

## Temporal anchoring of habituais

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I argue that so called ‘habitual sentences’ contain an extensional HAB-operator that is different from the generic operator. It locates points of time/intervals within a larger interval characterized by a habitus that is a cumulatively quantized property of times. HAB therefore acts as a stativizer, which accounts for the combination of habitualized predicates with certain adverbials and tense forms that require homogeneity of the predicates they combine with. Quantificational adverbs like *often*, *rarely*, etc. are not overt forms of HAB. Instead, they modify its complement yielding a habitus (frequentative reading) or, on a non-habitual reading, count events (iterative reading).

### 1. Introduction

The distinction between sentences dealing with single events or particular individuals and sentences presenting properties holding of typical instances of kinds or events that happen regularly seems to be well attested crosslinguistically. The latter class is usually subsumed under the cover term of genericity. Sentences that in the broadest sense deal with things that happen regularly are called habituais.

Most of the literature dealing with habituais considers them as some special sort of generics, namely those that involve generic quantification not over individual variables, but over the situation variable provided by some eventive verb (Carlson & Pelletier 1995, Cohen 1999, Lenci & Bertinetto 2000). Following Carlson & Pelletier (1995) the proposed structures roughly look like the one in (1):

(1) GEN<sub>s</sub> [...s...][...s....]

It is claimed that there is a generic quantifier (here: GEN) which is somewhat similar to the universal quantifier but nevertheless differs from the latter in various important respects. This quantifier is claimed to resemble a Lewisian adverb of quantification (Lewis 1975) and therefore unselectively bind the free variables in the restrictor, be it that they run over situations (as indicated in (1))

or over individuals. So the claim is that to know how to analyse the generic operator when running over individuals is to know the right treatment for habitual sentences as well.

However, a closer look at the structure in (1) shows that it cannot account for the temporal and aspectual properties exhibited by habituals. I will therefore follow the lines taken in Paslawska & von Stechow (2002) providing for an analysis that is able to integrate them in a framework which allows us to explain their behaviour in connection with temporal adverbials and certain tense aspect forms.

## 2. *Fencing off habituals*

When I have so far spoken of ‘habituals’ as referring to events that happen regularly I have concealed the fact that it is all but clear what has to count as a habitual. We are hardly ever provided with something like a definition when taking a look at the relevant literature.

I will start out with the idea that we can count as habituals all those sentences that either already contain periphrases such as *used to*, *has the habit of* (and their respective translations to the languages in question) (cf. 2a), or can be modified with one of these without change in meaning (cf. 2b):

- (2) a. Marina used to drink coffee.  
b. Sonja drinks tea.

### 2.1. *Habituals are not eventives*

Parting with this rough characterization we can now try to set them apart from other types of sentences.

Quite a standard assumption is that they are to be kept apart from eventive sentences:

- (3) a. Volker is smoking a cigarette.  
b. Volker smokes cigarettes.

While (3a) speaks about one particular event of Volker smoking a cigarette, (here implicitly) located in time and space, (3b) abstracts over many such events therefore presenting cigarette-smoking as a habit of Volker’s. At least in the present tense, English is quite explicit about this distinction, using either the Simple Present or the Present Continuous. Although only some dialects of German (Rheinische Verlaufsform) provide us with such a distinction in the verbal paradigm, periphrases, adverbs or pragmatic considerations help to disambiguate the relevant readings in German.

2.2. *Habituals are different from dispositions and rules*

In contrast to Carlson & Pelletier (1995) and Lenci & Bertinetto (2000) I will follow Cohen (1999) in assuming that habituals have to be set apart from modalized sentences as well. One such type of sentences that usually gets conflated with habituals is **dispositions** (cf. 4):<sup>1</sup>

- (4) Dieses Auto geht 250 km/h.  
 this car goes-PRESENT 250 kph  
 'This car makes 250 kph.'

If (4) really were habitual it should not change its meaning when applied one of the aforementioned periphrases:

- (5) a. This car has the habit of making 250kph.  
 b. This car can make 250 kph.

Considering the outcome it is rather the modal auxiliary *can* expressing circumstantial possibility (cf. 5b) than the habituality periphrasis (cf. 5a) that renders the most prominent reading of (4) correctly (this is not to say that (4) can't have the reading (5a) has – it's just not the dispositional reading usually discussed when taking into account sentences like (4)). I therefore assume that dispositional readings have to be kept apart from habitual readings.

The same goes *mutatis mutandis* for **constitutive rules** as exemplified in (6):

- (6) a. Bishops move diagonally. (taken from: Cohen 1999)  
 b. #Bishops have the habit of moving diagonally.  
 b'. Bishops may only move diagonally.

Again the correct periphrasis for (6a)'s most prominent reading is not the explicit habitual (6b)<sup>2</sup>, but (6b') which involves deontic necessity. We can easily imagine a scenario where the first is true, but the second false: just assume the international rules and regulations board for chess has been changed, assimilating bishops to let's say towers, thereby falsifying (6b'). Nevertheless, until people get to know the new rule, (6b) might still be true.

We can therefore conclude that whatever semantics we finally assign to habituals need not and shall not account for the specific properties of sentences talking about what individuals or objects can do (dispositions) or are designed to do (constitutive rules).

<sup>1</sup> Throughout this paper I leave out case and agreement marking in the glosses since only the temporal/aspectual properties added to the verb stem are relevant for the discussion of habituals.

<sup>2</sup> The pragmatic markedness of (6b) is due to the fact that the habitual periphrase encourages a notion of agentivity that tends to disambiguate the noun *bishop* in favour of its clerical reading.

### 2.3. Habituality and genericity in the individual domain need not go together

In this section I show that the relation between habituality and genericity is not so obvious as it has often been assumed.

In fact it cannot be that case that generic sentences (like (7b)) involve one generic operator yielding a generic reading for the subject and automatically causing a habitual reading for the predicate as assumed in Chierchia (1995).

Von Stechow (p.c.) has pointed out to me that it is important to see that a sentence like (7a) involves only one, while (7b) involves two steps of abstraction:

- (7) a. John builds dams.
- b. Beavers build dams.

In (7a) we abstract over individual events of John building dams, thus getting a habitual reading for the predicate. In (7b) we further abstract over individual beavers of which we predicate the aforementioned habitualized activity. Independently of how we want to derive the generic semantics we have to cope with how to explain the habitualization already present in (7a) in order to get (7b) right.

Further evidence for this independence between habituality and genericity stems from the behaviour of stative predicates. Without adverbial modification they cannot be read habitually, although allowing for a generic interpretation.

- (8) a. John is sick.
- b. Only 50% of the people in a hospital are sick.

While (8a) can only be interpreted as an episodic sentence claiming John to be sick at utterance time, (8b) can well be understood as talking about hospitals in general, thus involving a generic reading irrespective of the main predicate's stativity.

Last but not least the fact that generic sentences can but need not contain habitual predicates shows the independence of the two phenomena:

- (9) a. Good people smile or laugh loudly.
- b. Good people smile or laugh loudly at least once in their lives.

While both (9a) and (9b) involve a generically read subject NP only the predicate in (9a) is habitualized. (9b) relates the members of the (derived) kind of good people to an existentially quantified eventive predicate.

Of course this does not prove that abstracting over single events and abstracting over single individuals may not be the same operation. It only tells us that we need to postulate two separate steps of abstraction anyway. If therefore the specific temporal-aspectual properties of habituais force us to

assign them a particular semantics that cannot be used to explain the phenomena in the nominal domain, we need not be concerned.<sup>3</sup>

### 3. Critical properties of habituals

In order to account for their specifically habitual semantics I will assume that habitual sentences contain an operator, called HAB. It is distinct from the generic operator GEN the semantics of which cannot be investigated here. Contrary to the major part of the literature (cf. Carlson & Pelletier 1995, Cohen 1999), following Lenci & Bertinetto (2000) I will argue that HAB is no covert quantificational adverb which would thus substitute an overtly missing *generally*, *always* or the like.

In this section I want to take a look at the specific properties of habitual sentences (as singled out in chapter 2) that have to be explained by the semantic analysis of the habitual operator.

#### 3.1. Stativization

A first puzzling fact about habituals is that they result as homogeneous and thus stative, irrespective of the nature of the underlying predicate (cf. von Stechow 2002a). Homogeneity being defined as cumulativity and divisivity (cf. Krifka 1989) HAB can easily be shown to be a stativizer.

- (10) **cumulative:** A predicate is cumulative if its extension is closed under summation of entities.

definition: I, J intervals,  $\phi$  a property of intervals:  
 $CUM(\|\phi\|) \leftrightarrow \forall I, J[(\phi(I) \wedge \phi(J)) \rightarrow \phi(I \cup J)]$

example: John used to go to the movies last July.  
 John used to go to the movies last August.

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 John used to go to the movies during all of last summer.

- (11) **divisive:** A predicate is divisive if its extension is closed under partitioning of entities.

definition: I, J intervals,  $\phi$  a property of intervals:  
 $DIV(\|\phi\|) \leftrightarrow \forall I, J[(\phi(I) \wedge J \subseteq I) \rightarrow \phi(J)]$

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<sup>3</sup> During the discussion at Console XI, Federico Damonte pointed out to me that it is always elements expressing habituality, not genericity that seem to undergo grammaticalization. This in fact might be evidence for the two processes being distinct. I have to leave that point open for further investigation.

example: John used to go to the movies during all of last summer.  
 -----  
 John used to go to the movies last August.

Considering the definition in (11) one may well argue that it seems to strong. Even if the particular 1<sup>st</sup> of December mentioned in (12) falls within a lets say five year interval of John drinking ten beers a day, (12) is strange:

(12) #In the morning of December 1<sup>st</sup> John had the habit of drinking 10 beers a day.

According to (11) it should be fine under such circumstances though: assuming that the habit holds of a five-year interval *J* which includes an interval *I* referring to the morning of December 1<sup>st</sup>, (11) says that the same habit predicated from *J* can be truthfully predicated of *I*. Obviously that is not quite right.

Nevertheless I don't think that (11) is to strong. As soon as a particular event renders the smaller interval pragmatically salient, the sentences get fine. If John was hospitalized on the morning of December 1<sup>st</sup>, the habit is predicated of exactly the same interval in (13) as it is in (12). Nevertheless (13) is fine:

(13) John had the habit of drinking 10 beers a day when they hospitalized him.

I therefore conclude that (11) is correct, but that we have to bear in mind that full divisivity of habituals is often suspended due to pragmatic factors. As (13) shows, it can be recovered creating the right contexts.

As shown by the example given with the definitions in (10) and (11) habituals are cumulative as well as divisive and therefore homogeneous.

This inherent stativization of habituals explains their cocurrence with adverbials that don't allow for non-homogeneous predicates. This is the case for German *seit* + duration 'for X time' which introduces an interval restricted as to what can be predicated of it (cf. von Stechow 2002a):

- (14) a. Winnie lebt seit 3 Jahren in Tübingen.  
 W. lives since 3 years in T.  
 'Winnie has lived in Tübingen for 3 years.'  
 b. \*Magda ist seit 2 Jahren dreimal in Tübingen gewesen.  
 M is since 2 years three-times in T. been  
 roughly: '\*For 2 years Magda has been to Tübingen three times.'

The predicate *Winnie in Tübingen leben* 'Winnie in Tübingen live' is homogeneous due to the lexical properties of *live*, and as predicted (14a) is fine; on the other hand *Magda dreimal in Tübingen sein* 'Magda be in Tübingen three times' involving a quantized predicate is not homogeneous,

thus yielding the ungrammatical sentence (14b) when combined with *seit 2 Jahren* ‘for 2 years’. We can now show that habituals patterns with the stative predicate in (14a) irrespective of the underlying nature of the lexical predicate:

- (15) Hans geht seit drei Jahren (oft) mit Maria ins Kino.  
 H. goes since three years (often) with M. in-the cinema  
 ‘For three years Hans has (often) been going to the cinema with Mary.’

While *ins Kino gehen* ‘go to the movies’ is not homogenous, the habitualized form (with or without *oft* ‘often’) behaves like a stative. Besides the progressive (cf. Dowty 1979), habituality is therefore a further means to stativize eventive predicates (achievements, accomplishments, activities) which can then be predicated of time intervals/points of times. This is why we often get habitual readings with certain adverbials (i.e. German *seit* + DURATION, Italian *per* + DURATION) or tense forms (i.e. Italian Imperfect (cf. Arosio this volume), English Simple Present).

### 3.2. Extensionality

Habituality (and genericity as well) has sometimes been analyzed as involving quantification over “normal worlds” thus assuming that the habituality operator expresses necessity (cf. Lenci & Bertinetto 2000 for an approach along these lines). Apart from the fact that it is all but clear how to make the underlying notion of “normal world” precise (cf. Scheiner 2000) it can be shown that a modal approach does not make the right predictions.

#### 3.2.1. Presuppositions of Existence

Truly habitual sentences always come with existence presuppositions:

- (16) John used to play tennis with Mary.

For (16) to be true at least some events of John and Mary playing tennis together must have occurred, thus indicating that the *used to*-construction is extensional. Lenci & Bertinetto (2000) are well aware of that problem and claim that the actual world is mostly included under the worlds the necessity operator is quantifying over, hence inevitably yielding an existence presupposition for the event type in question. Nevertheless according to them we do find rare cases which do not include the actual world in the modal base, e.g. (17):

- (17) Gianni vendeva                    macchine usate.  
 G. sold-IMPERFECTIVE cars used  
 ‘Gianni sold used cars.’

In fact, (17) has a reading under which it is true without Gianni ever having sold a single car. I do not think that this is an instance of a truly habitual reading. Rather it seems to depend on a genuine lexical ambiguity of *vendere (macchine usate)* ‘sell (used cars)’ which can always be read as ‘being a (used car) dealer’. I conclude that lack of existence presuppositions is not due to habituality in these cases.

### 3.2.2. *Substitution salva veritate*

Further evidence against an intensional analysis for habituals comes from the fact that they allow for substitution *salva veritate*: two expressions that are extensionally equivalent in the actual world can be exchanged without a change in truth value. This has been pointed out by Cohen (1999). At first sight this does not seem correct for (18a) and (18b):

- (18) a. John accompanies the Queen of England to Ascot.  
 b. John accompanies Elizabeth II. to Ascot.

In fact it might be the case that John’s job might be either accompanying the Queen of England whoever happens to be Queen of England, or Elizabeth II, irrespective of her being Queen of England. On closer inspection, we can easily see that we have to require a stronger premise for the substitution test: the two expressions have to be equivalent for the whole interval the habitual is said to hold for. The problem with the sentences in (18) is that the present tense does not allow us to see what exactly that interval would be. As soon as there is some contextual clue or some adverbial specifying the duration of John’s accompanying status they no longer allow for different truth values. Given that Elizabeth II. was in fact Queen of England from 1995 to 2000 (19a) and (19b) are clearly either both true or both false :

- (19) a. From 1995 to 2000 John used to accompany the Queen of England to Ascot.  
 b. From 1995 to 2000 John used to accompany Elizabeth II to Ascot.

Taking into account the behaviour of truly habitual sentence concerning existence presuppositions and substitution *salva veritate* we have to conclude that the habitual operator is extensional.

## 4. *A semantics for HAB*

### 4.1. *Idea & Preliminaries*

What does it take to make an ordinary habitual sentence like (20) true?



(20) Ede often goes to the movies.

My intuition is that it should mean something roughly along the following lines. The utterance time lies within an interval that contains a number of events of Ede going to the cinema that is larger than some contextually given standard (possibly what Ede usually does, how often other people go to the cinema, etc.). I will assume that the LF for (20) looks more or less like (21a) and gets assigned truth conditions as in (21b):

- (21) a. [HAB often [<sub>VP</sub> Ede-go-to-the-movies(e)]]  
 b. PRES  $\lambda I \exists J [I \subseteq J \ \& \ |\{e: \tau(e) \subset J \ \& \ \text{John-go-to-the-movies}(e)\}| > C]$ ,  
 C some contextually defined standard.

Before going into what HAB and the quantificational adverb contribute to the semantics in (21b) let me point out some preliminary assumptions on tense and aspect required in the following.

Following von Stechow (2002a,2002b) I assume a deictic theory of tense (cf. Partee 1973). Morphological tenses introduce semantic tenses (PRES, PAST<sub>i</sub>, FUT<sub>i</sub>). The latter are variables for intervals/points of time<sup>4</sup> which are restricted for their localization relative to utterance time (g is the assignment function):<sup>5</sup>

- (22)  $\|\text{PRES}_j\|^g = g(j)$  if  $g(j)$  overlaps with utterance time ( $t_c$ ), undefined otherwise.  
 $\|\text{PAST}_j\|^g = g(j)$  if  $g(j)$  precedes utterance time, undefined otherwise.  
 $\|\text{FUT}_j\|^g = g(j)$  if  $g(j)$  follows utterance time, undefined otherwise.

Aspectual relations (PERFECTIVE; IMPERFECTIVE) introduce the reference time via a relation to the event time. The reference time is the interval for which the proposition is claimed to hold. I will not go into the semantics here since we will later see that the HAB-operator itself establishes the necessary relation.

The tense- and aspectless VP expresses Vendlerian Aktionsarten, which are either properties of events (type  $\langle s, t \rangle$ ) which is the case for achievements, accomplishments and activities, or properties of intervals (type  $\langle i, t \rangle$ ) when statives. Statives are homogeneous predicates.

As for quantificational adverbs we can assume that they relate predicates to intervals. I give the eventive version for *often* as an example:

- (23)  $\|\text{often}_s\| = \lambda P \lambda t [\{e: \tau(e) \subset t \ \& \ P(e)\} > C]$ , C a contextually given standard for the amount of e such that P(e) in t.

<sup>4</sup> Points of time may be considered minimal intervals for the present purposes.

<sup>5</sup> Just like a personal pronoun, e.g. *he* is restricted as to evaluations which assign it a male individual, PAST is restricted to being assigned some interval preceding speech time.



predicate (yielding the habitus), and then apply the operator to the habitus requiring that the latter has to be cumulative. The problem with doing it that way is that one cannot distinguish quantified cumulative predicates from lexically homogeneous ones. *be blond*, *be sick*, etc. should therefore always be able to come out habitual. An alternative solution to my rebracketing strategy would have been to recur to structured propositions (cf. von Stechow 1982).

#### 4.2. Cumulativity is not enough

On closer inspection (26) proves to be still not correct for it cannot rule out sentences like (27):

(27) \*Ede goes to the movies more than 3 times.

(27) confronts us with a puzzle: While *more than 3 times* is clearly cumulative (if Ede went to the movies more than 3 times in June and more than 3 times in July he also went to the movies more than three times in June+July (at least: 6 times)), (27) cannot get a habitual reading. Consequently, it is ungrammatical given the particular restriction on the English simple present. We have shown that habituality is in fact divisive (apart from pragmatic considerations, cf. chapter 3.1), so can we claim the same for the habitus itself? (The distinction is the following: on the one hand we are talking about the property of being located within a certain time span for which a habitus holds – this being habituality, which is divisive; on the other hand we are talking about being an interval characterized by some quantified property, e.g. there being more movie-going-events of Ede than corresponds to the contextually given standard; - should the latter be divisive as well?) It can easily be shown that divisivity of the habitus would be too strong a requirement, for it would immediately rule out wellformed habituals like our familiar example (20), here repeated as (28):

(28) Ede often goes to the movies.

We can not reasonably claim that any subinterval of a larger interval which is characterized by more movie-going-events of Ede than correspond to the contextually given standard is itself characterized by more movie-going-events of Ede than correspond to the contextually given standard. In fact there will be a lot of subintervals without any movie-going-events at all. Therefore we cannot require the habitus-building quantifier to be divisive.

But when taking into account the situations that make a sentence like (28) true we may notice that there is a subtle requirement hitting in that direction. Assume we wanted to predicate *Ede often went to the movies* of the years 2001 and 2002 and found that he in fact went to the movies every evening during all of January and February 2002 but apart from that hardly ever. Due to the fact that not many people go to the movies 59 times in 2 years, we would most

likely agree that “there are more movie-going-events of Ede than corresponds to the contextually given standard” is true under the given scenario. Nevertheless we might hesitate to judge (28) itself as true. Therefore the truth conditions derived by (26) are still too weak.

What seems to be at stake is a kind of **restriction of even distribution**. The witness events for the habitus predicate have to be distributed more or less evenly over the period we are taking into account. The restriction is not very sharp, we seem to be quite prone to leave aside holidays, periods of sickness etc. when evaluating habits. I therefore conclude that the ultimate fine-grainedness of the distribution-check is something that should be left to pragmatics, giving us a final version for HAB that looks like (29):

$$(29) \quad \text{HAB} := \lambda Q \lambda P \lambda I \exists J [I \subseteq J \ \& \ \forall J' [J' \subseteq_{RELEVANT} J \rightarrow Q(P)(J)], \\ \text{HAB}_{\langle\langle st, it \rangle \langle st, it \rangle \rangle} \text{ defined only if CUM}(\|Q\|).$$

The relation  $\subseteq_{RELEVANT}$  is pragmatically determined and makes sure we take into account only subintervals we consider relevant, i.e. those having a certain size, those not presenting any outstanding circumstances as holidays or sicknesses, etc. Perhaps we have to require semantically that the large habitus-interval  $J$  itself is always relevant.<sup>6</sup>

What we finally require for a habitual sentence to be true is that the reference time be located in an interval for which it holds that all its relevant subintervals are instances of the habitus described by the cumulative quantifier and the predicate.

### 5. Not every quantificational adverb comes with HAB

As a consequence of the semantics for HAB given in (34) quantificational adverbs like *often*, *rarely*, *usually*, etc. are not overt variants of the habituality operator but rather obligatorily modify its complement.

This assumption allows us to give a straightforward account of the fact that most quantificational adverbs also have an **iterative** usage (IA) besides the **frequentative** (= HAB-modifying) one (FA). This way, we can avoid having to double all the lexical entries for quantificational adverbs.

In the following I want to discuss three contexts that provide evidence for IA vs. FA usages and show that the HAB semantics can account for the respective interpretations.

In the context of the present perfect, *often* can assume its frequentative HAB-modifying usage (cf. (30a)), or its iterative usage, thus patterning with adverbials like *three times*, *several times*, etc. (cf. (30b)):

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<sup>6</sup> The solution given here is a repair of the one in Scheiner (2002) where I defined a concept of Restricted Divisivity which has the failure of boiling down to ordinary divisivity under closer inspection.

- (30) a. For three years Arnim has been playing tennis often/\*a few times/\*three times. (FA)  
 b. Between Christmas and Easter Arnim has played tennis often/a few times/three times. (IA)

While a quantized predicate cannot be progressivized, a habitual one can. *Often* on assuming its frequentative reading is fine in (30a), the purely iterative adverbials producing ungrammaticality in the same context. But *often* can also appear in a non-habitual context: Just like *three times* and *a few times*, it then only serves to count the number of events in question (still comparing it to the inherent contextually specified parameter). As with the other iterative adverbials we don't find the restriction on even distribution familiar from habituals. Furthermore we would be prone to specify what "*often*" should mean in the given context by indicating e.g. "*four times a week*" in (30a), but "*at least 50 times*" for the iterative reading of (30b), thus specifying frequency vs. absolute amount.

The same distinction has to be made to get the readings of German *schon* 'already' in the paradigm in (31) right, the ambiguity of *often* hinging on which interpretation of the German Present Perfect is available respectively (cf. von Stechow (2002a) who shows that the German Perfect is ambiguous between an Extended Now- and a PAST-interpretation):

- (31) a. Hans ist jetzt schon oft mit Maria Cocktail trinken  
 Hans is now already often with Maria cocktail drink  
 gegangen. (IA)  
 gone  
 'By now there are already many instances of Hans and Maria going for a cocktail together.'
- b. Hans ist schon oft mit Maria Cocktail trinken gegangen,  
 H. is already often with M. cocktail drink gone,  
 als sie noch in der Schule waren. (FA)  
 when they still in the school were  
 'Hans already had the habit of often going for a cocktail with Mary when they were still at school.'

*schon* 'already' always has to modify a focused constituent: this can be either an instance of time (as in (31b)), or a constituent expressing a certain amount of a particular entity (events in (31a)).

Let us consider (31b) first: if we wanted to get an iterative reading for *often*, we would have to take a particular interpretation of the German Present Perfect, namely the one opening up an interval starting somewhere in the past and leading up to the (present) reference time (Extended Now). *often* could then quantify into that Extended Now interval and evaluate the absolute amount of cocktail events to be found within it. But this interpretation is blocked by the temporal adverbial clause *als sie noch in der Schule waren* 'when they were still at school' which is in the Preterite and thus requires a past reference time.

So we have to look for another interpretation of the German perfect, i.e. the PAST denoting one. *schon* can now combine with the past reference time, saying that already that point of time had a certain property: it seems that this can only be a homogeneous one, thus forcing us into inferring an underlying HAB-operator and taking the frequentative interpretation of the quantificational adverb *often*.

Since there is nothing to keep us from assuming an Extended Now interpretation for the German present perfect in (31a), we can well take *often* to count the amount of cocktail-drinking-events in question. *schon* then compares this amount to alternative, lower quantities and states that at reference time the actual amount of events in question is already big (cf. Löbner (1999), Krifka (2000) for discussion and formalization of the different usages of *schon*). Assuming that the Extended Now-interpretation of the German Perfect is derived via the semantics in (32) for the Perfect Auxiliary, we thus arrive at (33) for (31a) (*often* as in (23), *schon* following Krifka 1999):

- (32)  $\| \text{HAVE}_{\text{GERM}} \| = \lambda P \lambda t \exists t' [t' \gg t \ \& \ P(t')]$ ,  $t'$  an interval,  $\gg$  the abutting relation (cf. von Stechow 2002a).  
 (33)  $\exists t' [t' \gg t_0 \ \& \ \|\{e: \tau(e) \subseteq t' \ \& \ \text{hans-go-for-a-cocktail-with-mary}(e)\} \rangle C]$ ,  
 alternatives considered: *never, a few times, sometimes*.

It is also possible to combine two quantificational adverbs; e.g. it is quite straightforward to get an interpretation for iterative adverbs counting periods for which a certain habit holds (thus iterative adverbs having scope over a HAB-operator and its modifying frequentative adverbial):

- (34) Cecile has often smoked once in a while.

(34) gets interpreted as saying that by now there are many periods of Cecile being an occasional smoker, thus reading *often* iteratively and *once in a while* frequentatively.

Exactly as observed for (30b), the iteratively interpreted *often* in (31a) and in (34) don't show the restriction of even distribution which thus proves to be inherent to the frequentative usage only.

## 6. Conclusion

In contrast to competing accounts the semantics for habituais proposed here explains their combination with certain temporal adverbials and tense forms that exhibit a restriction on the predicate they combine with (namely homogeneity).

The analysis further makes correct predictions regarding the extensional nature of the context the habitual operator creates. Last but not least it enables us to account for the fact that most quantificational adverbs allow for both frequentative (HAB-modifying) and iterative (event-counting) usage. This does

not come out correctly under approaches that assume HAB to be a covert quantificational adverb forcing them into doubling the lexical entries for all the adverbs in question.

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