

THE CONTEXTUAL COMPONENT WITHIN A DYNAMIC IMPLEMENTATION OF THE FDG MODEL: STRUCTURE AND INTERACTION

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Abstract

The central issue addressed in this paper concerns the design of an appropriate contextual framework to support a dynamic implementation of FDG. The first part of the paper is concerned with the internal structure of the contextual framework. A particular hierarchical structure for the analysis and description of context, articulated in Connolly (2007a) and termed the Extended Model of Context (EMC), is presented as the starting-point. Alternative frameworks are considered, but all are found to have shortcomings. However, the original version of the EMC has also received some criticism. Consequently, a revised model of the EMC is proposed, in which the treatment of context is enhanced, and which is appropriate to a dynamic implementation of FDG. The application of the revised EMC not only to the grammatical model, but also to a broader discourse model, is also discussed. The next part of the paper is concerned with the interaction between the EMC and the FDG Grammatical and Conceptual Components. It is contended that all of the main types of context recognised within the EMC have a significant effect upon grammar. However, the only way in which contextual factors may directly influence the production and interpretation of discourse is through their presence in the minds of the discourse-participants. Consequently, the Conceptual Component plays a vital, mediating role in the handling of interactions between the EMC and the Grammatical Component. This point is particularly salient when considering a dynamic implementation, in which the flow of information around the model is of crucial importance. It is contended that this flow is essentially cyclic in nature.

Keywords: Component; Context; Dynamic; Functional Discourse Grammar.

1. Introduction

1.1. *Aim*

Hengeveld and Mackenzie (2008: 294) speak of a “dynamic implementation” of FDG, in which the top-down construction of utterances is carried out by means of processes whose purpose is to generate Discourse Acts in accordance with the relevant context of communication. The aim of the present paper is to address the question of how to design an appropriate Contextual Component to support such a dynamic implementation. In particular, how should the Contextual Component be structured internally, and how should it interact with other components of the FDG model?

If the Contextual Component of FDG is to constitute an accurate model of the phenomenon that it is intended to represent, namely the context of language-based communication, then the structure of the phenomenon itself should be reflected in the structure articulated within the pertinent component of the grammatical framework. A proposal for the modelling of context in relation to FDG has been put forward in Connolly (2007a: 13-22). This may be seen as embodying a more detailed design for the internal architecture of the Contextual Component than is offered by Hengeveld and Mackenzie (2008: 9-12), and for this reason it may be termed the Extended Model of Context (EMC). The EMC will serve as the starting-point for the present paper.

However, in order to handle a dynamic implementation of FDG, the EMC needs further development. In the present paper we shall therefore propose a revised internal structure for the EMC as the basis for the architecture both of the FDG Contextual Component and of the wider model of verbal interaction. We shall then explore how the Contextual Component interacts with the Grammatical Component and with the Conceptual Component of FDG.

1.2. *Basis of the approach*

Some basic characteristics of context are set out in Connolly (2007a: 11-19, 2007b: 195-197). These may be summarised as follows. Firstly, the context of language-based communication is supplied by (only) the relevant properties of its surrounding environment. Secondly, context is a subjective construct rather than an objective property of the world; cf. Shailor (1997: 97) and van Dijk (2008: 16). Thirdly, context is structured in terms of a fundamental hierarchy:

- (1) Context is divided into two parts:
 - (a) Discoursal context.
Given the generally multimodal nature of discourse, this is divided into two sub-parts:
 - (i) Linguistic (or verbal) context.
 - (ii) Non-linguistic (or non-verbal) context.
 - (b) Situational context.
This is also divided into two sub-parts:
 - (i) Physical context.
 - (ii) Socio-cultural context.

Any of these parts or sub-parts may also be subdivided in terms of the following dichotomy:

- (2)
 - (a) Narrower (relating to the immediate surroundings of the communication).
 - (b) Broader (extending beyond the immediate surroundings).

This dichotomy imparts a structural layering to all the aspects of context covered in (1). In the case of linguistic context, the narrower category is often termed “co-text” and is delimited by the current discourse, while the broader category is sometimes called “inter-text” and extends to other discourses.

In addition, context may be categorised in terms of the following dichotomy:

- (3) (a) Mental context.
This exists within the minds of the discourse-participants (including analysts, where applicable).
- (b) Extra-mental context.
This is supplied by the external universe.

In relation to the dynamic FDG model, the mental context is key, given the subjective nature of context. The main role of the extra-mental context is to ground the mental context in the external universe. Its relation to language production and comprehension is indirect, being mediated by the mental context. Still, the distinction in (3) can be useful in the discussion of context (and will, indeed, be used later on in the present paper). However, it is likely that work on the modelling of context within FDG will be focused primarily on mental context.

Finally, the situational context may be subdivided in terms of the following dichotomy:

- (4) (a) Interactional context.
This is the context in which the discourse-participants are situated. It may be spatiotemporally distributed if the participants are not collocated.
- (b) Described context.
This lies in the situation that the discourse serves to represent. (For instance, if we converse in Barcelona about the Netherlands, then the Netherlands supply the described context, while Barcelona supplies the interactional context.) The subject-matter of a discourse may in some cases be classifiable in terms of its topic-area, or “domain”, for example Natural Science.

The described context may or may not overlap with the interactional context. The two may coincide if the participants are communicating about their immediate situation, but if they are communicating about a situation elsewhere, then the latter supplies a described context of a kind that Martinec (2000: 244) calls a “displaced context”. (The Netherlands in (4b) provide an example of this.)

2. Structure of the Contextual Component

2.1. *The proposed extended model of context*

2.1.1. *The initial proposal*

Various authors outside of the FG/FDG tradition have attempted to reveal the structure of context by identifying categories in terms of which the phenomenon may be analysed and described. Such attempts include Firth (1957: 203); Hymes (1972: 58-65); Brown and Fraser (1979: 35, 39-53); Biber (1988: 29-31); Harris (1988: 78-81); Devlin (1991: 33, 217-221); Cook (1992: 1-2); Goodwin and Duranti (1992: 6-9); Martin (1992: 493-496); Linell (1998: 128-131); Fetzer (2004: 4-12); Okada (2007: 186); van Dijk (2008: 76); and Auer (2009: 91-95). Unfortunately, space does not permit a detailed review of all of these. However, some general remarks are in order.

Firstly, not all the contextual frameworks proposed by other authors offer a sufficiently explicit and detailed account of the hierarchical structure of context, though Brown and Fraser, Devlin, Martin, Linell, Fetzer and van Dijk are relatively strong on this point. Secondly, not all such frameworks provide an adequate treatment of multimodal aspects of context (including non-verbal communication), though Biber, Goodwin and Duranti, Cook, Martin, Linell, and even Firth's pioneering attempt, score relatively well here. Non-verbal accompaniments to language are discoursal in nature, as they constitute communication channels that operate at the same time as the verbal channel; but when we focus our attention specifically on verbal communication, we treat non-verbal aspects as supplying part of the context of this. (Prosodics are taken to be part of verbal communication.)

Thirdly, not all such frameworks render important distinctions (e.g. between narrower and broader context or between social and physical context) sufficiently salient. Fourthly, most such frameworks fail to accord an explicit place to at least one significant aspect of context (e.g. the broader physical context or the broader discoursal context). Indeed, none of them is as comprehensive as it could be. This is not, of course, to suggest that the authors mentioned above are unaware of the other aspects or distinctions, but only that the systems of categories that they propound are capable of improvement.

The EMC was designed to avoid these particular deficiencies. For this reason, it will serve as the starting point for the rest of the present paper. Nevertheless, it is in need of further development, as will be explained below.

Let us begin, though, by summarising the EMC as proposed in Connolly (2007a). Because context is so complex, it is represented in Connolly (2007a: 21) in terms of a super-component, which embraces both the Contextual and Conceptual Components proposed by Hengeveld and Mackenzie (2008: 13). This super-component is divided into three parts:

- (5) (a) The Content Component.
This is comparable with Hengeveld and Mackenzie's Conceptual Component, but is intended to include affective and social meaning, as well as conceptual content in the usual sense; cf. Butler (2008: 241). In fact, because it is, essentially, an expanded version of Hengeveld and Mackenzie's Conceptual Component, we shall, in the present paper, for the sake of compatibility with other contributions to the Volume, employ the term "Conceptual Component" for this part of the model.
- (b) The Discoursal Context Component.
This supplies relevant verbal and non-verbal material from the co-text or inter-text.
- (c) The Situational Context Component.
This supplies relevant information of a non-discoursal nature.

Thus, in the EMC, Hengeveld and Mackenzie's Contextual Component is divided into two, namely (5b) and (5c); cf. also Butler (2008: 226), Keizer (2008: 197) and Rijkhoff (2008: 88).

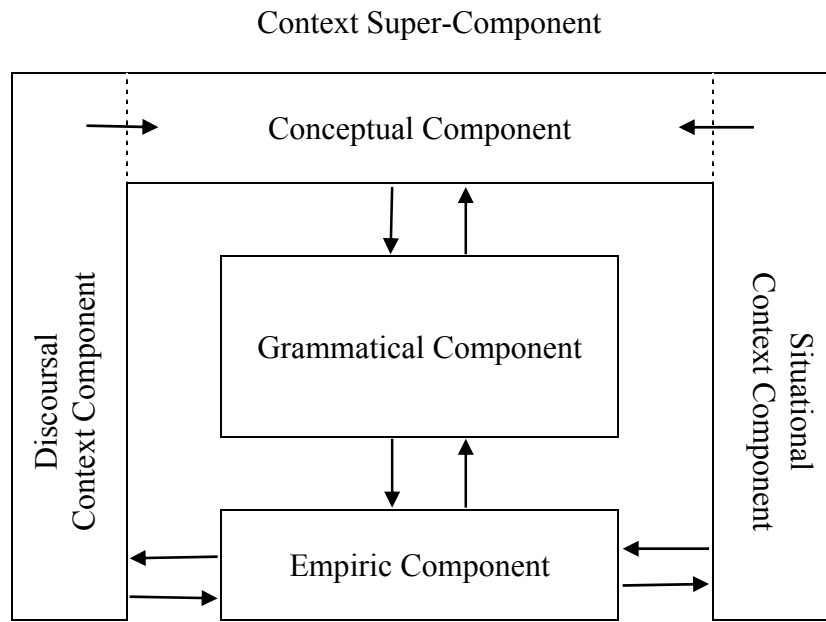


Figure 1: Modified outline of FDG

A diagrammatic representation is offered in Figure 1. The diagram is based on Connolly (2007a: 21), but with some rearrangement of the horizontal arrows to reflect the flow of information involving the context super-component, in anticipation of section 3.2 below. (It may be noted that Hengeveld and Mackenzie's Output Component has therein been renamed the "Empiric" Component, in order better to recognise the model's theoretical neutrality between production and comprehension.)

It is intended that the EMC should recognise all of the distinctions set out within (1-4) in 1.2 above, as well as the fact that the broad categories implied by (1-4) can usefully be divided into subcategories. For instance, within the situational context, Connolly (2007a: 15-16) subdivides the narrower physical context as in (6) and the narrower socio-cultural context as in (7):

- (6) Narrower physical context:
 - (a) The animate and inanimate entities present, together with their physical attributes and activities.
 - (b) The location in time.
 - (c) The location in space.
- (7) Narrower socio-cultural context:
 - (a) The discourse participants, together with their social and psychological attributes and activities, including their relationships with one another.
 - (b) The occasion, characterised in terms of properties such as the degree of formality or seriousness.
 - (c) The purpose and outcome of the discourse.

However, the analysis of context depends to a considerable extent on the aims of the investigator, and it is not feasible to propose a definitive, all-purpose set of analytical categories for the (multifarious) purposes of contextual analysis.

In Connolly (2007a: 19) it is envisaged that both mental and extra-mental context may be analysed in terms of a similar system of categories, given that the external reality, as speakers perceive it, is represented (in some manner) within their minds. Nevertheless, mental context differs in two particular respects:

- (8) (a) Mental context may include imaginary as well as real phenomena and events.
- (b) Discourse-participants' mental representations of a discourse may not reflect an accurate record of the exact extra-mental co-text.

For further discussion of the mental aspects and representation of context, see Connolly (2004, 2007b); Givón (2005) and van Dijk (2006, 2008).

Both the Discoursal and Situational Components have a mental and an extra-mental aspect, whereas the Conceptual Component is (as its name suggests) entirely mental in nature. The narrower-broader distinction is not applicable to the Conceptual Component either.

2.1.2. Developing the Extended Model of Context

Cornish (2009: 98-100) objects to the fact that Connolly (2007a), among other FDG-oriented authors, does not draw a systematic distinction between the following two terms:

- (9) (a) Text.
This is to be regarded as an externally observable trace of communicative activity. It may be either spoken or written.
- (b) Discourse.
This is to be understood as a mental product of communicative activity, co-constructed by the discourse-participants; see further Jacoby and Ochs (1995: 171); Linell (1998: 86); Goodwin (2000: 1491); Auer (2009: 90) and Widdowson (2004: 9).

Cornish (2009: 106-107) suggests that in order to accommodate the distinction in (9), we should acknowledge a three-way division of context into “discoursal”, “textual” and “situational” aspects.

Clearly, it is essential for a dynamic model to make explicit provision for handling the constantly-changing context of the process of discourse. Consequently, the EMC needs to be revised in order to take (9) into account. We shall return to this matter shortly.

Cornish (2009: 107-108) also points out that there is a dependency between the situational context and his two other types of context, in that the latter are grounded or anchored within the former. This observation leads to a top-down perspective on context, as also espoused in van Dijk (2008: 101-103), which is also worth incorporating. The basic idea here is to make explicit the fact that the broader discoursal and situational context supplies a framework within which narrower context may then be constructed. For instance:

- (10) (a) The generic category of scientific journal articles supplies a framework (including a conventional pattern of discourse organisation) that can be drawn upon when

composing (sequences of) Discourse Acts within the context of an individual paper.

- (b) The broader socio-cultural context supplies various ideologies that may be reproduced or resisted when composing (sequences of) Discourse Acts within the context of an individual argument. (The asymmetric relationship between broader and narrower socio-cultural context has also been noted by other authors; for a recent example see Lukin (2013: 526-527).)
- (c) The broader physical context supplies geographical regions that may be pertinent when composing (sequences of) Discourse Acts within the context of an individual publication in and/or for a specific location, which may call for the use of the relevant standard dialect (e.g. British or American English).

As far as FDG is concerned, this top-down approach to context, combined with the hierarchical, and therefore layered, view of contextual structure, offers a noteworthy parallelism with the design of the grammar itself.

2.1.3. A revised proposal

The Contextual Component of FDG is intended to apply to the interactional context (rather than the described context), and this principle is assumed in relation to the EMC. The basic internal structure of the EMC takes the form of a three-dimensional architecture. One dimension is allocated to the distinction between mental and extra-mental context, while the remaining two dimensions are allocated to the hierarchy in (1) above, the essence of which is repeated for convenience in (11):

- (11) (a) Discoursal context.
This is subdivided into:
 - (i) Linguistic (or verbal) context.
 - (ii) Non-linguistic (or non-verbal) context.
- (b) Situational context.
This is subdivided into:
 - (i) Physical context.
 - (ii) Socio-cultural context.

Moreover, the layering into broader and narrower aspects applies throughout (11). Hence, the architecture incorporates the following subdivisions of context:

- (12) (a) Within discoursal context:
 - (i) Narrower linguistic context.
 - (ii) Narrower non-linguistic context.
 - (iii) Broader linguistic context.
 - (iv) Broader non-linguistic context.
- (b) Within situational context:
 - (i) Narrower physical context.
 - (ii) Broader physical context.
 - (iii) Narrower socio-cultural context.
 - (iv) Broader socio-cultural context.

In multimodal discourse, the discoursal context includes both linguistic and non-linguistic context. The broader discoursal context supplies the inter-text, and also,

insofar as it can be said to be organised into genres and sub-genres, it supplies the generic category and subcategory for any particular discourse that admits of such classification.

So far, then, the EMC remains much as before. However, in order to address the finer-grained structure, it will make for greater clarity if we consider mental and extra-mental context separately. Let us begin, then, with extra-mental context.

In its extra-mental aspect, the discursual context might be described, using Cornish's terminology, as the textual context. It is not in principle limited by human memory constraints, as it may be supplied by available written documents and/or possibly by recordings of spoken performances and non-verbal communication. (Admittedly, in the case of unrecorded spoken language, the extra-mental textual context has little role to play.)

The internal structure of the Discursual Context Component may be analysed with the help of linguistic concepts and/or, in the case of multimodal productions, with the aid of semiotic notions, as suggested in Connolly (2010: 12-13). However, it is not being proposed that the analytical categories employed for such detailed analysis should actually be built into the architecture of the EMC.

From a dynamic angle, the narrower discursual context is continuously updated as the discourse progresses. Moreover, in some cases, for instance if there is a TV or radio programme playing in the environment, and if the discourse-participants are paying attention to it, then it will be apposite to speak of a changing inter-text as well.

The narrower physical context is subdivided much as indicated in (6) above:

- (13) (a) The animate and inanimate entities present, together with their physical attributes and activities.
- (b) The spatiotemporal location.

These are such widely relevant subcategories that it is reasonable to incorporate (13) into the hierarchical architecture of the EMC. However, the broader physical context is so variable in terms of what may be relevant to a given discourse that it is difficult to propose any useful subdivision of this aspect of context for incorporation within the actual architecture of the Situational Context Component.

The narrower socio-cultural context is subdivided in (7) above in relation to the participants, the occasion and the purpose and outcome. As far as the extra-mental context is concerned, the problem is that "purpose" sounds like a purely mental concept, and therefore out of place here. On the other hand, it is possible also to speak of the "social purpose" of a discourse, to refer to what it is intended to achieve from the broader, societal point of view, above and beyond the personal intentions of the participants. For instance, the social purpose of a marriage ceremony is to unite a couple in an institutional relationship. This kind of purpose can, indeed, be regarded as part of the extra-mental context. Hence, we may revise (7) slightly, as follows:

- (14) (a) The discourse participants, together with their social and psychological attributes and activities, including their relationships with one another.
- (b) The occasion, characterised in terms of properties such as the degree of formality or seriousness.
- (c) The social purpose and anticipated outcome(s) of the discourse.

Again, these are such widely relevant subcategories that it is reasonable to incorporate (14) into the architecture of the EMC.

From a dynamic point of view, the narrower physical and socio-cultural context may change during the course of a discourse. Time inevitably passes (though this may not really be relevant) and the spatial location may change if the discourse-participants are on the move. Depending on circumstances, participants and other entities may enter or leave the setting, and participants may join or leave the discourse. Moreover, it is possible for the occasion to change in terms of its level of formality, and for the purpose of the discourse to evolve as the interaction progresses.

The broader physical and socio-cultural context, too, can be analysed into subcategories, such as geographical regions and social groupings. However, as with the broader discursual context, the variability in relation to the relevance or otherwise of particular subcategories to any given discourse serves as a deterrent to proposing that any of them be incorporated into the actual architecture of the EMC. As for the dynamic angle, the broader situational context generally does not change significantly during the course of a single discourse.

Turning now to the mental context, this relates to all three components of the contextual super-component of the EMC. Hence, we may speak of:

- (15) (a) The Conceptual Component.
- (b) The Mental Discursual Context Component.
- (c) The Mental Situational Context Component.

In (15c) are located the mental representations of (11b), (13) and (14), except that (in accordance with (8a) above) imaginary as well as real situations may figure as part of the mental context. The internal structure of (15c) mirrors that of the Extra-mental Situational Context Component, and therefore incorporates the distinctions between broader and narrower aspects and between physical and socio-cultural aspects, as well as the subdivisions within the narrower physical and socio-cultural aspects. The dynamics of (15c) also reflect those of the extra-mental situational context.

The Conceptual Component (15a), as explained in (5a) above, is an expanded version of Hengeveld and Mackenzie's Conceptual Component. Hence, it is within (15a) that the discourse-participants' individual intentions belong. From the dynamic angle, the overall intentions behind an individual participant's contribution to a discourse may or may not change during the course of that discourse. However, the particular intentions behind the successive Discourse Acts will, of course, be constantly updated as the discourse proceeds.

Note that since the Conceptual Component is purely mental in character, it obviously does not form part of the extra-mental context. Thus, the extra-mental context is fully accommodated within the extra-mental situational context and the extra-mental discursual context.

The Mental Discursual Context Component (15b) accommodates at least the following types of information:

- (16) (a) The mental representation of the textual context.
 This may well be an imperfect memory, in that the exact words may not be recalled in full.
- (b) The mental representation of the co-constructed discourse.

The co-constructed discourse is inter-subjective in nature, and may be represented slightly differently within the mind of each participant.

From the dynamic angle, these will be continually updated as the discourse develops and as an expansion takes place in what authors such as Clark and Carlson (1992: 68-69) call the “common ground” (the mutual knowledge, beliefs and suppositions) among the participants. Note also that the distinctions between narrower and broader aspects, and between linguistic and non-linguistic aspects, within the extra-mental textual context are mirrored in the internal structure of (16a).

2.2. *Context, grammar and discourse*

In standard FDG, the Move is taken to be the highest-ranking unit: See Hengeveld and Mackenzie (2008: 50). The implication of this seems to be that the Discoursal and Situational Context Components apply only to grammar, and not to higher-ranking units of discourse, such as the Exchange.

Hengeveld and Mackenzie’s stance has been criticised by Butler (2013: 31) as limiting the power of FDG to account for how language users communicate. From the perspective of the present paper, we may offer the following comments. Clearly, if Discourse Acts and Moves occur in contexts, then so do Exchanges and, indeed, entire discourses. The restriction of the scope of coverage to Discourse Acts and Moves is therefore based on the postulate that the Move is the highest-ranking unit of morphosyntactic analysis. However, Hengeveld and Mackenzie (2008: 45) envisage FDG as the Grammatical Component of a wider theory of verbal interaction. This implies that, in the longer term, the Discoursal and Situational Context Components need to be able to cope not just with grammar but with discourse.

Nothing has been introduced into the EMC that would restrict it in principle to the grammatical domain. Indeed, some features, notably the treatment of multiple discourse-participants, are clearly extendable to the coverage of Exchanges. The intention, certainly, is that the EMC should accommodate discourse context and not merely grammatical context.

On the other hand, Hengeveld and Mackenzie (2008: 10) take the stance that for the purpose of modelling grammar, as opposed to modelling discourse, the coverage of the Contextual Component should be restricted to factors that have a systematic effect upon grammatical choices. How may we accommodate this point of view?

It would seem that, in fact, we need to work both with a discourse model, serving as a model of the wider process of verbal interaction, and with a grammatical model, represented by standard FDG. At this stage, it is possible to offer only an outline sketch of the discourse model, but we are in a position to propose that it has certain specific properties. Firstly, as argued in Connolly (2010: 11), FDG should fit as seamlessly as possible into the discourse model. Indeed, if possible, it should constitute a proper subset of the latter. Secondly, it should have a similar architecture to FDG as postulated in Hengeveld and Mackenzie (2008: 13), but with a more general Discourse Component in place of the FDG Grammatical Component. Thirdly, this Discourse Component would accommodate multimodal discourse, along the lines suggested in Connolly (2010). However, it would contain two specifically linguistic sub-components: A grammatical subcomponent (comprising the Grammatical Component of FDG) and a

linguistic discourse subcomponent designed to be was maximally compatible with FDG. (The Discourse Component would also contain subcomponents to handle the non-linguistic modes of communication, but nothing further will be said about these within the present paper.)

Clearly, far more work needs to be done in order to develop a properly articulated linguistic discourse sub-component, which must at this stage, however, remain an area for further research. Nevertheless, it is hoped that sufficient has been said in order for us to proceed with developing the theme of the present paper, which relates to the handling of context in FDG.

As implied above, the EMC may be viewed as a contextual framework for the wider discourse model. Moreover, it is proposed that, just as the grammatical model is envisaged as a proper subset of the Discourse Component of the model of verbal interaction, so the Discoursal and Situational Context Components connected with the grammatical model should constitute a proper subset of the EMC. The question thus arises of identifying the requisite subset.

Hengeveld and Mackenzie (this volume) propose a multi-stratal view of the FDG Contextual Component in which discoursal and situational information is contained. (Such a view is, of course, consonant with the EMC.) However, they restrict the discoursal information to what has occurred in the preceding part of the current discourse, and they confine the situational information to features of the immediate environment of the utterance, namely the participants, the time and place, and the other pertinent perceivable and inferable entities. This suggests that, in terms of the EMC, it is the narrower discoursal context and the narrower situational context that constitute the subset which, in their view, is germane to FDG as a grammatical model.

Hengeveld and Mackenzie's restriction of contextual relevance to factors with a systematic influence on grammatical choices also calls for comment. They interpret this criterion very narrowly, confining it to cases of systematic rule-governed influence (this volume). However, in principle, systematic *quantitative* relationships are also possible, and if FDG is to offer an attractive face to sociolinguists and psycholinguists, for example, then, it is possible that statistical systematic relationships may, indeed, need to be countenanced. Moreover, in a model of verbal interaction, undoubtedly we would need to take account of unsystematic relationships, since the production and comprehension of discourse may, at times, be influenced by *ad hoc* facts about the context.

3. Interaction with other components

Let us now turn from matters of internal architecture to the interaction of the Discoursal and Situational Context Components with the other abstract components of the FDG model. Our first concern will be to demonstrate that both the Discoursal and the Situational Context Components may, indeed, exert an influence on the Grammatical Component. (When adducing examples, we shall make use of Hengeveld and Mackenzie's notational device of “#” to denote a contextually unacceptable expression.)

3.1. The Grammatical Component

The influence of the narrower discoursal context on the Grammatical Component can be appreciated with the aid of examples such as the following. Firstly, in Welsh the form of a response to a polar interrogative depends on the tense of the main finite verb in the preceding question. For instance, if the question is in the preterite, then an affirmative response is expressed by means of the word *do* (pronounced [do:]), whereas if the question is in the future tense, then *do* is grammatically incorrect as a response. Secondly, in English it is possible for a tag question to be added by an interlocutor, as in an exchange such as:

- (17) (a) He's moved to London.
(b) Has he?

Here the person, number and gender categories of the pronoun in (17b) are determined by those of the subject in (17a).

The effect of the narrower physical context, also, can be illustrated as follows. Firstly, in spoken discourse, one of the entities that need to be present is the speaker; and in Portuguese the contextually appropriate word for 'thank you' (*obrigado* or *obrigada*) in such discourse depends on whether the speaker is male or female. As for the addressee, the latter can also influence the formulation of the Discourse Acts on the part of the speaker. For instance, in Welsh, if a teacher tells an individual pupil to 'wait', then the correct form of the verb *aros* ['arps] is *arhosa* [ar'hpsa] (or, more informally, *aros*), whereas if the addressee is a group of pupils, then *arhoswch* [ar'hpsɔx] is the required form. Secondly, the influence of the spatiotemporal location on the formulation of language can be appreciated by considering the contextual inappropriateness of sentences like the following, composed in the UK in February 2011:

- (18) (a) #The afternoon of 1 January 2011 will be sunny.
(b) #Here in Sweden it is cold.

As regards the narrower socio-cultural context, the effects of this may be illustrated as follows. Firstly, in Welsh, if a pupil speaks to a schoolteacher, then because of the asymmetric social relationship between the two, the pupil has to use the pronoun *chi* [xi:], rather than the familiar form *ti* [ti:], for 'you'. Secondly, the influence of the occasion upon linguistic expression may be illustrated as follows. In Welsh, a formal situation such as an interview for an academic appointment, calls for the use of the pronoun *chi* rather than *ti*, even if the candidate knows the interviewer well and might otherwise have used *ti*.

Of course, not only the narrower but also the broader aspects of context have an influence on expression. Let us begin with the broader discoursal context. Genre plays a significant role here, and the structure of the marriage ceremony, with a prescribed sequence of essential Discourse Acts, provides one example, but there are others besides. For instance, to introduce a fairytale with the phrase "Once upon a time" is acceptable, but to introduce a scientific article in the same way is not. Again, in English

certain types of joke have a set format, and have to be introduced by specific expressions, such as “Knock, knock” or “What’s the difference between ...”.

The broader physical context, too, has an influence. First of all, geographical regions are often associated with particular dialects, which have characteristic grammatical conventions. For instance, the standard dialects associated with Britain and North America, respectively, have different forms for the past participle of “get”, namely “got” and “gotten”. Furthermore, for a rather different type of example, consider the following sentence, composed in the UK in February 2011:

(19) #The present king of the UK is very diplomatic.

The use of the word “king” here is contextually inappropriate because the British head-of-state at the time was a female person, and this is a physical fact which would, in most cases, lie outside the immediate interactional situation.

Finally, the broader socio-cultural context also influences language. To begin with, different social groupings may be associated with different sociolects, with their particular characteristics. For instance, expressions like “I done” are ungrammatical in the standard dialect of British English, but occur in some other sociolects. Moreover, to take a somewhat different example, ideological influences can be so strong as to render certain expressions, such as racist words, completely unacceptable in many contexts.

These broader contextual influences, which are not handled by the narrower types of context germane to the FDG grammatical model, need to be accommodated instead by the wider model of verbal interaction. Most of them involve the appropriateness or otherwise of particular linguistic choices. However, the dialectal differences would probably be reflected in the precise format of the grammar itself.

3.2. The Conceptual Component

As argued in Connolly (2007a: 19), the only way in which contextual factors may directly influence the production and interpretation of discourse is through their presence in the minds of the discourse-participants. This principle is particularly salient when considering a dynamic implementation, in which the flow of information around the model is of crucial importance. A similar point of view is found in van Dijk (2008) and Keizer (this volume). As far as FDG and the EMC are concerned, the implication is that the Conceptual Component should play a vital, mediating role in the handling of interactions between the Mental Discoursal and Situational Context Components, on the one hand, and the Grammatical Component, on the other. The process whereby the Conceptual Component fulfils its mediating role within a dynamic implementation of FDG will now be illustrated with an example.

Consider the following Exchange, between a man called Tim and his wife Ann, who has just finished a glass of white wine:

- (20) TIM: Oh, your glass is empty. Would you like a refill?
ANN: Yes, please.
TIM: *Goes into the adjacent room in order to carry out Ann’s request.*
Oh, the white wine’s all gone.
ANN: Has it? Is there any red left?
TIM: Yes, there’s plenty. I’ll pour you some.

In the analysis that follows, interactions between the Conceptual Component and the Discoursal or Situational Context Components are placed within square brackets. Whenever the discoursal or situational context is mentioned, this is to be understood as referring to the mental rather than the extra-mental dimension of that context.

Let us now begin the analysis. While Tim is in the process of formulating and expressing the Discourse Acts in the opening Move within this Exchange, he has to conceptualise at least the following:

- (21) (a) The fact that Ann is spatiotemporally collocated with him.
[This fact is drawn from the narrower situational context, in which Ann is a relevant animate entity.]
- (b) The fact that Ann's glass is now empty, and the fact that he has noticed. (This is the situation that needs to be represented linguistically in the opening Discourse Act.)
[The fact that Ann's glass is empty is drawn from the narrower situational context, in which the glass is a relevant inanimate entity. Moreover, her finishing the drink is a relevant action on Ann's part.]
- (c) The belief that Ann may not know the conjunction of facts in (21b). In other words, his assessment that this conjunction of facts does not constitute part of the common ground between Tim and Ann.
- (d) The desire and intention to bring the conjunction of facts in (21b) into the common ground, by representing (21b) linguistically (thus turning it into the described context of the opening Discourse Act) and addressing the message to Ann (thus assigning to himself the role of Speaker and to Ann the role of Addressee).
- (e) A willingness to offer to refill Ann's glass.
- (f) The desire and intention to bring an awareness of this willingness into the common ground, by representing it linguistically (thus turning it into the described context of Tim's second Discourse Act), and again addressing the message to Ann.
[Tim's offer now becomes part of the narrower discoursal context, and thus available to Ann.]

On hearing and interpreting the two Discourse Acts in Tim's opening turn, Ann decides to make a response, in preparation for which she needs to conceptualise at least the following:

- (22) (a) The fact that Tim is spatiotemporally collocated with her.
[This fact is drawn from the narrower situational context, in which Tim is a relevant animate entity.]
- (b) The fact that she would like to accept his offer.
[The offer is drawn from the narrower discoursal context.]
- (c) The belief that Tim does not know the fact in (22b).
- (d) The desire and intention to bring the fact in (22b) into the common ground, by representing it linguistically and addressing the message to Tim.
[This acceptance now becomes part of the narrower discoursal context, and thus available to Tim. The making and acceptance of the offer together have the effect of negotiating an agreed state-of-affairs in which Tim is now committed to do what he has offered to do. This commitment also becomes part of the narrower discoursal context. Note that the vital combination of offer and acceptance constitutes an adjacency-pair, whose domain lies in a higher-ranking unit of discourse than is treated as part of the grammar in standard FDG.]

When Tim arrives in the adjacent room in the hope of carrying out his offer, he finds to his disappointment that the white wine has run out and that he cannot fulfil his offer in the manner that he had anticipated. He therefore decides to continue the Exchange, and in preparation for his next Discourse Act, he has to conceptualise at least the following:

- (23) (a) The fact that Ann remains spatiotemporally collocated with him (at least within earshot).
[This fact is drawn from the narrower physical context.]
- (b) The fact that the white wine bottle is now empty.
[This fact is drawn from the narrower physical context, in which the empty wine bottle is a relevant inanimate entity.]
- (c) The fact that the commitment negotiated during the course of the first two turns in the Exchange cannot now be honoured in the manner anticipated.
[The commitment is drawn from the narrower discoursal context.]
- (d) The belief that Ann does not know the fact in (23b).
- (e) The desire and intention to bring the fact in (23b) into the common ground, by representing it linguistically and addressing the message to Ann.
[This information now becomes part of the narrower discoursal context.]

Ann's response involves her conceptualising at least the following:

- (24) (a) The fact that Tim remains spatiotemporally collocated with her.
[This fact is drawn from the narrower physical context.]
- (b) The fact that she was previously unaware of the information in (23b).
[This information is drawn from the narrower discoursal context.]
- (c) The desire and intention to bring the fact in (24b) into the common ground, by representing it linguistically and addressing the message to Tim (in what becomes the first Discourse Act of the turn).
[This fact now becomes part of the narrower discoursal context, and thus available to Tim.]
- (d) The wish to know whether there is any red wine left.
- (e) The desire and intention to bring the wish in (24d) into the common ground, by representing it linguistically and addressing the message to Tim (in what becomes the second Discourse Act of the turn).
[This wish now becomes part of the narrower discoursal context.]
- (f) The intention to refer to the white wine economically (without needless repetition), given that it is now part of the common ground. (This results in the use of the pronoun "it".)
[The awareness of common ground derives from the narrower discoursal context.]
- (g) The intention to refer to the putative red wine economically, given that wine is now part of the common ground. (This results in the elliptical phrase "any red".)
[The awareness of common ground derives from the narrower discoursal context.]

Tim's preparation of his response and amended offer involves his conceptualising at least the following:

- (25) (a) The fact that Ann remains spatiotemporally collocated with him.
[This fact is drawn from the narrower physical context.]
- (b) The information that Ann wishes to know whether there is any red wine left.

- [This information is drawn from the narrower discoursal context. Because the word “wine” has been omitted from Ann’s question, it has to be supplied by an inference on Tim’s part, based on that context.]
- (c) The fact that there is plenty of red wine left.
[This fact is drawn from the narrower physical context.]
 - (d) The desire and intention to bring the fact in (25c) into the common ground, by representing it linguistically and addressing the message to Ann (in what becomes the first Discourse Act of the turn).
[This information now becomes part of the narrower discoursal context.]
 - (e) The desire and intention to offer to pour some red wine into Ann’s glass, and to bring an awareness of this intention into the common ground by representing it linguistically and again addressing the message to Ann (in what becomes the second Discourse Act of the turn).
[This offer now becomes part of the narrower discoursal context.]
 - (f) The intention to refer to the red wine economically, given that red wine is now part of the common ground. (This results in the use of the word “plenty” rather than “plenty of red wine”, and of the word “some” rather than “some red wine”.)
[The awareness of common ground derives from the narrower discoursal context.]

The worked example just given has deliberately been kept reasonably simple, in the interests of clarity of exposition. Undoubtedly, both the data and the analysis could be expanded. However, even as it stands, our example suffices to illustrate two important principles.

First of all, the interaction between the various components in the FDG model is, in general, essentially cyclic in nature (though there may be exceptions, for instance when someone speaks, knowing that no-one is listening). The Situational and Discoursal Context Components feed into the Conceptual Component and influence the pre-linguistic conceptualisations formed there. The conceptualisations are passed to the Grammatical Component, where they are formulated and encoded into expressions. These are then passed to the Empiric Component. The results impact the Discoursal Context Component, bringing about an update to the Extra-mental Discoursal Context Component; and they may also affect the Situational Context Component, for instance startling someone and thus causing a physical change of state. The new addition to the Discoursal Context Component is then received by an addressee-oriented version of the Empiric Component (possibly with the addition of vocal effects, such as trembling with fright as a result of some factor in the Situational Component), and parsed by an addressee-oriented version of the Grammatical Component. The results of the parse are interpreted in the Conceptual Component (drawing if necessary on the Discoursal and Situational Context Components, which means that the cyclicity is not perfect). The resulting interpretation brings about an update to the mental discoursal context in the Discoursal Context Component. The latter is now ready to feed into the conceptualisation of a new Discourse Act, if necessary. (It may be noted that the account just given would seem well-suited to the dialogic model proposed by Mackenzie (this volume).)

Accordingly, from the particular point of view of the Conceptual Component, when a Discourse Act is being generated, information arrives as input from the Situational and Discoursal Context Components, and is processed as part of the operation of forming conceptualisations to act as input to the Grammatical Component. In this way, the Conceptual Component plays a mediating role between the Discoursal and Situational Context Components and the Grammatical Component. Moreover, when

a Discourse Act is being comprehended, information arrives in the Conceptual Component from the Grammatical Component, and is processed (along with contextual information) as part of the operation of forming interpretations to act as input to the Discoursal Context Component (for updating purposes). Again, the Grammatical Component does not exchange information directly with the Discoursal Context Component or with the Situational Context Component. Rather, the Conceptual Component once more plays a mediating role.

The second main principle is that the dynamic processing of discourse in relation to its context demands conceptualising work on the part of both the speaker (or writer) and the addressee. In the presentation of FDG in Hengeveld and Mackenzie (2008: 1-3), the generation of Discourse Acts is described from the point of view of the speaker. This is a reasonable enough simplification to make for the purposes of an initial presentation of the grammatical model, but in understanding the role of the Conceptual Component, we need to have regard to the work of the addressee as well; cf. Giomi (this volume), Mackenzie (this volume). It is clear from the above example that this work includes drawing information from the discoursal context, interpreting what the other discourse-participant(s) may say and (if necessary) drawing inferences in order to recover information which is not actually expressed, but which is nevertheless understood.

4. Conclusion

In this paper it has been argued that the extended model of context (EMC) proposed in Connolly (2007a: 13-22) provides the basis for an appropriate framework for the treatment of context in FDG and, indeed, in the wider theory of verbal interaction. Nevertheless, the original EMC required some revision, and consequently, a revised version has been presented here. An architecture has been proposed for both the Discoursal and the Situational Context Components of the EMC, designed to support a dynamic implementation of the theory and to accommodate the process of multimodal discourse, within which human language serves its purpose of facilitating human communication, and within which grammar fulfils its vital function in enabling meaning to find expression.

An account has also been offered of how the Discoursal and Situational Context Components interact with the Grammatical Component and with the Conceptual Component. It is contended that the EMC facilitates a systematic treatment of the relationship between context and grammar, and furthermore, an attempt has been made to demonstrate that each of the subdivisions within the narrower Discoursal and Situational Context Components is capable of exerting its own influence on the Grammatical Component. In addition, an account has been given of the interaction among the components of the FDG model, suggesting that this interaction operates in a cyclical manner, in which the Conceptual Component exchanges information with the Discoursal and Situational Context Components, and in which the Conceptual Component plays a mediating role between these and the Grammatical Component.

As always, current research suggests questions that future research may address. A natural development of the work reported in the present paper would be to investigate more closely the internal workings of the Conceptual Component, and also to seek a more detailed understanding of how this component interacts with the Grammatical

Component, the Discoursal Context Component and the Situational Context Component.

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