sain et haillié de son corpz, sans avoir quelque essomte  
[BFM, Roman du Comte d'Artois, unknown author, 1460]  
'Il s'aperçut qu'il était entièrement intact et en bonne santé, sans aucune  
blessure'  
'He realised that he was entirely untouched and in good health, without any  
injure'

Summarising, we have seen that *quelque* has most probably a concessive origin, in which the notion of equivalence captured in (4) is central. The ignorance value is an epistemic extension of it. We have presented a slightly more advanced stage of this research in the paper (Jayez and Tovena, 2010a). However, it does not modify the conclusions and questions mentioned in the present text.

## 5 Conclusion

In this paper, we have shown that the French determiner *quelque* can be analysed using the general notion of equivalence in (4). This notion helped us to highlight the connection between its concessive and epistemic uses and to locate it in the family of FC and epistemic items. We have argued that the PPI-like distributional profile of *quelque* can be explained by the epistemic implicature it carries and some general processing principles. We have also laid the foundations for a diachronic study of this determiner, which, in spite of its current limits, has already raised a number of important points, including the concessive origin of the item, the relatively early emergence of an anti-specific use and the difficult issue of the articulation/distinction between existential and universal interpretations. In subsequent work, we intend to refine and extend the diachronic study, including in particular the case of plural *quelques*, in order to gain a better understanding of the connections between different modes of equivalence.

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