A Pragmatics-based Model for Narrative Dialogue Generation

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Abstract

We describe a method and a proof of concept which allow the generation of rich and engaging dialogues between virtual characters from a formalised plot description. The structure of the dialogue generated borrows from inferential pragmatics, following the Geneva Model of discourse analysis, in order to provide realistic interaction between characters in the narrative. At a higher level, this discourse is organised following heuristics borrowed from narratology theory in order to elicit emotions linked to dramatic tension and thus favour narrative engagement. Besides enriching narrative generation systems embedded within simulation applications, our work also has the potential to be adapted to support engaging interactive dialogues between users and virtual conversational agents in narrative systems.

Introduction

Research in interactive storytelling has in the last 20 years produced a number of prototype systems allowing to engage their users in simulations where virtual characters would play out a story influenced through user interaction. These systems rely on real-time story generation mechanisms in order to generate story events according to high level narrative goals, or repair the unfolding story with regards to user interaction, often staging virtual characters' interaction and scripted dialogue as the lowest level narrative actions, which therefore sets a limit to the story adaptation and to the richness and variety of characters' dialogues. In this paper, we describe an approach and a proof of concept which would allow to overcome this limitation thanks to the generation of rich and engaging dialogues between virtual characters from a formalised plot description. The dialogues generated by the system deliver narrative content through the conversation between these agents.

Our approach builds upon theories from two disciplines. First, we rely on dialogue structures, as defined in the Geneva Model of Discourse Analysis (Filliettaz and Roulet 2002; Moeschler 2002), used as the building blocks for modelling conversations. Second, we exploit the discourse organisation from Baroni's work (2007), generating curiosity as the effect of a temporary discourse incompleteness of the narrative action.

Related Works

Interactive storytelling systems have provided a mechanism to generate narratives based on computational models, and allowing the plot to be instantiated either through visuals or text (Cavazza, Charles, and Mead 2002). Furthermore, generating dialogues in interactive storytelling has been an important means of delivery of the story discourse. Dialogues are produced based on story formalism, through rule-based mechanisms. The development of dialogues as part of storytelling systems has been tackled over the years by several researchers, such as (Cavazza and Charles 2005; Onate, Mendez, and Gervas 2019), or in the seminal Façade system (Mateas and Stern 2004) which is one of the early attempts at relating the principles of narrative functions to dialogue acts.

Whilst narrative discourse often tends to be generated through a monologue, there have been several attempts at generating dialogues to reflect their richer nature. (Piwek and Stoyanchev 2011) created a system able to transform a monologue into a two-participant dialogue. (Bowden et al. 2016) notes that information provided in the form of a dialogue is more engaging than when provided in monologue form. They present algorithms for converting a deep representation of a story into dialogue-based storytelling that can vary aspects of the conversation.

Dialogue Structures and their Relations

The Geneva School of Linguistics (Filliettaz and Roulet 2002) proposed a modular approach to discourse analysis. Discourse is composed of a finite set of components combined in a hierarchical representation. To retain the richness of the discourse, we consider a multi-component approach. Based on (Filliettaz and Roulet 2002), we define two theoretical categories needed to transform our monologue into a dialogue. The two main questions to answer are: i) how do we organise the discourse and ii) how do we describe the links between the monologue statements that are essential in the logical and causal narrative of the generated discourse.

To address the first question, we propose using a set of discourse structures initially described in (Moeschler 2002) in order to analyse monologues and thus, providing us with a strong theoretical basis; we use these structures to generate dialogues, as further described herein. If no specific formalisation is defined for linking these structures, then the re-

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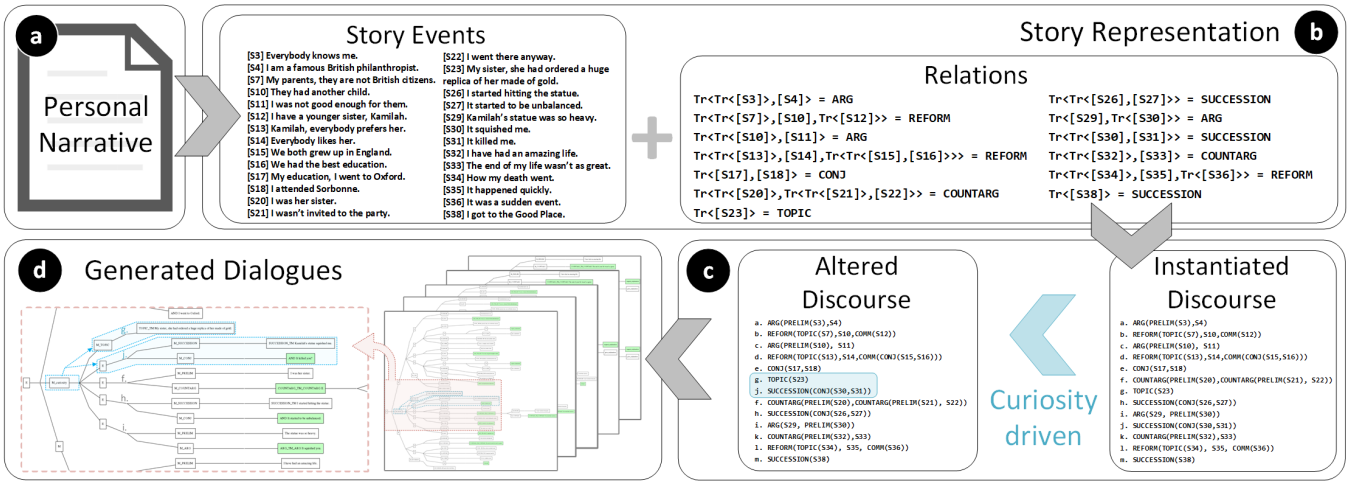

Figure 1: System Overview: The original *personal narrative* (a) is formalised, resulting in the *story representation* (b). The author *instantiates the discourse*, then the system computationally derives the *altered discourse*, incorporating narrative effects (c). Based on the *altered discourse*, the system automatically generates dialogue structures (d).

sulted dialogues will be incomprehensible, one would only read an incoherent sequence of speech acts.

Integrating Narrative Tension

Classical narratology has described means to achieve *narrative tension* to engage readers in the unfolding of the story.

Russian formalist Tomachevski, in an essay published in 1925 (translated in French in (Tzvetan 1965)), remarked the discrepancy between narrative events and their presentation to the reader through the discourse. This distinction has now been widely accepted in contemporary narratology. We use plot, story and discourse to refer respectively to the logical organisation of the narrative, the elements of the narrative, and the way they are presented to the reader, a terminology which is common in the Computational Narratives community. Tomachevski remarked how narrative discourses are constructing *secrets*, voluntarily maintaining readers in the ignorance of details which are necessary to understand the story, thus triggering *curiosity*. This aspect of narrative tension has also been described by Barthes (1970): the *hermeneutic code* introduces mysteries at the beginning of the text, in the form of an unexplained event that will be solved later in the text. Such constructions are typical, for instance, of *whodunnit* mystery novels and movies, which engage their audience using the intellectual curiosity for understanding an emotionally charged event which is exposed early in the narrative.

Sternberg (2003) described the centrality of *curiosity, suspense* and *surprise* in narratives. These concepts have been further honed by Baroni (2007), who clarified how narrative tension can be either heuristic or dramatic, both having to rely on the organisation of discourse but the latter relying more heavily on interpretation of the reader. Naturally, altering the interventions within the narrative will lead to different effects. Building on the work of (Sternberg 2003), (Baroni 2007) has described how the structure of discourse can elicit various emotional effects, resulting in the building up of dramatic tension, allowing to emphasise narrative events and to emotionally engage the audience. We show in this paper how the *heuristic tension*[1] described by Baroni (2007) can be simply structurally built in the generated dialogue, by maintaining the audience in ignorance of narrative events which is essential for narrative comprehension. Furthermore, (Wu, Young, and Christie 2016) focus on deciding the most appropriate places to insert story events as flashback effects (i.e. curiosity effects), and the impact these effects have on the readers.

Suspense in narrative generation plays a key part in terms of the affective responses elicited to induce reactions by the user. Reactions in response to this type of engaging interactive stories are positively related to enjoyment, having a significant impact on the audience's immersion and suspension of disbelief (Delatorre et al. 2018). Several interactive storytelling systems, such as *Suspenser* (Cheong and Young 2014), have ensured to incorporate this principle at the very heart of the generation process to enhance the quality of the experience generated for the users.

We propose here to manipulate the dialogues using such narrative constructions in order to generate a compelling discourse. In the remainder of the paper, the components of this proposed approach (Fig. 1) are described, along with our own taxonomy combining these constituents in creating complex discourse structures.

Generating Structured Dialogues

A dialogue model is based on a discourse structured in a predetermined sequence of types of utterances. To represent the hierarchical structures in which the dialogue is organised, we need to account for the rules of formation proposed by (Filliettaz and Roulet 2002; Moeschler 1989;

[1] translated from the French *"tension heuristique"*

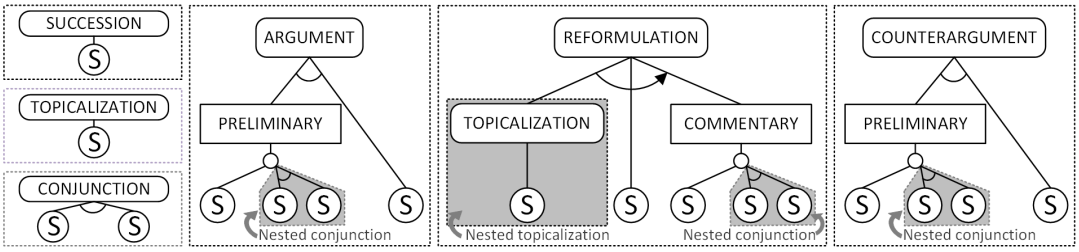

Figure 2: Text Relation Taxonomy - building blocks of the monologue towards generating the dialogue.

2002). The dialogue is represented as a hierarchical structure on which the dialogic units (*Exchanges*, *Moves* and *Dialogue Acts*) are mapped. A dialogue model consists of descriptive units (i.e. the structure) and the relations that connects these structures to each other (Pernel 1994).

- Exchanges (**E**) describe the main structure component of the dialogue. The usage of exchanges marks discourse segments according to the considered topic.
- Moves (**M**) relate to the exchange depending on topic similarity. Exchanges can be embedded within Moves to represent a particular view within the same topic.
- dialogue Acts (**A**) are associated to a communicative goal.

To formalise our dialogue structures, we propose to define various types of categories of representations. We base our formalisation of these structures upon the rules defined in (Moeschler 2002). To computationally generate dialogues, we first need to express them in a concise form. We choose to represent these rules in Backus Naur Form (BNF) notation. We use the notation $n * X$, whereby at least n units of type X (default value is 0), U is the dialogue unit, E is the exchange, M is the move and A is the dialogue act. The notation *::=* is read as *it*; and the notation $|$ is read as *or*. The first rule below is read as *a dialogue unit is either at least one dialogue Act, at least one Move, or at least one Exchange.*

$$U ::= 1^*A|1^*M|1^*E$$
$$E ::= 2^*M$$
$$M ::= {}^*U\ 1^*(M/A)\ {}^*U$$

Text Relation Markers

Roulet (2006) specifies that text relations (TR) are not only defined between text constituents (Blakemore 1992; Van Dijk 1979), but are defined as the relation between the discourse structure and the text constituents. As a result, their description depends on their hierarchical structure and on the occurrence or insertion of a specific text relation marker (TRM; (Roulet 2006)) of a particular category.

Text relations (TRs) are classified into ten different levels, some characterising what is happening at the *Exchange* level, while others are specific to the *Move* level. An Exchange can be characterised as either initiative or reactive. Move levels have eight types of relations: topicalization, counter-argument, preliminary, commentary, argument, reformulation, succession and clarification. Roulet (2006) describes how to use each relation based on the analysis of a narrative. However, we here make use of these for the purpose of generation, thus we now need to define specific templates for these.

Integrating Text Relations

Through the use of TR and their respective characteristics, we consider one other level of constraint that helps group together the relations into particular structures. We consider that TRMs are divided in two categories due to some relations describing a major step in the completion of the dialogue, hence having a higher importance in the Exchange pairs. Also, based on their structural representation and characteristics, some relations are dependent on others. For example, a *Preliminary* relation is part of the *Argumentation* relation – no matter whether the *Preliminary* is either a single statement or made out of a *Conjunction* relation, but by its definition, it requires some type of a main constituent afterwards – in consequence, being followed by an *Argument* type statement.

We now consider the connective elements as divided in two categories: logical conjunction and TRMs, as shown in Fig. 2, where *S* represents the statements.

Category: Logical Conjunction

It connects two subordinate statements linked by a conjunction *"and"* (Fig. 3). Its main purpose is to add strong connected information to the discourse. Based on the defined taxonomy, the relation is thus commutative.

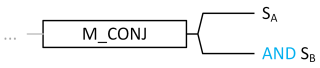

Figure 3: In the case of logical conjunctions, utterances are connected to the same Move, the speech acts being linked through a "and" conjunction.

Despite being used as an additive relation, it provides various response strategies:

- *provide_continuation_for_effect* The second interlocutor finishes the actual relation, the second clause together with "and" being generated from their point of view.
- *request_details* The second interlocutor expresses an explicit request for additional information.
- *request_importance* The second interlocutor requests the importance of a statement for future references (e.g.

"Why do I have to know about this?"). With regards to the effect, there is an importance for what was expressed.

- *backchannel* The backchannel interventions (e.g. "Yeah / Right/ Uh-huh") expressed by the second interlocutor. Concerning the effect, the first interlocutor continues with their story, using any type of relations.

Category: Argument

It expresses a statement describing a point of view within the same topic, and is either preceded or followed by a preliminary move; the relation is thus commutative. A preliminary move can be comprised of only one preliminary statement or multiple statements grouped by the logical conjunction *"and"* (Fig. 4). This relation is indicated by the following TRMs, Argument_TM: *because (of), since, as, like, even, moreover, if, then, therefore, for that, so that, at least*.

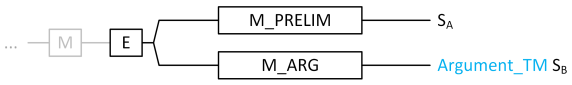

Figure 4: Structural effects for the Preliminary statement S_A and the Argument statement S_B (this relation is commutative, i.e. S_B can be used as a Preliminary whereas S_A as the Argument).

We define the strategies for generating a dialogue comprising of M_ARG (and thus Argument_TM), from the second interlocutor's point of view:

- *ask_argument_for_preliminary* The second interlocutor either asks for an argument that sustains the preliminary, or they reply with the actual argument. One way to ask for the argument is by using the preliminary statement itself, explicitly asking for a reason. This type of reply is always placed after the first move of the relation being generated. Regarding its effect, an argument is given to support the claim.
- *interject* The second interlocutor replies with an interjection or exclamation. This kind of move allows to present how the second interlocutor feels about what has been said.

Category: Counterargument

It expresses a statement describing a point of view in opposition to what was previously generated, within the same topic. It is either preceded or followed by a preliminary move; the relation is thus commutative. It is indicated by the following TRMs, COUNTARG_TM: *although, whatever ... that, whatever, even if, but, nevertheless, however, even though, only, being true that, however many/much, despite*.

We define the strategies for constructing a dialogue comprising of M_COUNTARG, from the second interlocutor's side:

- *give_reasoning_countarg* The second interlocutor intervenes by adding a possible reasoning (either a cause or an effect). From the structure's point of view, the statement joined with the TRM completes the counter argument exchange. Regarding the effect, an opposing claim is included into the discussion.
- *interject* The second interlocutor replies with an interjection or exclamation. This kind of intervention shows how the second interlocutor feels about what has been said (e.g. the received counterargument is not the one they were expecting).

Category: Topicalization

It highlights the focus of the next part of the discourse, i.e. an emphasis towards a word, a connection, or a reference. It is represented by a statement linked to the discourse by the topicalization TRM (Fig. 5). This relation can appear as part of another relation, or it can be independent from other constituents. Regarding the structural effect, it opens up a new speech act inside the current move. Roulet (2006) suggests the following TRMs for this category, TOPIC_TM: *as for, regarding, concerning, with respect to, as regards*.

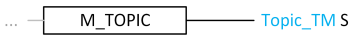

Figure 5: Structural effect for a Topicalization move; this move contains the elements of TOPIC_TM and the actual narrative statement, S.

Category: Commentary

It is either represented by one statement, or via the Conjunction relation (Fig. 6). Although this category does not have a specific list of TRMs, Roulet (2006) defines it as always needing to follow the main constituent. Thus, the goal of this relation is to further describe the main constituent by having a more in-depth description of the previous statement's topic, and also providing the other interlocutor with a continuation of the story. We characterise this relation as always being dependent on another relation with a higher meaning in the discourse; in other words, it will always appear as a constituent of other relations.

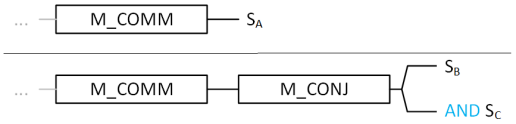

Figure 6: The Commentary relation can either be expressed by a single statement S_A, either through a logical conjunction move (S_B and S_C)

Category: Preliminary

It marks the beginning of a new topic. Similar to the Commentary relation, with the only difference that the main constituent must follow after the Preliminary move. There are no specific components for this category's TRMs.

Category: Reformulation

As shown in Fig. 2, this relation is order dependent. Regarding the structural representation, the main constituent

of the Reformulation is preceded by a Topicalization statement (M_TOPIC) and followed by a Commentary move (M_COMM) that can either be expressed as a single statement, or as two clauses linked together by the logical conjunction M_CONJ (Fig. 7). In discourse theory (Roulet 2006), the Reformulation's main constituent is indicated by the following TRMs, Reform_TM: *in fact, basically, in any case, anyway, finally, after all, in short/shortly*.

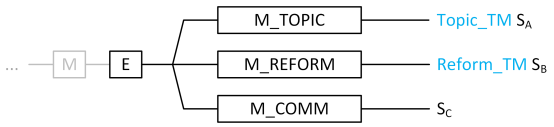

Figure 7: Structural effect for one Reformulation statement S_B, preceded by the Topicalization statement S_A, and succeeded by a Commentary-type intervention expressed through S_C.

We define the strategies for building up a dialogue comprising of M_REFORM (thus, by using Reform_TM):

- *request_explanation* An intermediate reply that validates the Topicalization statement, marking a request for an explanation or a verification of the intended topic. This reply opens up an exchange inside the current one, pausing the narration process until the first interlocutor intervenes with a Clarification with their turn to close the current exchange. The dialogue will then continue with the Reformulation relation.
- *wrap_up* A reply with the role of wrapping-up an idea/fact that has just been covered during the Commentary relation. It could also be used to check understanding. This type of move is added after the Commentary relation at the current level.

Category: Clarification It must succeed an interrogative intervention. No specific TRM describes this category. It is used during the *request_explanation* case of the Reformulation strategies of replies.

Category: Succession

It describes further development of the discourse, through a continuation of the statements being told to the second interlocutor; Explicitly shows the progression of the narrative. In discourse theory (Roulet 2006), the Succession relation is indicated by the following TRMs, SUCCESSION_TM: *then, after that, as soon as*. Regarding its structure representation, a new simple move is added into the current dialogic unit.

Curiosity in Dialogue Generation

From the relations and story events, the algorithm constructs a tree structure, similar to the one in Fig. 8. Based on the generated discourse instantiation and the defined generation rules, there exist potentially a large number of tree structures to be generated, however constraints are specified to ensure control over the process. These generation rules are integrated into the relation definitions themselves, resulting in consistent structures while still being valid instances of the original model. The tree structure that we constructed allows for branching new substructures in the tree, such as swapping nodes, insertion, deletion. This functionality allows us to easily describe the templates that the dialogue relations are based on. Based on our definition of the curiosity effect, the order of identified tagged relations is modified, resulting in an altered discourse. Our definition of curiosity translates into moving the last relation in the annotated subtree to the first position. Also, if there is a Topicalization structure in the tagged subtree, which according to the definition of Topicalization, highlights the constituent of the current discourse – this is moved to precede the constituent. The algorithm only affects the subtree annotated by the author, and therefore, the order of the rest of discourse relations is preserved based on the discourse. For illustration in Fig. 1.c, the highlighted constituents are considered to be the beginning of the curiosity driven effect.

Worked Example

The Personal Narrative

We illustrate our approach through a detailed example focusing on personal stories, narrated from a first-person point of view (Fig. 1.a). The personal story for this example is from the point of view of *Tahani*, one of the main characters in *The Good Place* TV series[2].

"I am Tahani Al-Jamil [S1]. I require no introduction [S2] ***as*** *everybody knows me [S3]* ***because*** *I am a famous British philanthropist [S4], and I am a model [S5]. I work with the most respected agencies [S6]. Now my parents, they are not British citizens [S7]. My father is from India [S8] and my mum comes from Pakistan [S9]. They had another child [S10]* ***because*** *I was not good enough for them [S11].* ***Anyway****, I have a younger sister, Kamilah [S12].* ***With respect to*** *Kamilah, everybody prefers her [S13]. Everybody likes her [S14]. We both grew up in England [S15], and we had the best education [S16].* ***Regarding*** *my education, I went to Oxford [S17] and I attended Sorbonne [S18]. My sister was having a party [S19].* ***Although*** *I was her sister [S20], I wasn't invited to the party [S21],* ***but*** *I went there anyway [S22].* ***Concerning*** *my sister, she had ordered a huge replica of her made of gold [S23].* ***Because*** *I was so angry on her [S24], I wanted to destroy the statue [S25].* ***As soon as*** *I started hitting the statue [S26], it started to be unbalanced [S27], and it fell over me [S28].* ***Since*** *Kamilah's statue was so heavy [S29], it squished me [S30],* ***then*** *it killed me [S31].* ***Although*** *I have had an amazing life [S32], the end of my life wasn't as great [S33].* ***As for*** *how my death went [S34], it happened quickly [S35].* ***In fact****, it was a sudden event [S36] and it was in front of everybody [S37].* ***After*** *my death, I got to the Good Place [S38]."*

Story Representation

Through the narrative representation process (Fig. 1.b), we extract the possible sequences of events according to the de-

[2]*The Good Place* (2016–2020). Fremulon, 3 Arts Entertainment, Universal Television, 19 September

fined relations. To represent narrative events, we first identify the statements based on TRMs defined in our model; and through the categories that they belong to, we outline the relations between the connected statements.

Table 1 illustrates the representation of the extracted statements for the second paragraph. These relations obtained from narrative representation construct the plot, currently through the authoring process (Fig. 1.c). We only include the statements included in this example plot that is fed into our preliminary system, obtaining the dialogue in Fig. 8. Story events are selected based on our assumption that, in personal stories, the temporal order of events is the same as the order of discourse.

In the following, by treating the groups of relations within the plot, we explain our rationale based on our model. Fig. 8 provides a complete example of a generated dialogue based on the defined plot. Exchanges and Moves are annotated corresponding to this plot's relations with labels *a* to *m*.

a	$ARG(PRELIM(S3), S4)$
b	$REFORM(TOPIC(S7), S10, COMM(S12))$
c	$ARG(PRELIM(S10), S11)$
d	$REFORM(TOPIC(S13), S14,$ $COMM(CONJ(S15, S16)))$
e	$CONJ(S17, S18)$
f	$COUNTARG(PRELIM(S20),$ $COUNTARG(PRELIM(S21), S22))$
g	$TOPIC(S23)$
h	$SUCCESSION(CONJ(S26, S27))$
i	$ARG(S29, PRELIM(S30))$
j	$SUCCESSION(CONJ(S30, S31f))$
k	$COUNTARG(PRELIM(S32), S33)$
l	$REFORM(TOPIC(S34), S35, COMM(S36))$
m	$SUCCESSION(S38)$

Table 1: Sequence of Relations. (Labels on the left hand side match labels in Fig. 8).

Conjunction In the current example, in Fig. 8.e, the move consists of the Conjunction relation itself; contrary to Fig. 8.h and Fig. 8.j, where the move containing one or both clauses is part of an exchange. From a structural point of view, in Fig. 8.e, comes as a completion of the current parent intervention, in accordance to the rules of dialogue formation.

Regarding the Fig. 8.h and Fig. 8.j, the conjunction move is expressed by generating one of the clauses and the connective. This move comes as a reply from the second interlocutor. By using the conjunction move in Fig. 8.j, the second interlocutor reveals their curiosity.

Succession It shows further development of the narrative and, similarly to the conjunction, can be used as a closing of the parent move, after a sequence of exchanges, as Fig. 8.m. In Fig. 8.j and Fig. 8.h, *M_SUCCESSION* takes part of an exchange, narrating the progression of the events from the point of view of the first interlocutor.

Argument In this plot are three Argument-based relations (*ARG* in Table 1) being transposed into dialogue exchanges in Fig. 8.a, .c and .i. Next, we are discussing about the first relation of the plot: *ARG(PRELIM(S3),S4)* (8.a in the dialogue). Based on its definition, we have two options for generating this part of *monologue*, as seen below:

- ARG(PRELIM(S3), S4) is *[Everybody knows me] Argument_TM [I am a British philanthropist]*
- ARG(S4, PRELIM(S3)) is *[I am a British philanthropist] Argument_TM [Everybody knows me]*

The *dialogue* is constructed by adding replies corresponding to the second interlocutor. For the Argument category, there are various types of replies that can be generated. Within the dialogue generation process, we consider each case, combining it with the produced monologues. One generated solution is presented in Fig. 8.a: in this particular case, the reply consists of the actual argument by the second interlocutor, the M_{ARG}.

Reformulation A Reformulation exchange (Fig. 8.b, .d, .l in the dialogue) incorporates three text relation-based moves M_TOPIC, M_REFORM and M_COMM, to which the replies are added. Regarding the overall effect this relation has, it may be looked at from the point of view of an interlocutor emphasising something that is happening within the plot, the discourse revolves around the topic. Out of the exchanges based on this relation, we start by discussing the exchange generated in Fig. 8.b.

This relation is equivalent to the following *monologue*, where the first and second interlocutors are denoted by INT_1 and INT_2 respectively:

INT_1: TOPIC_TM [They are not British citizens.]

INT_1: REFORM_TM [They had another child.]

INT_1: [I have a younger sister, Kamilah.]

By applying the reply strategies defined for this category, one possible outcome is to obtain the following instance:

INT_2: But they live in the UK, right?

INT_1: Yes, they live in Great Britain.

Regarding the Reformulation exchange in Fig. 8.l, the *wrap-up* can have different interpretations; currently, we use it to express the understanding of the information transmitted in the current exchange; since M_TOPIC is there to highlight the dislocated constituent and M_COMM brings in added commentary on the issue, M_Reform conveys the actual information.

Counterargument The Counterargument is similar to Argument, but it expresses an adversarial position. For instance, in our example Fig. 8.k, Tahani admits that her life was amazing, but the second interlocutor highlights a counterexample. Another more complex example can be found in Fig. 8.i where the pattern is recursively continued to produce a stronger effect of Counterargument, i.e. by Fig. 8.f*.

Curiosity Effect (Fig. 1.c) In this example, curiosity was applied to the second move within the dialogue Exchange: it is defined by generating of the last relation in that block (part) at the beginning, as well as generating the Topicalization before that (Table 2). These constructions create curiosity by describing specific moments of change.

g	$TOPIC(S23)$
j	$SUCCESSION(CONJ(S30, S31))$
f	$COUNTARG(PRELIM(S20),$
	$COUNTARG(PRELIM(S21), S22))$
h	$SUCCESSION(CONJ(S26, S27))$
i	$ARG(S29, PRELIM(S30))$

Table 2: Sequence of Relations that are part of M_Curiosity. (Labels on the left hand side match labels in Fig. 8).

Perspectives and Future Work

In this paper, we have described a novel method and a first prototype for generating rich dialogue structures from a formalised first-person narrative description. For this proof-of-concept system, the input is currently user-edited, though we are already working on automatising and generalising some of its features, such as implementing heuristics for selecting which narrative events are good candidates for dramatic discourse manipulation, and mapping its structure to the event-based representation of the plot in use in a typical interactive storytelling system. The system will be compatible to use with a narrative generation system and NLP libraries which will provide an easier integration with interactive storytelling simulation-based applications with the ability to rely on dynamically generated dialogues between characters as another means for adapting to user interaction. A further direction to be explored is the extension of the dialogue structure building blocks, by integrating models of misunderstandings.

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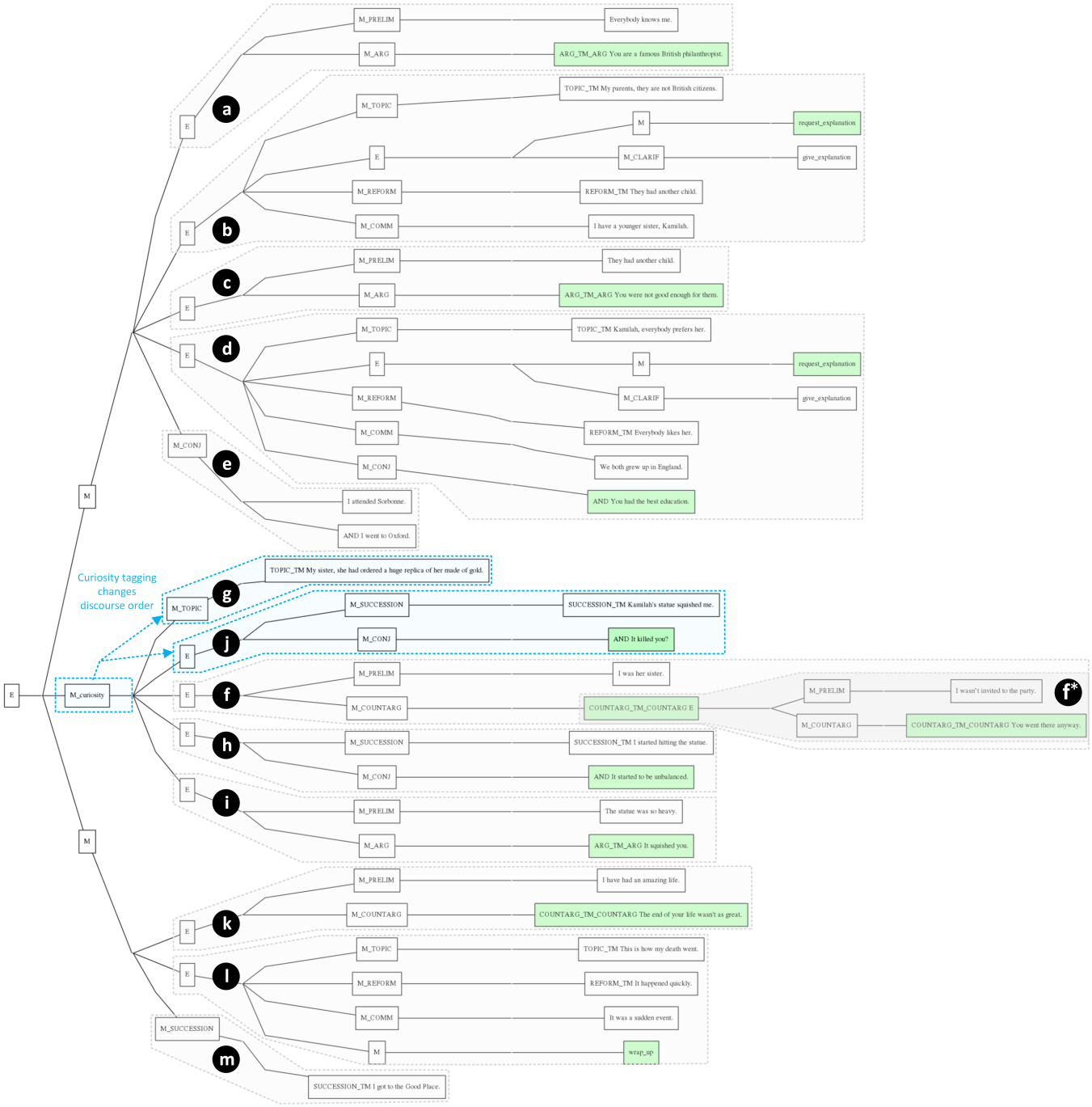

Figure 8: Interlocutor 1 (INT_1) – white background; Interlocutor 2 (INT_2) – green background; Please refer to the main text for full details.

Instantiated sequence of utterances from the above dialogue structure: INT_1: Everybody knows me. INT_2: As you are a famous British philanthropist. INT_1: As for my parents, they are not British citizens. INT_2: But they live in the UK, right? INT_1: Yes, they live in Great Britain. INT_1: Anyway, they had another child. INT_1: I have a younger sister, Kamilah. INT_1: They had another child. INT_2: As you were not good enough for them. INT_1: Kamilah, everybody prefers her. INT_2: Kamilah? INT_1: Kamilah, my sister. INT_1: Basically, everybody likes her. INT_1: We both grew up in England. INT_2: And you had the best education. INT_1: I attended Sorbonne. INT_1: And I went to Oxford. INT_1: My sister, she had ordered a huge replica of her made of gold. INT_1: At some point Kamilah's statue squished me. INT_2: And it killed you? INT_1: I was her sister. INT_1: However, I wasn't invited to the party. INT_2: But you went there anyway. INT_1: Then I started hitting the statue. INT_2: And it started to be unbalanced. INT_1: The statue was so heavy. INT_2: So it squished you. INT_1: I have had an amazing life. INT_2: Although the end of your life wasn't as great. INT_1: Regarding the end, this is how my death went. INT_1: Basically, it happened quickly. INT_1: It was a sudden event. INT_2: Did you really die because of a statue? INT_1: Then I got to the Good Place.