I Rolled a One and I'm Dead: Person Reference Across the Multiple Worlds of Table-Top Roleplaying Games

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Summary/Abstract

Theories of reference to person are generally considered to name their target in some way. With few exceptions, a proper name is assumed to refer to the entity that bears the name, and a deictic form to the entity it points to. A problem arises, however, when we take into account examples such as Example 1 below, taken from transcriptions of natural speech:

Example 1:
Phil: Okay so after Sean was Jacob. Jacob did you do anything?
Jake: **I'm** moving thirty feet
Jake: Cause **I'm** gonna turn- oh, actually
Jake: Actually, with **my** tumble **I** have to beat its bloody base attack don't **I**?
Sam: I'm going there, I'm gonna xxx like thirty feet closer

In this example, although the speaker does not change, the entity referred to by "I" in the bold are not the same entity, and not the person speaking. The first two instances refer to a fictional character that Jake portrays, the "my" refers to the game-rule-based stats of that character, and the final two "I's" refer to Jake as himself playing the game in combination with those stats. A similar problem arises in other referring expressions, such as the proper names in Example 2. In this example, "Gaz" refers to the fictional character portrayed by Gaz, and "Pete" refers to either Pete himself (being addressed by other participants) or his character (flame striking in the final utterance):

Example 2:
Pete: and I'll cast flame strike on him, and yes I know he doesn't cop fire damage
Phil: [[he's not immune to fire Pete
Sean: so you're gonna hit one of these guys @[[@
Gaz: I'll do it Pete
Sean: I'm sure Gaz'll dodge
Jake: do it on Gaz
Pete: No I'll just move up
Jake: No Pete don't go through there
Jake: not there either, ah. [Pete, Pete's flame striking

In this thesis, I investigate person reference across multiple worlds such as those in these examples using collected data from table-top roleplaying games. These games present an interesting challenge to traditional reference theories due to their constant shift in referred entities with little or no shift in reference terms. During the course of this study, I test several theories of reference, both general and specific, by applying them to the collected data. The tested theories include cognitive theories such as mental spaces, theories of reference such as Rauh's seven types of deixis (Rauh, 1983), and theories of specific types of reference such as anaphoric accessibility and Jackendoff's (1992) statue rule. Complex theories such as Rauh's, in which deixis is split into various forms including allegorical, egocentric but non-present and other-centric types, are often less useful in explaining multiple world reference than more simple theories. The tests are a way to find and overcome the shortcomings of existing theories, and to take their useful elements for incorporation into the final model.

Overall, the shortcomings of these theories fit into three main themes. First, as mentioned above, theories of referring expressions assume they refer only to one entity in any given situation. A name will refer only to its bearer and only the bearer that is contextually appropriate, such as the bearer that is salient or present at the discourse event. Further, these theories place references only within their self-contained space, such as the real world, or a fictional world in a novel, without shift in or out. This also causes a run-on issue that

elements of context from one world are not used to aid interpretation of reference to another. Finally, these theories may explain only a single part of reference, for example, why certain forms can be used, or how certain interpretations are possible, but not always both.

The shortcomings are overcome by way of adapting some of the more successful elements of several theories to create a new model of reference for multiple-world contexts. This new model, heavily based on mental spaces (Fauconnier, 1981), conceptual blends (Fauconnier & Turner, 1998), cognitive domains (Sweetser & Fauconnier, 1996) and Bühler's deixis (1934), introduces a fourth element to the immediate deictic context- that of the active mental space. This is a somewhat minor adjustment to the basic idea of deixis, that deictic reference is determined by the place, time and person of an utterance that takes activity and intent into account. This adjustment allows for a shift in world focus without losing the immediate context used to determine a referent.

The new model is presented in two parts. First, a process of interpretation of reference forms is provided as a step by step process. The second part concerns later stages of interpretation and focuses on the worlds available for reference themselves. The available worlds from the data are established and their use described in relation to the theories that make up the final model. Cognitive domains, for example, are found to restrict the worlds that are available for reference during the course of a game event, as well as what worlds may require more distinct discourse marking when a world change is required. The spaces available for reference are a combination of distinct mental spaces, such as the fictional world, non-diegetic spaces such as joke spaces and rules, or combinations of spaces and entities in the form of conceptual blends, including character/player blends or joke "versions" of a character. These blends allow the creation of entities that exists outside the baseline worlds found in the data, and for reference to several entities across multiple worlds and spaces within a single discourse event. The final form of the model is tested and discussed based on a sample of data.

In consolidating several previous theories, the new model not only adds to the coverage of previous theories, but also to the explanation of reference's pragmatic function in any situation that requires several active mental spaces in a discourse event including pretend play, sports commentary, recounting narrative and direction giving. The model may also provide insight into the way that imagination and language interact within the mind.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed:

Print Name: Catherine Leanne Cook

Date: 9 May, 2017

To Lorelei

Don’t let anyone tell you your dreams are a waste,

be the person you want to be

and to Gary Gygax

You gave us a chance to be Monks, Sorcerers and Gnomes

and we are forever grateful

Acknowledgements

This thesis is complete due to the support, wisdom and encouragement of a great many people. First and foremost, I want to express my sincere gratitude to Drs Simon Musgrave and Alice Gaby, my supervisors, who helped walk me through the journey of this thesis and to make the most of the ideas in my head. I also wish to thank Dr Howie Manns, although only a supervisor for a short time, his change of perspective was invaluable. My thanks, too, to Professor Kate Burridge, Professor Farzad Sharifian and my fellow students and members of the Linguistics department for their support, friendship and patience throughout my candidature. I acknowledge the financial support provided to me by Monash Arts Research Graduate School write-up grant and the Edith Lahr Bequest fund in the final stages of my candidature.

I must also thank Vic Wertz of Paizo publishing to allow me to stretch the definition of "campaign journal" to include this thesis, and therefore allow me to use Pathfinder elements for the figures herein. I also thank Steve Jackson, who personally replied with his permission to use GURPs related information.

Finally, I could also not have completed this mammoth task without the support of my parents Rod and Edweena, and my brother Andrew, who may not understand my work, but were still supportive encouraging. I thank my participants for allowing me into their play, and to Dr Bryce Feltis, who introduced me to roleplaying, lent me an ear when I needed it and kept me going when I thought I was ready to give in.

Thank you all, I could not have done this without you.

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Transcription Conventions & Code Numbers

Symbol	Gloss
@	Laughter (one symbol per particle)
(laugh)	Laughter longer than 1 second
(Pause)	Pause longer than 1 second
…	Pause under 1 second
<R>	Read from text
((X))	Transcription notes
[, [[, [[[	Overlap
[X]	Omitted for privacy
Phil:	Speaker
ALL:	Multiple speakers
?:	Unknown speaker
xxx	Inaudible segment
<X>	Uncertain transcription
=	Lengthened segment
<teary>	Speaking as if crying
<sings ((song))>	Singing a particular song
<sings>	Singing
((Dice))	Sound of dice rolling
Underline	Emphasis

Chapter 1 Introduction

Most reference theories assume that references to person name their target in some way. With few exceptions, a proper name is assumed to refer to the entity that bears the name, and a deictic form to the entity it points to. A problem arises, however, when we take into account examples such as Example 1.1 below, taken from transcriptions of natural speech:

Example 1.1:

1. **Phil:** Okay so after Sean was Jacob. Jacob did you do anything?
2. **Jake: I'm** moving thirty feet
3. **Jake:** Cause **I'm** gonna turn- oh, actually
4. **Jake:** Actually, with **my** tumble **I** have to beat its bloody base attack don't **I**?
5. **Sam:** I'm going there, I'm gonna xxx like thirty feet closer

Session B1, Segment 9

In this example, although the speaker does not change, the entity referred to by *I* in the bold are not the same entity, and not the person speaking. The first two instances refer to a fictional character that Jake portrays, the *my* refers to the game-rule-based stats of that character, and the final two *I*'s refer to Jake as himself playing the game in combination with those stats. A similar problem arises in other referring expressions, such as the proper names in Example 1.2. In this example, *Gaz* refers to the fictional character portrayed by Gaz, and *Pete* refers to either Pete himself (being addressed by other participants) or his character (flame striking in the final utterance):

Example 1.2:

1. **Pete:** and I'll cast flame strike on him, and yes I know he doesn't cop fire damage
2. **Phil:** [[he's not immune to fire Pete
3. **Sean:** so you're gonna hit one of these guys @[[@
4. **Gaz:** I'll do it Pete
5. **Sean:** I'm sure Gaz'll dodge
6. **Jake:** do it on Gaz
7. **Pete:** No I'll just move up
8. **Jake:** No Pete don't go through there
9. **Jake:** not there either, ah. [Pete, Pete's flame striking

Session B2, Segment 13

In this study, I test existing reference theories for their ability to account for this kind of non-canonical reference. By using data from table-top roleplaying games, I investigate the way imaginary context affects the use and interpretation of references to person and adapt

several existing theories into a cohesive model for cross-world reference. The analysis and resulting model will have applications to reference theory in general, particularly to deictic reference, as well as studies of play and ludology. The overarching contribution of this work is the provision of evidence that reference is a pragmatic phenomenon, with context dictating the use and interpretation of reference more than any direct link between referring expression and referent.

1.1 Statement of the Problem

The referring expressions used in roleplaying games have the ability to differentiate multiple entities over multiple worlds and contexts, but the terms are the same whether talking about the real world or any other available world. The working hypothesis for this project is that reference use must take into account the active mental or world space to pick out a unique referent (see Chapters 7-9). These worlds and spaces are dictated by the active cognitive domain, which is in turn determined by the discourse event.

Roleplaying games (RPGs) are a popular style of game both on a computer or console, or using pen and paper (Table-top RPGs, or TTRPGs), which are the source of data for this study. In these games, players assume the role of a fictional character (or characters) in a fictional world. In TTRPGs, all action and plot of the game and its story are performed verbally. TTRPGs are played in groups, and one participant, the Game Master (GM), controls the world and events in the story. The other participants in a group (usually between 3 and 7 people) control individual characters. In many cases, this is a character they have created themselves based on the constraints of the game.

An example of TTRPG gameplay is presented below taken from Group 1 playing the Pathfinder Roleplaying Game (Schneider, 2009):

Example 1.3

1. **Gaz:** oh that's Jacob!
2. **Phil:** no that's the monster
3. **Gaz:** that's the monster. Once again.
4. **Jacob:** What does he look like by the way?
5. **Gaz:** he looks like some dude now stop playing with your ball
6. **Sean:** yeah... human
7. **Jacob:** he looks human?
8. **Sean:** yeah
9. **[omitted]**
10. **Gaz:** [which one are you?
11. **Phil:** I'm the one with the sword pointing above his head
12. **Pete:** <R>each round there are from [your turn it strikes the opponent you designate starting with one attack in the round the spell is cast and continuing each round [thereafter, on your turn</R>
13. **[omitted]**
14. **Sean:** no, no that's right so it can't you can't do anything special with the sword you can just keep smacking Sam with it
15. **Sam:** yep
16. **Gaz:** oi, so you got four days off [now
17. **Pete:** [you get one save don't you not every [[round?
18. **Sean:** [[y=eah I don't think so it's just an attack roll
19. **Phil:** I got Monday
20. **Sam:** No, it's not saving throw
21. **Gaz:** four day weekend. [You people you people

Session B2 Segment 18, irrelevant data removed

In the example above, the group's seven players are on the verge of a fictional battle against a monster. This group uses an on-table grid and miniature figurines (minis) that represent the relative position of the characters in regards to each other and any monsters they are fighting. An image of a typical play space is given below in Figure 1.1[1]. The scenario in the example is typical of a game, with a real-world conversation occurring at the same time as gameplay and narration of fictional elements.

[1] No pictures of the group's real game space were available. The game space pictured below was from one of my own games and was indicated to be equivalent to Group 1's play space by a mutual member.

Figure 1.1 A roleplaying game space equivalent to Group 1 taken during an unrelated game. 1 indicates the miniature figures used to represent characters. 2 indicates the scale map.[2]

[2] For the printed version of this thesis, a colour image is provided on the accompanying CD.

The example shows several interesting linguistic phenomena relating to reference. The example begins with Gaz proclaiming that a miniature, a small figurine (1 in Figure 1.1) set on a gridded mat (2 in Figure 1.1) that represents an entity in the fictional world at a 1 inch to 5 feet scale, is representing Jacob's character. Gaz does this using a demonstrative *that* to make an identity statement about the miniature. Ignoring, for the moment, that Gaz misidentifies the miniature's represented entity, the statement is still problematic. Gaz states that the miniature figure is Jacob, but the figure is not Jacob, nor does it represent him. Rather, it represents the character Jacob is playing. As representations usually share the name of the entity they represent (Jackendoff, 1992), Gaz should need to refer to the miniature as "Jacob's character". In Lines 2 and 3, it is established that the miniature actually represents the monster, and the reference is used as expected. There is a difference, then, in the use of reference between represented entities related to players and those that are non-player characters. In Line 4, Jacob asks what the monster looks like, indicating that the representation is an arbitrary link, rather than an iconic one.

The first four lines in the example have already contained two concurrent, but separate, active worlds; the representative mat and the fictional world in which the plot of the story takes place. Line 5 brings in another world as well as a different facet of the fictional world. "He looks like some dude" continues to refer to the monster in the fictional world, but it is not the same version of the fictional monster as the one represented by the miniatures and described by Sean in the following line. The version Gaz describes as "some dude" is a joke and is referred to and has different narrative functions to its non-joke counterpart. The second part of the line, where Gaz tells Jacob to "stop playing with [his] ball" moves to a joke version of the real world and is unrelated to the game. Gaz does not make an explicit indication that he has changed his target world (i.e. He does not state "the real you" or "out of character") but the change occurs none-the-less. Sean pulls the active world back to the

fictional in Line 6 when he describes the monster as human, which Jacob confirms with a question. This confirmation established the description as part of the shared fictional world the gameplay creates among participants (Cook, 2012).

Gaz returns to discussing miniatures in Line 10, as which of the miniatures represents Phil, to which Phil replies with a description of the miniature that represents his character. Gaz uses a second person form in a similar way to his use of *Jacob* earlier, in that Phil is not being represented by the miniature. Phil then mixes his references in the following line. His identity statement uses a first person pronoun, but his description of the miniature proper uses a third person pronoun ("his sword above his head"). This may indicate a change in the status of the cognitive link between character and miniature when the miniature is treated as an independent object rather than a representation. In the example, the miniatures are all discussed as representations, but are not used to dual refer to the entity they represent. As we will see, the standard use of a miniature is a means of referral to the character as well as representing their relative position from other characters, opponents and landscape features.

Line 12 begins a discussion of the rules. Pete is reading a rule from the spell *spiritual weapon* (Schneider, 2009). The read segment contains jargon terms that are related to the passage of time in the game and an indefinite second person. It also operates in a world or space that relates to the fictional world, but is not part of that world. A *round* refers to a period of 6 seconds in the fictional world in which a character can take an action. In the fictional world, each character acts simultaneously. In reality, this is simulated by initiative and turns. Each player rolls to determine the order of their character's actions and plays their turn in sequence. This fictional six seconds can, as a result, take hours of real time to occur, while several days or months in the fictional world can take minutes of real time. The time flow, and therefore reference to time, is based on the activity and the active world.

The person reference in the read segment is typical of the rulebooks. The book uses an indefinite you to refer to any given player or any given character depending on the context in which it is used. There is no indication whether the player or character is being discussed except surrounding lexicon. “Your turn” may refer to both the player and character combined, while the *you* in “opponent you designate” is almost certainly referring to a player, as the action of designating will come from them.

The rule discussion continues in Line 14, where Sean starts discussing what a spell is able to do with the indefinite second person, discussing the spell in terms of rules, but finishing with a proper name. The proper name *Sam* should refer to Sam himself, but does not. The rule indicates that the magical sword should be able to hit ‘Sam’, but it does not exist in the same world as Sam. The proper name instead refers to Sam’s character in the fictional world, a world in which Sam does not exist and thus his name should not be able to designate anything.

In Line 16, the active world of the group splits, so that some participants maintain the fictional world while others more to the real. Gaz asks Phil about his time off, while Pete and Sean continue their discussion of the rules. The worlds do not cross and the conversations are not confused. The two conversations occur concurrently through the rest of the example.

The example shows the complexity of reference in table top roleplaying games. The different worlds used during play and the limited number of ways of expressing those worlds raises some questions that will be answered throughout this thesis.

To allow for an in-depth analysis of multi-world reference and the creation of a complete model, some topics and analysis paths needed to be neglected for reasons of space. For instance, I have chosen not to perform a full statistical analysis of the use of reference in the data in order to focus on the qualitative aspects of the analysis. I also restricted the kinds of reference discussed. As a result, this thesis focuses on reference to person, and not to space

and time. Temporal deixis in roleplaying is complex, and draws on aspects of both world context and activity. It was not possible to do justice to these topics within this thesis, although many of the concepts discussed for person reference apply directly to space. These two topics will be explored in future research.

The constraints of this thesis likewise do not allow for the detailed consideration of tangentially related philosophical and metaphysical concerns. For example, the term *real* is used here to refer to the physical realm in which we exist. I treat the real world as singular and shared between all participants for ease of discussion of the various worlds found in the data. It is not the concern of this thesis to define reality in any meaningful philosophical way, nor will I try to refute idea of reality as being specific to an individual or non-existent (Kant, 1781/2003).

1.2 Primary Research Questions

1.2.1 What reference forms are used for entities in different worlds?

The first research question of this thesis relates to the kinds of reference used in multiple-world contexts. Specifically, I will investigate how person-referring expressions are used and interpreted when a player's character is referred to using the terms normally associated with the player. This includes determining if the presence of several worlds changes reference accessibility, whether there are limits to the way certain terms are used or whether the interlocutors mark the referred entity in some way.

This question leads to an investigation of the 'rules' of use for these referring expressions, such as whether shifting between entities must take specific steps, or whether the rules for referring to fictional events or reality are somehow different.

As the focus of this thesis, this question is addressed throughout, culminating in a model for interpreting and using reference in Chapter 7. The following questions, without which the first cannot be answered, are addressed across Chapters 5-8.

As I have been a TTRPG player for some time, my hypothesis for the first research question is based partly on prior experience. At the surface level, reference in TTRPGs is not altogether different from everyday reference, and the terms used are not specific to the game. The reference terms used for characters are the same as those used for the people playing them, as are the expressions used for other associated objects and entities.

The key to multiple-world referent interpretation is the context of the utterance. The context will likely be textual in cases of narrative, and based on the active domain, mental space or world in other cases. Discourse markers or narrative introductions ("last time we were here" or "Alright! The Dwarf looks you in the eye and says…") are used where there is a dramatic shift in world or timeframe, while unmarked shifts are sufficient for more immediate situations such as passing food on the table, or where the entities in the shift are highly inter-accessible. Where the referent is potentially ambiguous, participants use more explicit markers (including statements of "out of character"), and unclear reference is queried

1.2.2 Can existing reference theories explain this phenomenon?

The primary focus of Chapter 5 of this thesis is the testing of existing reference theories against TTRPG data to determine if the phenomenon can be explained. The theories tested cover a wide range of theories of deixis, proper names and anaphora.

The expected outcome of the theory tests is that, because there has been little to no research on multiple-context speech, there will not be one theory that covers all elements required by the data. The theories tested can therefore be brought together to create a new model to explain multiple-world reference. This new model uses Mental Space theory as a

part of the overall situational context. Other theories will be used to explain specific entities or situations being referred to, including Conceptual Blending Theory (Fauconnier & Turner, 1998) or Cognitive Domains (Sweetser & Fauconnier, 1996). Ideally, the final model will explain how multiple-world reference is possible, how it is interpreted and how certain worlds and entities are related in the minds of participants.

1.2.3 What would a theory require to account for multiple-world reference?

The theories tested in Chapter 5 fall short of an explanation of reference in TTRPGs, an so I investigate what those theories would need to change, or what elements of those theories could be adapted, to create a model of multiple-world reference. The model would also need to explain reference use in similar contexts, including theatre and video gaming, and, if possible, be applicable to reference in general.

Chapter 6 of this thesis primarily addresses the shortcomings of existing theories and the requirements of a new model. It takes the results of the Chapter 5 and explores the successful elements of tested theories, bringing them together to create a model for TTRPG reference based primarily around Mental Space Theory (Fauconnier, 1981).

1.2.4 What are the applications of this new model?

The final question asked in this study is how the model created in Chapters 7 and 8 is applied, and whether that application has any lasting implications for our understanding of reference. Chapter 9 addresses this issue by first applying the model directly to a ten-minute data sample to illustrate the model's potential use in various discourse contexts. The broader implications of the model are discussed in the concluding chapter.

The model primarily contributes to the understanding of what is part of the situational (not just indexical) context. The interpretive context of a deictic term such as *I* or *you* is dependent on the worlds available in the active domain; the intended world must be taken

into account as part of the deictic context. Proper names, too, require this active world knowledge for interpretation in this model. This means that proper names are context dependent in a similar way to deictic terms. This is turn may mean that few, if any, referential terms can be considered rigid designators.

1.3 Contributions

This study has the potential to change the way contextual reference, the role of pragmatics in reference, is understood. The establishment of a situational context must move beyond space, time and speaker in order to interpret reference in situations with multiple active worlds, including roleplaying. Such uses extend to other forms of reference, including other fictional uses, as well as reference use in recounting past events, future plans, self-projection (putting yourself in someone else's shoes) or giving directions.

This study consolidates several reference theories into one coherent whole, thus somewhat simplifying the field. In doing so, it avoids the limitations of each separate reference theory, allowing us to move onto more in-depth studies on how reference is managed and interpreted and why certain uses are possible, rather than concentrating on what is referred to and how to label certain types of reference.

Further to this thesis's contribution to the field of reference, this thesis represents one of few (if any) works that are aimed at the study of adult pretend play. Studies have been performed on the language of children's pretend play (e.g. Ariel, 1984; Corrigan, 1982; Howe, Abuhatoum, & Chang-Kredl, 2014; Melzer & Palermo, 2016), but where there are studies of play in adults, they focus on the sociology (Fine, 1983), education (e.g Stevens, 2015) or game immersion (Hou, Nam, Peng, & Lee, 2012). It is hoped that this research will add a new dimension to research into the adult imagination.

1.4 Glossaries and Accompanying Files

The tables overleaf provide glossaries of terms used in this thesis, each of which will be justified in chapter 2.

Table 1.1 Main Glossary

Term	Gloss
Entity	An object, person, or concept that is able to be referred to. The entities in this thesis are people or objects that can be referred to using person forms
World Matrix	A set of worlds, spaces and blends in a particular.
Index	The index of a term is between its sense and reference. It is the type of object in the world the sense may pertain to, and leads to the referent
Referent	The intended target of a sign
Origo	The actual situation of the utterance; the unaltered place the utterance is spoken, time it is spoken in and person speaking or hearing it
Ground	The deictic centre that is projectable to different worlds or spaces. The here, now and ego of a world outside the true origo
World	A world, either real or imagined, stands on its own with its own rules and inhabitants.
Space	A space is an imagined subsidiary to a world that is usually an adjustment to its base world
Diegetic space	Diegetic spaces are those that are integrated into and are able to affect the narrative, and in the case of imagined worlds, are able to make changes to the worlds themselves
Non-diegetic space	A non-diegetic space is, unlike a diegetic space, unable to progress the narrative or affect the world it is attached to
Representation	Used in terms of one object or entity being used to portray another, particularly as an analogy of an entity in a different world.

Table 1.2 Gaming Glossary

Term	Gloss
Ac	Armour class. A numerical value that represents how hard a character is to hit
Minis	Small figurines used to represent characters. The mat and figurines are at a 1 inch to 5 foot scale
GM	Game master, participant in the game who describes the world, creates the plot and narrative and controls NPCs
Party	The group of fictional characters controlled by the players.
NPC	Non-player character. Inhabitants of the fictional world not controlled by players.
D(x)	A dice where x indicates the number of sides. A d20 is a 20 sided dice

Included with this thesis is a card that provides a short glossary and coding number reference without requiring referral to the preamble of the thesis. An abridged version of the glossary provided above is also included on the reverse of the card.

The thesis is supported by four accompanying files: an entity salience timeline (EntityFlow.html), a data sample segment (DataSample.pdf, also found in Appendix 1), an interactive diagram of the final model (ModelDetail.ppsx), and an interactive walkthrough of a data segment which includes model and blend diagrams (ModelWalkthough.ppsx). Readers are advised to consult these files in parallel with the main text, as directed.

1.5 Thesis Structure

This thesis will be structured as follows: Following this introduction, a review of relevant literature will set the stage for the discussion that follows. The review will focus on establishing a way of talking about reference using Frege (1892) and Peirce (1883/1991) as a basis, and on providing an overview of the reference literature that led to the theories tested in Chapter 5.

Having established a basis for the study, I will move to my methodology. This includes a discussion of data choice and collection as well as the analysis of the data. A brief overview of the theory-testing methodology is also included.

Chapter 4 provides a brief description of the use of reference in a table top roleplaying game. Proper names are used to frame the discussion, showing that proper names have more in common with freer deictic terms than non-deictic indexicals like definite descriptions.

Chapter 5 consists of a test of current theories that directly relate to context-dependent, fictional and counter-reality reference. The theories tested were chosen based on their potential to fit the data, and are grouped by theme. The results of this chapter are presented in Chapter 6.

The final chapters of the thesis discuss the creation and use of the new model. I begin by outlining the model as a whole, exploring the process of interpretation of reference in particular. This is followed by a discussion of worlds and blending in table top data. The final chapter applies the model to a section of data, discussing various aspects of reference use. The thesis concludes with discussion of further research and implications.

Having provided an outline of the thesis and a basic set of assumptions and definitions, the following chapter will review the literature on reference and worlds.

Chapter 2 Background and Literature

2.1 Introduction

This chapter begins with an outline of current research into reference. The basic terms for use in this study will be established and, in cases where there are several schools of thought on an issue, the foundational theories used for my research will be discussed. The discussion will include literature about worlds of various kinds.

2.2 What is Reference? Signs, Sense and Reference

The fundamental basis of this study is the use of referent. In order to adequately discuss reference behaviour, the terms of the discussion and definitions of certain key ideas must be established, beginning with how reference itself is defined.

In simple terms, reference is the way in which a sign points out or indicates a target object, person or concept (Bühler, 1934; Ehlich, 1982). A sign can be a word, gesture or object that represents another object which may be a sign itself (Peirce, 1883/1991). In order to be considered a sign, the sign must be "…connected with its object so that it is possible to reason from the sign to the thing" (Peirce, 1883/1991, p. 142). Should there be no connection between a sign and its object, the sign does not refer. It is usually the case that the link between the sign and its signified is direct; a name to its bearer, smoke to the fire that created it, or a culturally defined symbol such as a red octagon for stop. In the data under consideration in this thesis, however, the connection between sign and signified is far more indirect.

The connection between a sign and the object signified can be of one of three types. First, an icon, is a visual representation of something that may or may not have its own physical form, such as a pencil mark representing a straight line as an icon (Peirce, 1883/1991). The second type of sign, a symbol, is a sign with an arbitrary link to the object it

represents. Words are examples of this type of sign. The final type, an index, is a type of sign that has a direct relationship with an object. This may be a causal connection (smoke and fire), a visual connection (a picture of a woman in a dress representing female toilets) or an auditory connection ('moo' to represent a cow).

Two further distinctions as to how a sign signifies were offered by Bühler (1934). He distinguished between pointing, which is the function of deictic or indexical signs (or "field signs" (Bühler, 1934)), and objective meaning, the function of "conceptual signs" (Bühler, 1934, p. 40). Conceptual signs are non-indexical terms that signify solely based on their lexical content, while deictic or indexical forms rely on the utterance's context. Field signs are the main focus of this study.

The way signs refer (as opposed to signify) has been widely discussed by scholars in several fields. Ariel (1988) considered referring expressions (signs that pick out an entity) to be "…no more than guidelines for retrieval" (Ariel, 1988, p. 68), while Bach (1989) claimed that the signified entity of a noun phrase is defined based on properties. The explanation of reference that I will use for this study comes from Frege (1892). Frege contended that a sign has *a sense* and *a referent* with an element of individual conception in its meaning:

> A [sign] (…) expresses its sense, refers to or designates its referents. By means of a sign we express its sense and designate its referent (Frege, 1892, p. 214)

The sense of a term is essentially the dictionary definition or meaning. The sense is shared by all speakers of a language, and is generally unchanging. The referent, on the other hand, is the entity or object a speaker intends a sign to signify. When a sign is used, the intent is usually to "speak of its referent" (Frege, 1892, p. 211). A sign will usually correspond to a single sense, but may have many referents. The sign "a book", for example, has the sense of "a bound volume of paper that contains text" when the sign is a noun. The referent of a sign is the entity that a sign is intended to pick out; in this case, anything that is a book. A referent

does not only correspond to a single sign, and a sign need not have a single referent. Deictic signs such as *I* change referents depending on the speaker, and the sign *John* has many referents. On the other hand, I can be referred to by a number of signs, each with a different sense, including my name, *I, you, the researcher,* my various nicknames and so forth.

In addition to the sense and reference, I will be discussing referring expressions in terms of a third element in a sign's meaning. Following Nunberg (1993), I will use the term *index* to mean an element in the situational context picked out by the sense of a sign. The term *here* has the sense of "a place proximal to the speaker", while its index is the place itself. If I say I am here, I am indexing my position, and may be referring to my chair, office, house, city or country, depending on the context and the requirements of the conversation. In terms with fixed referents, such as natural kinds like 'cat', the index and referent are the same. "That cat" both indexes the cat being signified and refers to it. Thus the mismatch between index and referent indicates that a term is non-rigid, and so indexical to some degree.

For the remainder this section, I will explore specific kinds of referring expressions and the way their referents are determined. I will focus on reference to person, although reference to place will be included where it provides clearer examples or where person is not discussed in the literature. I will begin with an investigation into proper names, then the bulk of this section will be dedicated to discussing context-dependent reference and context itself. Both types of reference will be discussed in terms of both real-world reference and fictional.

2.2.1 Proper Names

It would be impossible to review all of the literature available on proper names, so I will not attempt to do so in this section. I will instead focus on a general overview of the research into proper names. I will begin with a general definition and discussion of names before moving to rigidity, non-reference and the use of proper names in fiction.

The sense of a proper name equates to the description "bearer of the name X",

according to Frege (1892), or abbreviates it, as Russell contends (Russell, 1912). Proper names are also singular terms, meaning that they refer to a single, specific object rather than the many objects that general terms such as count nouns or indefinite descriptions do (Russell, 1912). A proper name is also considered a kind of 'genuine term', meaning that its function is to introduce a referent into the discourse and nothing else (Mckinsey, 1986; 2010). They are terms that are low on the accessibility scale (Ariel, 1988), and so are used in cases where the referent is new in the discourse, but may be known by the interlocutors.

A name is said to only have a single sense, even if there are several names sharing the same referent or vice versa. The names *Judy Garland* and *Frances Gumm* each have a single referent and a distinct sense, although the referent of both terms is the same single entity. The singularity of reference leads to the view that proper names are rigid designators (Kripke, 1980). A rigid designator is a term that refers to the same entity in any world where they exist, and nothing where they don't. As many of the entities in a roleplaying game are referred to by a name that is not their own designator, and whose designator does not exists, the rigid designation theory becomes problematic.

Although scholars have since acknowledged problems with rigid designation theory overall (Baumann, 2010, for example), names seemed to have continued to be treated primarily as unique identifiers, as have terms designating natural kinds. This differentiates them from other singular terms in that they do not require context to refer, and are in fact considered independent of context, similar to natural kind terms (e.g. Cook, 1980).

There have been several theories of how proper names actually refer. In his paper *Understanding Proper Names*, McKinsay (2010) categorises the basic theories of how proper names determine a referent. The first category, description theories, claim that a referent is determined by a set of properties that describe the referent that the name points to. This description can be as basic as "bearer of the name X" or a set of properties that describe the

bearer (Frege, 1892; McKinsey, 2010; Russell, 1912; Searle, 1979). Several scholars have discounted this, including Kripke (1981), who contends that a proper name will continue to refer even if the properties used to describe them no longer apply, such as if Aristotle died as a child and thus never taught Alexander the Great (De Sousa, 1974; Kripke, 1981).

The second category of proper name theories, causal theories, are those that say that names have some form of link to their referents, and that they are "directly referential designators" (Pietarinen, 2010, p. 342). The link is usually some form of dubbing. Dubbing is a process whereby a name is introduced and attached to a referent for the first time both in the given discourse and the naming of the entity at 'birth' (Pelczar & Rainsbury, 1998). This dubbing appears to equate to a simple statement of "this person will be called X". Once dubbed, that name should refer to the entity that was dubbed with it exclusively.

Some have ascribed the causal or dubbing theory to Pierce[3], though Pietarinen (2010) does not agree, stating that "from Pierce we do not find much (...) that supports a causal theory of reference". The assumption of Pierce's support of causal theories relates to his claim that a name becomes "existentially connected" to the object it names on its first use. He also claims that when the connection is made, the sign becomes an iconic sign of the person it names. The direct, unwavering link is then rigid, and not simply dubbed for each discourse event.

There are theories of proper name reference that intersect the others. Social practice theories, for example, treat the semantics of proper names as relating directly to their use within society. This means that a proper name such as *Aristotle* will refer to the Greek philosopher because society associates that name with that person. These uses can be applied to both causal and description theories. Kripke (1972), for example, treats names as both

[3] See (Pietarinen, 2010) for a list of these scholars.

social and causal, claiming that a name refers based on the name's historic use in the society it is used in, from its initial dubbing through a chain of uses through every use thereafter.

The final category are the individualistic theories of names, which claim that "each particular use of a name has its semantic referent determined solely by the speaker's state of mind and its relation to the referent" (McKinsey, 2010, p. 327). This may imply that speaker intent and focus are an integral part of referent understanding, making proper names a kind of indexical. It is this last that best suits the model produced for this study, as the intended focus world dictates the interpretation of a sign and its referent.

It has been acknowledged that speaker intent plays an important role in how and whether interlocutors retrieve the correct referent (Grice, 1969; Peet, 2016; Stamp & Knapp, 1990; Stokke, 2010). Inference of intent can be made from eye-gaze (Hanna & Brennan, 2007; Macdonald & Tatler, 2015) alongside linguistic and non-linguistic contextual factors such as salience, focus and object presence (e.g. Grosz, 1978). Use of a novel reference term has been found to lead to the inference of a new referent object in children rather than assuming a new word for something known (Kidd, White, & Aslin, 2011). Disfluencies such as *um* and *ah* were also associated with new referent objects in the discourse.

A problem arises when two entities share the same name in a given context (such as George Bush and his son (Pelczar & Rainsbury, 1998)). When these shared names occur, the speaker would usually use a definite description to narrow the referent. The fact that names are shared between multiple people is a key point in Bauman's (2010) argument against rigid designation. Using Katz's (2001) response to the homonymy explanation provided above, Bauman explains that homonymy would render such situations as a namesakes "literally false" (Baumann, 2010, p. 337). Bauman also repeats Katz's (2001) claim that the homonymy argument is given under a mistaken definition; that true homonymy is when two words came together from different etymology and semantics. Shared names have no such deviated

history (Baumann, 2010).

In response to the problem of shared names, several scholars have moved toward an indexical theory of proper names (Baumann, 2010; Maumus, 2012; Rami, 2014). Indexical proper name theories are tested against collected table top-gaming data in Chapter 5 of this thesis, so here I will only give a basic summary of the idea as a whole and the categories these indexical theories fit into here. Indexical proper name theories are primarily concerned with explaining the presence of multiple entities that share the same name, as opposed to entities sharing the same single dubbing as is found in the data. These theories claim that interlocutors determine the referent of a name based on one or more elements of the names' context of use.

One of the approaches to determining the referent of an indexical proper name is related to the surrounding context of the discourse event or the salience of the entity referred to. Focus-based views on referent determination treat proper names as anaphoric or exophoric. The referent of a name is determined, or the reference narrowed down, by the available possible owners of the name within its contextual constraint (Rami, 2014). A speaker may know several Marys, but the Mary that is most salient may be a Mary that is present, is one that is known to all of the interlocutors or that will be of particular interest to those interlocutors; the bearer most contextually appropriate at the time of utterance (Maumus, 2012). If there is more than one Mary in a context, the Mary that is most recently spoken of or who is picked out demonstratively is considered the referent unless focus is deliberately shifted with less accessible forms, such as descriptions, in combination with the proper name ("Mary, Queen of Scots") or with a surname ("Mary Tudor”). The salience view of proper name reference was considered by Rami to be one of three methods that can combine in referent determination alongside the communication chain (or parasitic view) and the descriptive view. The role of salience is discussed throughout the following chapters,

culminating in a direct discussion of world salience in Chapter 7.

Beyond the constraint of possible uses, the actual determination of the referent of a proper name may be related more to the relation between designator and world, not between entities with the same name in the same world. Take the following example:

Example 2.1
Mister Bingley is related to Belatrix LeStrange

This is a true statement, and does not involve some form of Pride and Prejudice/ Harry Potter crossover fan fiction. The proper names in the example also refer to multiple entities in multiple worlds where the indexes and referents don't match. *Mr Bingley* is a rigid designator that belongs to Jane Austin's world of *Pride and Prejudice* (Austen, 1813), *Beatrix LeStrange* is from the *Harry Potter* world (Rowling, 1998). The indexes are not the fictional originals, however, but the film and television version of those characters. At this stage, for the sake of argument, I will say that each "version" of the character is an instance of the same entity in a different world. The problem arises when we move to the verb of the sentence, "related". Familial relations require existence in the same world and Bingley and LeStrange are in different worlds. The referents of these terms are instead Crispin and Helena Bonham-Carter (who are cousins). Reference is achieved via indexes to their portrayals of the characters on screen (rather than the fictional characters as separate entities from their on screen portrayal), and thus refer using designators for an entity that does not exist in the target world (Figure 2.1).

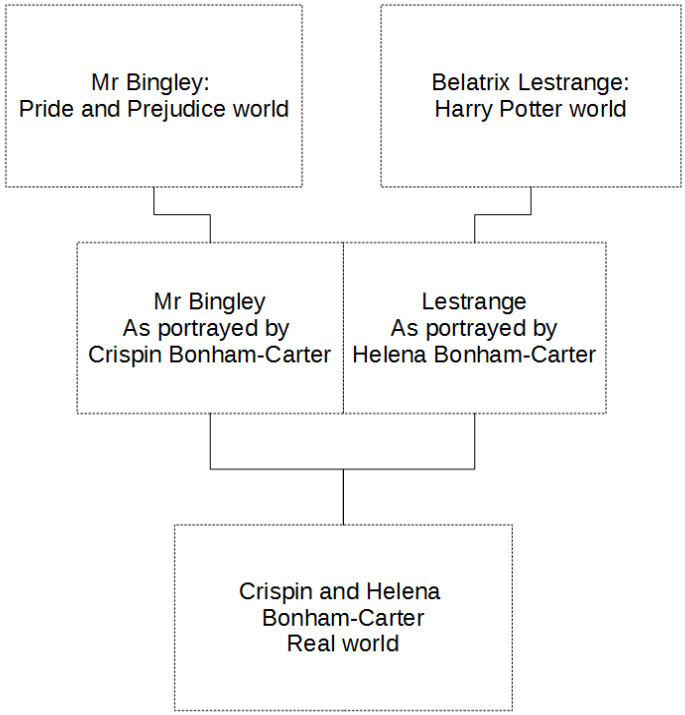

Figure 2.1: The Bonham-Carter relationship across worlds. The worlds of the sign characters (top) are separate, while the index worlds (middle) are separate portrayals on an onscreen world with the final target world (bottom) occupied by both entities.

This brings us to the current theories surrounding proper name use in fiction. Fiction is problematic for reference theories, as illustrated in the example above. Kripke (1980) has made the conscious choice to ignore fictional entities in his rigid designation theory. Later scholars corrected the oversight in fictional rigid designation, allowing rigid reference to non-existent entities (e.g Tiedke, 2011). These studies failed to include instances of proper name sharing between real and non-real entities, such as role-playing, or the use of a character's name for their actor, such as referring to Helena Bonham-Carter as Belatrix LeStrange (or vice versa). This example illustrated fictional-to-real reference, where the sign's origin does not exist but the referent does. The majority of referents in this study are the reverse, using the real to refer to something fictional.

Fictional reference is considered different than normal reference for one major reason; the referent of a fictional proper name does not actually exist (Martinich & Stroll, 2007).

There is no Belatrix LeStrange or Mr. Bingley outside their respective fictional worlds. It is difficult to assign truth values to sentences with proper names within them that relate to fictional entities as they are true or false for different reasons than those that apply to other uses. The utterance "Malcolm Turnbull is Prime Minister" is true at the time of writing this sentence because the real entity named Malcolm Turnbull is currently in the role of Prime Minister in the country in which this thesis is written (Australia). The sentence "Mr. Bingley is good looking and rich" is true within the constraints of the fictional world and in that context because Jane Austen told us so, and thus she, as the creator of the entity Mr. Bingley, assigned those properties to him (Margolin, 1987; Sawyer, 2015)[4].

Fictional worlds, as a result of their lack of existence, are considered impossible by many, having never existed as a separate-but-linked world (Yagisawa, 2010). Although fictional worlds are in some way based on reality, they are made deliberately separate by authors (Vernay, 2014). As fictional entities do not exist[5] in the sense of being part of the actual world, they cannot be possible. This may also be attributed to their inherent falsehood; a fiction is a form of pretend (Adams, 1985; Searle, 1979). As they are considered impossible, the rules of possible world-based reference should not apply. Salmon (2011), discussing the works of Kripke, suggests that Kripke claims that fictional names do not designate, particularly within the work of fiction.

This contention that fictional entities do not exist goes against something Kripke himself stated in a lecture (1973/2013). Kripke explained that fictional entities do exist in some way due to the creation of the fiction they are found in. He states that "…no fictional person in his own work of fiction is said to be a fictional person." This lends itself more

[4] This statement may also refer to his actor, as discussed above, but the truth conditions are different and more complex.
[5] I will not go into the nature of existence in this thesis.

toward Tiedke's view of reference in fiction and to the account of internal rigidity discussed above. This means that, internal to a fictional work, a name may refer rigidly. In the same lecture, Kripke also broaches the subject of a fictionalised version of a real person, citing a theoretical fictional Napoleon. Details can be said of a fictional Napoleon, such as him being exceptionally short, that cannot be said of the real, and vice versa. Rather than creating an explanation of separation of entities between the fictional and real Napoleon, Kripke simply suggests an implicit addition of "according to the story" in order to adjust the truth conditions of the fictional sentence, making it true for the story and not for the entity Napoleon.

Neither the rigid-within-fiction account, nor the non-designating account of name use in fiction is particularly helpful in our discussion of name use in roleplaying. The names used when playing belong to real entities, and designate them, but also designate fictional entities without belonging to them (and so are not analogous with Napoleon above). What is more, a single name can designate several entities across several worlds without itself becoming a fictional name or disconnecting the owner of the name from the real world. This issue is discussed further in Chapters 4-9.

If we work under the assumption, then, that fictional worlds are self-contained worlds (possible or not), and that fictional names refer within their own fictional world, the example sentence "Mr. Bingley is related to Belatrix LeStrange" is problematic for another reason, explained here in terms of the index/referent distinction established earlier. Mr. Bingley and Belatrix LeStrange themselves are not related, and do not "exist" (for want of a better term) in the same universe. The example sentence is, however, true. This can be said because the utterance is true of the referents but not the indexes. The same can be said for reference to fictional entities using the real names of the actors who portray them, such as "When Harrison Ford is lowered into the Carbonite, he responds to Carrie Fisher with "I Know"". As

with the previous example, this sentence is true because it refers to the fictional entities that performed the actions described (the referents), but those entities are indexed through the actors who portrayed them in the original *Star Wars* trilogy (*Star Wars Trilogy Episodes IV-VI*, 1977/2013). From this, we can conclude that truth conditions are related to the referent, rather than the index, a fact that will become problematic when we discuss indexical reference in the next section.

Also in line with the rigid properties view, Tiedke (2011), in her work on reference in fiction, claims that proper names are context dependent, as in Pelczar and Rainsbury's (1998) theory, but still compatible with Kripkean ideals. In her view, fictional names mark a set of associated properties rather than specific individuals, and are context dependent until the referent is picked out or "dubbed" by the author, but not beyond then. This is therefore a kind of anaphoric use of a name (Sommers, 1982) or communication chain theory combined with a descriptive theory. If we continue with the Mr Bingley example, we are provided with the following:

> "Why, my dear, you must know, Mrs. Long says that Netherfield is taken by a young man of large fortune from the north of England; that he came down on Monday in a chaise and four to see the place, and was so much delighted with it, that he agreed with Mr. Morris immediately; that he is to take possession by Michaelmas, and some of his servants are to be in the house by the end of the week."
>
> "What is his name?"
>
> "Bingley" (Austen, 1813 as presented in; Austen & Goodreads, 2016)

The name *Bingley* used in the final quote of the extract refers anaphorically to the properties provided earlier in the piece; young man from the north of England, rich, arrived on Monday and so forth. This use of *Bingley,* the first in the novel, is the point of dubbing (Zalta, 2003). From that point on, any subsequent use of *Bingley* in the novel is part of a communication chain back to that instance, and is rigid within the space of the novel to Mr Bingley. As authors rarely choose to dub different individuals with the same name in their

novels, it is difficult to prove or disprove rigidity in the names used within the same world of a novel.

The reference chain theory assumes the communication chain is parasitic. Subsequent uses of a name are a matter of using a name the way other users do, thus passing the name between users (Rami, 2014). The "interlocutors" (readers, viewers etc.,) in a fictional communication chain are usually present at the time of dubbing, meaning that the communicative chain is not parasitic as the interlocutors learn of the dubbing directly and not through others. Parasitic chains are possible in relation to fiction, such as someone telling a friend about a character in a book, but are not the norm.

In the following section, I move away from literature on proper names and move to context dependent reference.

2.2.2 Context Dependent Reference

Context dependent unique references, usually called indexicals, take their referents from elements of the surrounding context. That context can be cultural, social, situational, personal, linguistic, or taken from within the discourse itself. In this section, I will discuss contextual reference to person, with particular focus on deixis. This will include a discussion of the distinction between deictic and indexical reference as well as the different kinds of contexts associated with each. As a result, the bulk of this section will be dedicated to discussing the deictic centre, including centres outside the precise, visible situational context, particularly in the imagination and fiction.

There is less debate over the referent determinism of an indexical than of proper names. The current understanding is that, in order to interpret an indexical term correctly, all interlocutors must have access to the context being called on by the speaker (Heritage, 1984). It is therefore up to the interlocutors to determine what elements of the context are appropriate to interpreting the deictic term used. This may be primarily down to the sense of

the term (*I* is nearly always going to be the speaker of the utterance), or some form of pointing gesture by the speaker. In the case of roleplaying, this would mean that the interlocutors must be able to determine which entity is intended, and in which world.

The functional lifespan of an indexical is short. Once a referent is picked out, the indexical term no longer has a function in the discourse event, as "the linguistic meaning of an indexical doesn't figure as part of what is said by the utterance containing it" (Nunberg, 1993 p. 4). In light of the world and entity interactions found in the data presented in this study (see Chapter 4), the contention that an indexical does nothing but point to a referent may be a little restrictive. If nothing else, much like any other term, an indexical may apply certain semantic constraints to the remainder of the sentence. The use of an indexical term that indexes a player and refers to a character is the key difference between a player's portrayal of a character and a simple telling of fictional narrative. In this way, the use of an indexical creates a contextual constraint on the actions of the character, or on the worlds that are available to discuss in the remainder of the utterance. Determining whether the referent is the player or character is key to understanding the utterance. Take the example sentence presented earlier in this chapter:

Example 2.2
Mr. Bingley is related to Belatrix LeStrange

In the example above, the senses, indexes and referents of the two proper names are all different. In this case, the sense of the signs is "a person who bears the name Mr. Bingley/Belatrix LeStrange", the index is the on-screen portrayals of those characters in the BBC Pride and Prejudice adaptation (Langton, 1996) and in the Harry Potter movies respectively (Cuarón, 2004). The referents of the signs are Crispin and Helena Bonham-Carter, who played the characters. The disparity between the referent and the sense of the term in such utterances makes the need for the index distinction apparent. The distinction

becomes particularly important where the index becomes a waypoint when referring across multiple worlds. In the example, the fictional characters Mr. Bingley and Belatrix LeStrange do not exist in the same world, Mr. Bingley is from the fictional world of Pride and Prejudice and Belatrix LeStrange existing in the fictional world of Harry Potter.

The ability to use a sign in certain contexts depends on what Rami (2014) called *contextual constraint*. Contextual constraint "is a (proper) subset of the set of all contexts of use" of a term where the subset is the contexts in which the term is "used in an acceptable or felicitous way" (Rami, 2014). In the case of a proper name, a contextual constraint will be a context where the name has an entity to which it can refer, and all interlocutors are able to discern that entity. Where a sign's target is unavailable, particularly where they don't exist, the target is outside contextual constraint and unable to be retrieved as a referent. Contextual constraint can be functionally linked to Sweetser and Fauconnier's (Sweetser & Fauconnier, 1996) cognitive domains (see Section 2.3). Cognitive domains in my model dictate the worlds and space available for reference, and thus the possible entities that can be linked to a particular index.

The term indexical is often used interchangeably with the term *deixis*, providing no distinction between terms that use the direct situational context exclusively and those that take social, cultural or historic context into account (e.g. Cornish, 1996). Other scholars treat deixis as a property of indexicals, claiming that deixis is the element of meaning of a term that makes it context-dependent, much like the character of an utterance (Kaplan, 1979). The final view, which I will use in this study, is that deictic terms are a subset of indexicals (Nunberg, 1993). Not all indexical forms are deictic. Some definite descriptions behave indexically in that they may change with certain elements of context, but are not deictic. The referent of a phrase *the main road through Blackburn* does not change if the speaker changes, they leave the room or the next day, changing only if some major change has occurred in the

outside, indexical context, such as changing to a different city with a suburb called Blackburn. The terms *I, here,* and *now* change in all those circumstances respectively. Other communication forms that are considered indexicals such as gestures, signs, or prosodic features also do not change with the speaker, usually changing with culture, society or time (Silverstein, 2003).

There are two main reasons for my using the subset approach. First, I want to be able to differentiate between specific kinds of contexts. This distinction is made to restrict discussion to the immediate context, and because the use of mental spaces (Fauconnier, 1985) in the final model relates only to the deictic context. Second, I need to be able to differentiate between different types of referring expressions that behave differently in multiple world contexts. The difference between cross-world referencing using deictic forms and non-deictic indexicals is a marked and important distinction in the data.

The discussion of multiple world reference requires differentiation between signs that rely on different elements of context for their referent determination. Definite descriptions of characters in table top roleplaying, for example, are rarely used to refer to players. Descriptions of players, with the exception of insults, are rarely used to refer to the characters where the player is present, or where they are known to all interlocutors. Proper names and pronouns, however, are frequently shared from player to character. Definite descriptions are context dependent indexicals, but do not behave in the same way as deictic forms or names in the data.

2.2.2.1 Definite Descriptions

A definite description is a full noun phrase that points to an entity which fits the description. The description can relate to a role ("the Prime Minister of Australia"), properties ("the red jumper") or some other contextual element ("the chair to my left", “the capital of Victoria”). Descriptions can also be indefinite where there are several entities that can be

described by the same descriptor or where the speaker does not intend to refer to any particular single entity ("a red jumper"). Definite descriptions are seen as a non-rigid reference forms by many researchers. Kripke, for example, uses them as a contrast to rigid forms (Kripke, 1980), and Fauconnier (1994) treats them as roles to be filled by the referent. Take the following example:

Example 2.3
The person teaching Semantics is on annual leave

In this example, *the person teaching semantics* is relatively fixed. The referent may change if the person who teaches semantics changes, or the utterance is made at a different university. The referent does not change from one moment to the next, if the same person says the utterance in a different place within the same university, or if the person speaking changes. "I am on annual leave", however, changes with the speaker, regardless of the outside elements of the context.

Definite descriptions such as the example above have shifting referents (or, as Cornish (2011) claims, can be interpreted deictically). However, there is very little change compared to deixis, which changes when the immediate spatio-temporal context changes. Instead, they change depending on a much broader indexical context, such as political situation or larger-scale time period in the case of *the Prime Minister of Australia* or scientific discovery as in *the planet furthest from the sun*.

Assuming, therefore, that definite descriptions are context-dependent and thus indexical (Cornish, 2008) (or non-rigid, following Kripke (Kripke, 1981)) but not to the point of being deictic, we can say that the key difference between deixis and indexicality is how often the referent changes in relation to its index. Deictic expressions have frequently shifting referents, while indexical referents are more variable in the frequency of their changes, perhaps remaining fixed for years at a time.

There are some, Russell primarily, who view definite descriptions as non-referring, or at least non-shifting (Russell, 1912/2009). Russell views a definite description as a property belonging uniquely to a single person or object. Russell states; "When we say 'this so-and-so exists,' we mean that there is just one object which is the so-and-so. The proposition "A is a so-and so' means that A has the property so-and-so and nothing else has." (Russell, 1912/2009, p. 27). It is clear from this statement that Russell holds that every definite description is unique to the object or set of objects to which it is attached. Example 2.4 below illustrates how a definite description can be seen to refer to a rigid referent:

Example 2.4
I saw the actor who plays Luke Skywalker at a sci-fi convention

The description *the actor who plays Luke Skywalker*, to most people, refers to Mark Hamill. Hamill will presumably always have this property. If the audience changes to people who only know Luke Skywalker though video games, the description may apply to Bob Bergen or Llyod Floyd (‘Luke Skywalker (Character)’, n.d.). The index remains fixed as the actor who had portrayed Luke Skywalker in the most salient instance, but the referent depends on the knowledge or intent of the speaker, and may be misinterpreted (the speaker may intend to refer to Bergen while the addressee assumes the referent is Hamill).

Russell’s view of definite descriptions does not, therefore, rule out an indexical reading. If we create a qualifier that states that definite descriptions are unique in their given indexical context and have rigid indexes, we keep the spirit of Russell’s ideas, and allow for changeable referents. If we take Russell's account as-read, the description *the Prime Minister* would only refer to a single prime-minister (say, Tony Abbott), and could not refer to the British or Canadian prime ministers, Julia Gillard, John Howard or any other past or future Prime Ministers. When context is added to the account, however, it becomes far more accommodating. The Prime Ministers becomes "the person who is currently Prime Minister

of the country salient to the current context".

Russell views *the Prime Minister* not as a way to refer to Tony Abbott (or whoever), but as a property of Tony Abbott. As such, Russell believes that when a description is used, we learn something about Tony Abbott (that he is the Prime Minister) without knowing that the Prime Minister is Tony Abbott, or even who Tony Abbott is. This means that definite descriptions can be used effectively, even where the referent is unknown, as the index is simply the property being described.

Supporters of the referential definite description theory, such as Wettstein (1981), define them as being used in place of pointing or proper names. A non-referential or attributive use, on the other hand, is used when the speaker is not referring to a specific person. The referent may be anyone who fits that description. Wettstein subscribes to an indexical referential approach to descriptions. He believes definite descriptions are a form of demonstrative where the description is pointing to something in the immediate context (1981). This gives an impression of deixis in definite descriptions. The demonstrative form does have some possibilities, if one can assume that the description can point outside of the immediate context, and, in addition to the actual referent, point to its world-space element of the context as well. However, if the description points to something outside the immediate context (as a description such as “the first Emperor of Rome” does) then they cease to be deictic.

2.2.3 Deixis

Deixis is a kind of referring expression in which the referent is entirely dependent on the context in which the sign was uttered. Without the context, there is no referent or index, and the sense is not particularly helpful. For the deictic sign *I*, for instance, the sense is “The speaker of the utterance". If we were to take the sentence "I am eating an apple" without context, the subject of the sentence would be meaningless, as there is no known speaker to be

the referent of *I*. This is not necessarily true of an equivalent description (Nunberg, 1993). This means replacing the deictic form with a definite description that describes its sense does not provide the same meaning, as it (usually) does for non-deictic forms. Compare the below examples:

Example 2.5
A) I am eating an apple
B) The speaker of this utterance is eating an apple

Notwithstanding that "this utterance" is itself deictic, the example presented in A no longer has the same fundamental meaning as the example presented in B. The referent of the subject in sentence A has no understandable meaning without a speaker. According to the present understanding of deixis, where there is a speaker, the subject can only be that speaker. Sentence B, on the other hand, will have a discernible meaning even where the referent is not known (as with all definite descriptions, as shown in the previous section). The meaning also does not shift as readily as the deictic form. This is easier to show if we make a slight adjustment to sentence B to eliminate the demonstrative:

Example 2.5i
Bi) The speaker of the utterance "I am eating an apple" is eating an apple"

While sentence A is assumed to be spoken by the person eating an apple, B and Bi do not need to be spoken by the eater of the apple. The speaker of B may be reporting the speech of another, or reading about a person whose only previous identifier was their speaking of the utterance. The referent of the definite description is fixed as the original speaker of the utterance, and remains that person even where the speaker changes.

Unlike other indexicals, deictic reference is dependent on knowledge of the direct situational context rather than the social, cultural, shared knowledge and historical context. The treatment of indexicality as a socio-cultural contextual reference system follows the works of Silverstein (2003) and Ochs (1992). Ochs contends that linguistic forms index what

she calls "social meanings" (Ochs, 1992, p. 338). These social meanings both embed and call on elements of gender, ethnicity, socio-economic background and social distance.

As Bühler contends, deixis "[cannot] do without the gesture or a sensory guide equivalent to gesture or, finally, an orientation convention that takes their place." This situational context, also known as the *origo, deictic field, ground,* or *deictic centre* (I will use *deictic centre* throughout this thesis for the deictic centre that can be projected, and *origo* for the real-word centre proper) consists of the time and place a given utterance is used and the speaker of that utterance. These correspond to the terms *here, now* and *I* respectively. All deictic terms in English take their meaning from contexts relative to the origo. *You,* for example, refers to the addressee of the speaker, *there* is a place that is distant relative to *here* and *tomorrow* is the day after *now*. Deixis, by its nature, is a way for the speaker to verbally point to a referent. The origo is discussed in more detail below. Distinctions between types of deixis are tested against the data in Chapter 5, so I will not go into detail here.

I will include other forms of reference under the blanket of deixis in the discussion of reference for this thesis. The first, anaphora, will be discussed in Section 2.2.4 of this review, as its classification as a deictic form has been the subject of debate. The second, demonstratives, are somewhat more straightforward. A demonstrative specifically refers by pointing, whether verbally of physically. Demonstratives may be nouns or determiners, and most deictic and anaphoric pronouns can be used demonstratively in some way. Aside from the basic *here/there/this/that* demonstrative forms, it can be difficult to determine if a pronoun is being used demonstratively from audio data. As a result, this study is unable to go into demonstrative reference in multiple world contexts, so this review will not go in depth into the topic.

It can be, and has been, argued that deixis has two elements of meaning. The first points to or labels something in the discourse context. This element is most closely related to the

semantic meaning of a deictic term, and is called *index* by Pierce (1883/1991), the term used in this thesis, and *character* by Kaplan (1979). Nunberg (1993) dubs these the *relational* and *classificatory* components of deictic meaning.

The relational component provides semantic meaning, including number, gender, and animacy (equating to sense), while the classificatory component provides restrictions or requirements, such as the "person" element (Nunberg, 1993). When applied to the first person pronoun *I*, the relational component is the singularity of the form, while the classification restricts the referent to the person speaking. The spatial reference "here" has a relational component of proximity, and a classification component of the position in front of the speaker, or a place near their pointed finger.

Heritage contends that it is assumed that deictic terms are "exceptional in requiring contextual knowledge" for interpretation. However, he claims other descriptive terms are the same, as otherwise they would "have to be related to their referents through some determinate set of 'corresponding contents'" (Heritage, 1984, p. 143).

Deictic and indexical terms have a different relationship depending on whose research you are reading. Garfinkle (via Heritage, 1984) treats deixis and indexicality as seemingly interchangeable. Nunberg (1993), on the other hand, takes advantage of a slight disparity in definitions to treat deixis as a subordinate of indexicality. He treats deixis as an element of indexicality, the part of an indexical that is wholly context dependent. Thus, in Nunberg's view, deictic-indexical forms would be more context dependent than more complex non-deictic-indexicals that contain more elements in their meaning, such as speaker intent or cultural knowledge. It is Nunberg's view that deixis is a sub-type of indexical that I will be using throughout this thesis. The indexical context thus becomes the linguistic, historical, social, and cultural context of the utterance, while deixis is restricted to the immediate spatio-temporal context. The treatment of indexicality as a socio-cultural contextual reference

system follows the works of Silverstein (2003) and Ochs (1992).

2.2.3.1 The Origo

The deictic centre, or *origo* (Bühler, 1934), is the zero point of the deictic context. It represents the *I* (or *ego*), *here* and *now* of context dependent forms (Bühler, 1934). The deictic centre is mobile, shifting space, time or person as needed (transposed deixis) (Hanks, 2011). The deictic context (or "ground" (Hanks (1992) and Rubba (1996) among others) of a speech event is generally considered to be space and time of the event, the persons taking part in the event, and the event itself (Diessel, 2012). The context of this sentence for instance, at its original time of writing, is me at my desk in my study on this particular Friday night, writing this review (the speech event). Context is perhaps the most important distinction made between indexical and deixis. The deictic context is relatively narrow- including only contents in the immediate spatio-temporal and discourse contexts. Indexical reference, on the other hand, has a broader context that includes style and speaker intent, as well as cultural considerations (Ochs, 1992).

The deictic centre in English is Egocentric, meaning the default centre is the speaker and deixis is determined based on self-world orientation. All deictic terms need to be interpreted relative to the speaker (Duchan, Bruder, & Hewitt, 1995). Brugmann (1904) suggested four "modes" of deixis which relate to the position of the referent in the deictic field. The first mode, *der-deixis* (Bühler's (1934) name for *this-deixis*), encompasses deictic forms that refer to something that is being pointed to. The gesture, Bühler claims, is integral to the interpretation of der-deixis (1934). This would exclude some uses of "this" or "that", particularly uses where the sign points to a salient element (hearing a scream and saying, "that was loud").

Hic-Deixis, which is Bühler's (1934) re-naming of what Brugmann called *I-deixis*, refers to entities in the position of the speaker (*here*). Bühler describes the mode of

determination of hic-deixis as based on the origin of the sound of the sign. This means that terms such as *here* or *I* are interpreted based on the audible position of the speaker.

This causes an issue with reference use presented in this study. The referent of hic-deictic forms in imaginary contexts are not found at the location of the sound. For the purpose of this study and for terminology use where required, I will say that the audible element of hic-deictic forms points to the index and not the referent. There may be gestural elements of hic-deixis, although Buhler claims that hic-deixis gestures are more directional than truly pointing, exemplified by the forms *hither* (to here) and *hence* (away from here) (Bühler, 1934).

Iste-deixis (originally *thou-deixis*) refers to entities at the place of the addressee. Bühler claims that there are no iste-deictic signs in German or many other Indo-European languages, as Brugmann's modes of deixis specifically refer to place, rather than person or time. Later in the same work, he acknowledges that *thou* is a deictic term in this category, and that several languages including Bulgarian, Greek and Latin have terms that relate directly to the addressee, with *Iste* translating to "that of yours" (Wade & Kidd, 1997). It may also be that iste-deixis does not have words-signs, but rather point in other ways, such as volume of speech or focus by the speaker (Bühler, 1934).

The final form, *jener-deixis* (Bühler's *yonder-deixis*) refers to entities further away from the speaker, or something beyond a barrier ("that over there") (Brugmann, 1904). The nearest person forms to jener-deixis are likely third person pronouns used deictically or demonstratively.

Brugmann's modes remain somewhat egocentric, as the categories are still relative to the speaker, and also relative to potential opposites. *Here* can be the chair I am sitting on, or the room that chair is in depending on what is considered *there*, whether *there* is somewhere else in the room, or somewhere outside the house. Rauh (1983) indicates that *there* is a form

of deixis that is non-egocentric in English, but seems to restrict those forms to space deixis where terms such as *above* are centred on a selected space, not the speaker.

As the above scholars suggest, the centre can be moved from the directly visible Origo, but the projection is limited to where the speaker will be at the time the centre is being projected into. In a sentence like "are you coming to university tomorrow?" the verb *coming* behaves as if the speaker is already at university, and the addressee is moving toward them. It may be the case that neither party is at the university at the time of the utterance, so the centre is moved to where the speaker will be at the time in question. This kind of deixis is used to give directions, ask about time-displaced events, and, as some contend, fictional uses of deixis.

2.2.3.3 Fictional Deixis

Those who study fiction (Duchan, Bruder, & Hewitt, 1995; Young, 2004) have declared that in order for deixis to work in narrative fiction, the story realm must be treated as a new “field of experience”, similar to Rubba’s (1996) deictic grounds (see below). The deictic centre shifts to a point in the story, the view point character or an omnipresent viewer (Segal, 1995, pp. 14–15). The narrative world provides the context (or the *diegesis*, as Genette originally called it[6] (Genette, 1966)) and is therefore a type of *Deixis ad phantasma* (Bühler, 1934). Deictic forms that use a phantasma mode of pointing lack the ability to rely on the visual cues, pointings and verbal orientations of standard deixis which Buhler himself claimed were irreplaceable in the realm of deixis. Buhler claims that some forms of pointing do exist in phantasma because the "hearer" of an utterance transports his own body for orientation in the imaginary realm, meaning the position of the referent is determined based on its position relative to where the interpreter imagines themselves to be.

[6] The definition of diegesis changed to become something that occurs within the bounds of the story world and the narrative, see Section 2.4 below.

Jo Rubba, in her paper *Alternative Grounds for the Interpretation of Deictic Expressions*, suggests the use of mental spaces (as proposed by Fauconnier (1985), see Section 2.3) as a new deictic context, thus accounting for various levels of deixis in memory and imagination. See Chapter 5 for more detail and to see this approach tested on my data.

The context of an utterance is dynamic, constantly shifting as participants take turns and move to different places or introduce new participants to the discourse (Hanks, 1992, p. 53). In cases of narrative deixis, the context is shifted to the place and time of the viewpoint characters, rather than the context of the reader (Young, 2004). A similar shift occurs in spoken narrative recounting remembered events, although the speaker often remains the same. Certain "deictic centre devices" (Zubin & Hewitt, 1995) can be used to signal these changes. Such devices are seen in the data for this study, with some shifts in centre requiring more explicit devices than others. Discussion of these markers in the data can be found throughout Chapters 7-9.

2.2.4 Anaphora

Anaphora is a form of reference in which the referent of the sign is something established in the discourse. Take the following example:

Example 2.6
Matt said he needed a tissue

In this above example, the sign *he* is anaphoric, taking its referent as the referent of the name *Matt*. *Matt*, in this case, is the anaphor's antecedent. Throughout this thesis, I use the term *anaphora* as a blanket term that refers to anaphora (where the antecedent is established before the anaphoric form), cataphora (where the antecedent is presented after the anaphoric form), and exophora (where the antecedent is a salient element in the external context, but is not a deictic form).

Anaphora has been the subject of debate among linguists. The question is whether to

establish anaphora as a kind of text deixis or a type of reference in its own right. Bühler includes anaphora as a mode of pointing alongside visual deixis and imagination-orienting deixis. For the purpose of this study, anaphora is considered a sub-form of deixis, following Bühler (1934).

The use of anaphora is dependent on the salience of the intended referent. When an entity is salient, they are the most in-focus possible entity for an anaphoric term. Anaphora forms in English are gendered, so that the anaphor will agree in gender and number with its antecedent, *Matt* in Example 2.6 will use the anaphor *he* because Matt is male and takes a singular pronoun. Salience can refer to discourse salience, or the current topic of conversation and the last full noun phrase mentioned, or external salience.

2.2.4.1 Salience

It is important at this stage to give an exact definition of both salience and focus. Salience deals with the level of *activation* of an object or person in the minds of the interlocutors (Ariel, 1990). Salience can be gained in a number of ways, including introduction by a speaker, another interlocutor, or through outside influence, such as a dog barking. An increase in salience may or may not cause an entity to become the focus, but this is not necessary. However, the object or entity in focus will always be salient. The focus in discourse is basically the topic of conversation.

Least accessible	Full proper name with description	Sean [surname], the Game Master
	Full proper name	Sean [Surname]
	Definite description	The Game Master
	Surname	[Surname]
	Given name	Sean
	Demonstrative and description	That/this person at the end of the table
	Distal demonstrative determiner	That person
	Proximal demonstrative determiner	This person
	Distal demonstrative pronoun	That
	Proximal demonstrative pronoun	This
	Deictic pronoun	You
	Anaphoric form	He/him
	Reflexive	himself
Most accessible	Null/ zero anaphora	Ø

Figure 2.2: Accessibility hierarchy based on Ariel, 1988

Distance-from-mention is not the only determination of the use of an anaphoric pronoun, however. The barking dog, for example, can create a sudden high accessibility for the dog, allowing an utterance such as “it scared me half to death” after the bark (Cornish, 1996). As access or salience of an entity degrades, the referent form requires more and more detail to bring it back into focus. The lowest access forms, such as full proper names or descriptions, are used to introduce brand new entities, often not known to one or more of the interlocutors before the event.

The signs used for high access forms are relatively fixed in form and use. Proper names and descriptions, on the other hand, have different levels of information based on access of the hearer and context. In English, a first name alone is higher access (based on context, interlocutor’s knowledge of possible referents) than a full name, a full name with description or a detailed description. New entities are generally introduced in fiction and narrative through description, potentially because they tend to be created for the text. In active conversation, the form can depend on things like whether the new entity is present, one of the interlocutors, known by the interlocutors or, as with the dog example above, it introduces itself. Pointing or deictic reference can introduce new entities, but are highly accessible in context. The context, too, has levels of accessibility. What I am calling indexical context is less accessible than the physical surroundings of the conversation (deixis), which are in turn less accessible than linguistic material in the discourse (Ariel, 1988).

A similar, but not equivalent, concept to salience is focus. It has been argued by many, including Ariel (1988) and Bühler (1934), that reference use is directly related to the drawing or retaining of focus. To paraphrase Bühler, forms of *hic-deixis*, including the word "here", exists to draw the attention of those who hear them, calling over their gaze and focus to the position of the speaker. Pointing is also used in this manner, instead sending focus to the object being pointed to. Deixis and other low access forms of reference bring new objects

into focus in the discourse. Anaphora, on the other hand, is a device to maintain focus. Focus also plays an important role in determining speaker intent, which in turn plays a role in determining the referent of ‘non-automatic’ or ‘discretionary’ indexicals (Rami, 2014). A discretionary indexical requires inference of the speaker’s intent for interpretation, while an automatic indexical requires only what Perry (1997) called the “public context”.

Speaker intent, it has been argued (Stokke, 2010), is one of the most important factors in the production and interpretation of reference. Where a reference is definite, a speaker will always intend to refer to something. Even indefinite reference, while not referring to a specific individual thing, has an intent to refer to something of that type ("a cat" intends to refer to any given cat).

There are certain other verbal and non-verbal cues that aid in interpretation of intent including prosodic features, body language or topic (Stamp & Knapp, 1990; Stokke, 2010). Contextual cues such as presence of the intended referent, shared knowledge and past discourses with the speaker also play a role. In the case of roleplaying, the interlocutors must not only determine the intended referent in the context of the discourse or physical surroundings, but also in terms of the intended world. The worlds found within the data for this study are a form of mental space, created and shared among participants to make a persistent place for the story to take place. In the following section, I will explore the concept of mental spaces in detail.

2.3 Mental Spaces

With the basis of the discussion of reference established, I will now move to the theories I use as a basis for the worlds aspect, namely Mental Spaces and related theories. The theory of Mental Spaces (Fauconnier, 1981, 1985) claims that, whenever a speaker discusses something contrary to the visible area where the utterance takes place (or is away from it), the interlocutors create a mental space that adjusts the visible reality or creates a

mental image to fit what is said. Fauconnier, the creator of the theory, uses the following example to illustrate the concept:

Example 2.7
(When looking at a painting) speaker: The girl with blue eyes has green eyes

When hearing the example, the interlocutors will create a mental space in which the pictured blue-eyed girl has green eyes. In this case, the referent of the utterance, the girl with blue eyes, is in a different mental space than her described true self which resides in the newly created space. It may be easier to "spot" the interesting reference use if we expand on Fauconnier's example:

Example 2.7A
The girl with blue eyes has green eyes and I bought her coffee

In this case, *her* refers to the girl with green eyes in the mental space, but also a real green-eyed girl that was bought coffee by the speaker. The space created by this sentence is now a space where not only does the girl have green eyes, but the speaker exists to bring her coffee. The domain of reference for all forms after "the girl with blue eyes" resides in this new space, meaning that all reference uses refer to an entity within this past space. While at first glance this sentence may be a form of multiple-world reference, this is not the case, at least not to the extent seen in the data examined for this study. The use of *I* here is more problematic than *the girl*, as the sign no longer refers to the speaker in the place and time of the utterance, but to a version of himself in the past within the newly created past space. As argued later in this work, a mental space is created for any given non-present tense utterance, including past narratives (see Section 8.2.2 on spaces in the model).

The reference projection seen in the above example follows Rubba's (1996) theory of mental spaces as deictic centres. In her theory, she sees projected reference as deixis where a mental space is created and the entire deictic centre is shifted to that space for all interlocutors. In the case of the example above, a real-past space in which the speaker has

coffee with the girl pictured with a change in represented eye colour is created by the interlocutors and all required contextual elements, including the speaker, are shifted to the new space. All deictic references are then relative to the speaker in the imagined space.

This further legitimises the choice to treat anaphora as a form of deixis, as for the above example to work, the antecedent of the anaphora must also be shifted into the new space. In the example above, the antecedent of the anaphora was also the source of the space which is later established as a past space. In the following however, when talking about the same girl, the space is created by way of speaking of the past:

Example 2.8
(Points to picture) That's Sue, I took her out for coffee this morning

The antecedent is the girl in the picture, a reference which follows the statue rule (see Section 5.5), while the anaphora refers within the past space. This is possible because the representation of Sue created a mental image of Sue to inhabit the new space, and thus the antecedent is projected into the space alongside the speaker.

This theory works well for fiction where the entire world of available referents is in a mental space, and the speakers themselves are fictional and born of that space (see Chapter 5 for applications of mental spaces to the data). In a way, all fiction is itself made up of mental spaces, albeit spaces that are kept separate from the real world. Unlike many mental spaces, fictional worlds will have their own content, history and logic (Galbraith, 1995; Zubin & Hewitt, 1995). Fictional worlds are a combined creation of author and audience; the author provides a foundation, but the reader creates their own mental representation of the world (Zubin & Hewitt, 1995). When interacting with literary fiction, the author and audience must "…transfer their referentiality from the actuality of the historical world to the entertained reality of the fictive world" (Galbraith, 1995), thus projecting all interlocutors to a character-centric mental space.

A problem arises, as will be discussed in Chapter 5, where the speakers are not brought into the mental space, and yet first person pronouns are used to refer. To my knowledge, there have been no in-depth linguistic studies on this phenomenon aside from this thesis and related papers. The nearest equivalent phenomenon comes from the realms of conceptual blending.

Conceptual blending is, in short, the creation of a mental space by way of combining two other mental spaces together with a generic space of shared contextual information, and the target space itself from which descriptions and reference operates. A blend consists of at least four spaces, as recreated in the diagram in Figure 2.3.

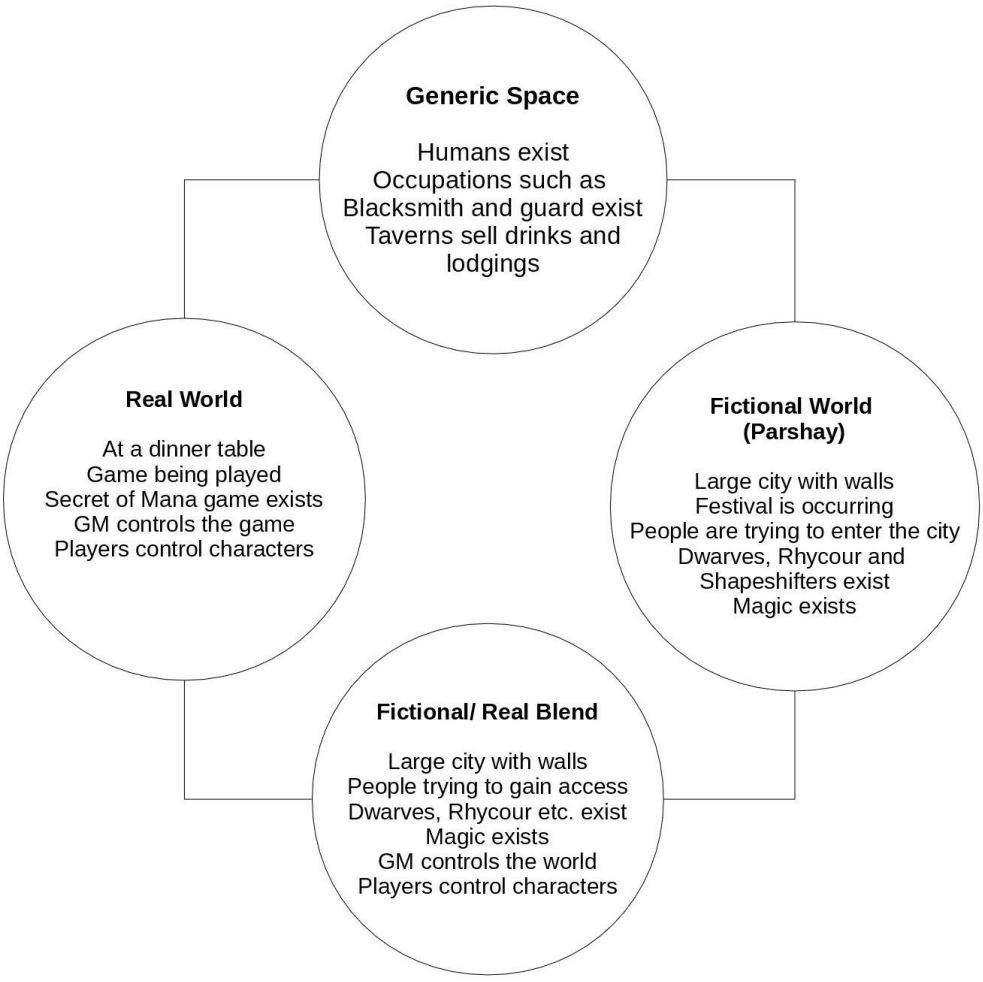

Figure 2.3 Blend of the real and fictional worlds of Group 2

The diagram above shows a blend of the worlds in one of the groups studied's game.

The first two spaces (left and right) are the source spaces, where the information for the conceptual blends reside. The second space (top) is the generic space. This is information shared by both spaces for use as broad contextual information for the blended space. The final space (bottom) is the target blended space. This space is a combination of the two source spaces, and contains the elements of those spaces that are required for the speech event the blend was created for.

Conceptual blending as written is not necessarily designed for reference specifically, but has been used to account for some of its uses. Two studies have applied conceptual blending to video game language, the first to scripted language in game (Tea & Lee, 2004) and the second, based on the findings of this thesis, to players' use of first person pronouns in broadcast Let's Plays (Cook, TBD).

The available worlds and the entities that are referrable during a roleplay game are set by contextual constraints. Those constraints and the ability to use real-life person reference for non-real entities are established by cognitive domains (Sweetser & Fauconnier, 1996). The theory of cognitive domains contends that the form a reference to a person or thing can take depends on the domain that the referred-to entity belongs to. For example, in the domain of a restaurant, a customer may be referred to by their order or their table, resulting in utterances such as:

Example 2.9
The ham sandwich on table 4 wants a coke

As the customer is in the domain of the restaurant, he may be referred to as a ham sandwich, although he is obviously not one. The available references are constrained by being in the restaurant domain, though constrained may not be the right word. The domain expands the available reference signs to anything the customer ordered, his table or his order number. In the same way, cognitive domains can be applied to multiple world reference by dictating what entities are available to be referred to using normal forms, a reverse of the

expansion of reference possibilities in cognitive domains as written (see Chapter 5 for more detail).

2.4 Worlds, Spaces and Diegesis

In this study, I differentiate various parts of a "world matrix" that an entity can occupy in a given situation. The parts of a matrix are worlds, spaces and non-diegetic spaces, as well as blends created from those parts. The parts of a universe are differentiated based on their function relative to other parts of a universe, and their persistence of use within a situation.

I use the term *world* throughout this thesis to refer to the base worlds of the real and various fictional worlds. As mentioned earlier, a world has its own internal logic (Galbraith, 1995), and is independent of other worlds in that the events in one world cannot affect other worlds except through intervening spaces (see below). Although a fictional world does not exist beyond what is provided by the author, the world is persistent and expandable within its own logical constraints.

Worlds have been of interest in the literature surrounding reference for some time. In particular, possible worlds have been used in modal logical studies on reference, including rigid designation, discussed earlier in this chapter. A possible world is "…a way in which things - all things – could be or might have been" (Bach, 1989). A possible world deals with hypotheticals and what-ifs, changing an element of the real world to create a separate alternative world, but remaining in some way connected to it (Ronin, 2005).

The groups recorded for this study both, to some extent, have access to several fictional worlds that they can refer to, though only one each that they are having a real-time interaction with. In order for this interaction to function, the real world and the fictional must be able to connect through sub-worlds that apply game functions to the fictional world.

Bach states, "…it might be nice to be able to restrict our attention to much smaller models or "worlds", perhaps sub-worlds of the big things we call "worlds"" (E. W. Bach,

1989, p. 102). Although Bach used *situations* to describe these sub-worlds, I will use the term *space*. The term *space* refers to a mental space that is built based on a base world, whether real or fictional, in order to talk about a world in terms appropriate to a game, such as creating a domain in which a person may have a numerical value describing their health, or to allow the real world to manipulate the fictional by way of a conceptual blend (see Tea & Lee, 2004). The separation of space and world also allows for discussion of plans or jokes that are deliberately unable to affect the base world while still behaving as an affecting space would. I call these types of spaces non-diegetic. The status of a space as either diegetic or non-diegetic affects the ability for an entity to become part of the narrative of the game, and thus how the entity can be referred to and discussed relative to the worlds they inhabit.

A space's status as diegetic or non-diegetic influences its ability to become integrated into a world or into a primary narrative (Bunia, 2010; Genette, 1966, 1969). In a stage musical, for example, a song may be diegetic if the character is performing on a stage themselves, or non-diegetic if the character is not understood to be really singing, the song instead behaving as a narrator or representing the passage of time, for example. Non-diegetic events may affect narrative flow or mood, but do not affect the fictional world.

In roleplaying, the functions of the game are a complex mix of diegetic and non-diegetic; often affecting the narrative world without being a part of it. An example of this is the game rules. The rules themselves are non-diegetic, existing outside the fictional world. The rules have a direct effect on the fictional world, however, as the abilities of characters, logic of the setting and inhabitants of the world are all dictated by the rules. Because of this mix, I have restricted my definition of what is diegetic to something that affects a world, rather than simply in-world/ out of world as its use in literary studies suggests (Bunia, 2010).

With the background of this thesis established, I will now move to the study proper, beginning with a description of the methods used to collect and analyse the data.

Chapter 3 Methodology

My investigation into multiple-world contexts was based on detailed coding and analysis of natural language data. This chapter gives a detailed account of the investigation process, from data collection through to final analysis. I begin by explaining my choice of data source and specific groups. The information gained from each group, their part in the study, and how each group relates to the gaming community as a whole, is found in Section 3.1. Demographic information about individual participants is found in Appendix 6. This will be followed in Section 3.2 by a detailed description of the recording and transcription process, including problems and limitations both foreseen and unforeseen.

Section 3.3 and beyond detail the various stages of data analysis. I begin with coding for both reference type and target entity in Section 3.3, and move to the method for testing of pre-existing theories in Section 3.4.

Throughout this thesis names of both participants and incidentally recorded non-participants are replaced with pseudonyms that have the same gender, syllable structure, and number and structure of nicknames. Any utterances by non-participants are omitted, or summarised where they directly affect the data. References to identifying information such as surnames, workplace names or places of residence were replaced with [surname], [workplace] or [street] respectively. The data was coded before this information was omitted, so these omissions do not affect the findings, only the examples presented in the text. I did not use pseudonyms for character names, or the names of public figures.

3.1. Choice of Data and Participants

3.1.1 Table Top Roleplaying

Table-top role-playing games (TTRPGs) provide a unique opportunity for studying language in the mind. TTRPGs are becoming an increasingly popular hobby (Phillips, 2013),

and a growing number of games are being played and recorded or streamed for sharing online[7]. Methods for available for playing online mean that the hurdle of needing to be in the same room as fellow players is no longer an issue.

Table-top role-playing is part game, part collaborative story. A group of players come together to take part in an imaginary scenario which is created and controlled by a Game Master (GM). Each player, other than the GM, creates a character to use as an avatar in the fictional world. The characters are created based on a set of rules, depending on the game being played, and are represented by a character sheet of numbered statistics (blank sheet shown in Figure 3.1 (overleaf). The game also includes an element of chance, in that the success or failure of a character's actions is determined by a combination of dice rolls and a character's statistics.

The GM's role is more complex than that of the players, and in a way much more linguistically fascinating. The GM must take the role of all non-player inhabitants of the world, and the world itself, whilst creating a compelling narrative in the bounds of the rules. This is done both through narration and description (Example 3.1) or through turn based combat (Example 3.2):

Example 3.1

1. **Mike:** Fred!... doesn't know what to make of what's in front of her
2. **Eleanor:** hmm
3. **Mike:** I mean she's seen ant colonies before.. but this just freaks her out slightly
4. **Mike:** huge walls made of perfectly smooth stone, people running everywhere, colours noises. Buildings smoke... like why aren't they running from the fire
5. **Eleanor:** hmm
6. **Mike:** you have found yourself at the gates of Parshay.. and apparently there's a party going on in town
7. **[22 Lines omitted]**
8. **Eleanor:** Well she's probably staying away from the bulk of the crowd

Session D1, Segment 2, irrelevant data omitted

[7] One of the most popular, on-going games is Critical Role, playing 5th Edition Dungeon and Dragons and streamed on a roughly weekly schedule ('Critical Role | Geek and Sundry', n.d.).

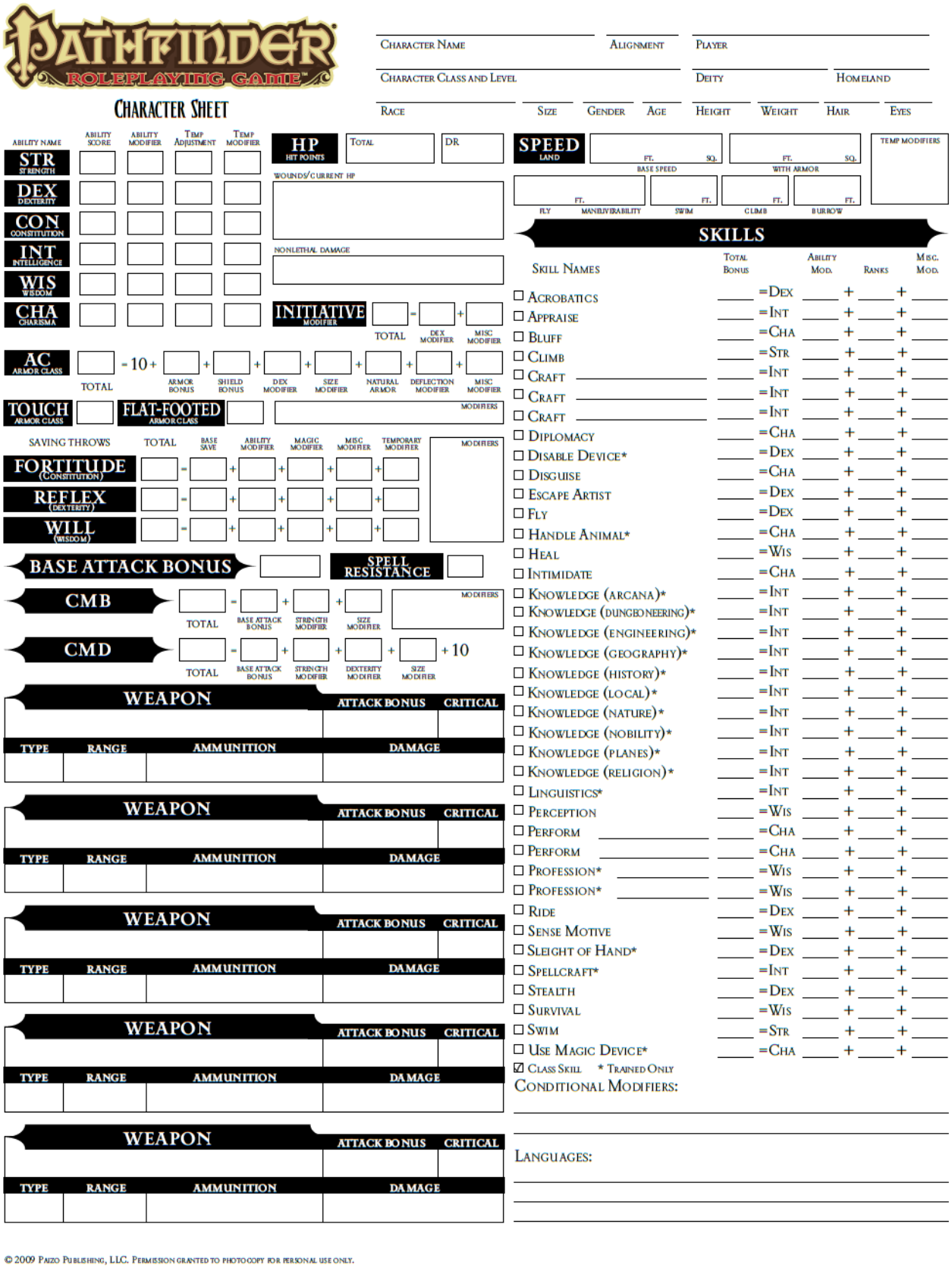

Figure 3.1 Blank Pathfinder character sheet front page. This page shows attributes (top left), skills (right) and combat ability (bottom left) of characters using numbers based on the rules of character races and classes.

In Example 3.1 the Game Master of Group 2, Mike, is describing the fictional city and the people within, while Eleanor, one of the players, only needs to narrate her own character, Fred. In this particular example, Mike is performing his role by setting the stage for Eleanor, narrating her character, as indicated by the use of the proper name initially and the third-person references as the example moves on. He then moves to a second person pronoun to indicate to Eleanor that he is handing control of Fred to her, that she now must dictate the actions of her character.

Example 3.2 shows a Group 1 combat encounter in a session run by Sean, showing a single turn by Bill, who is playing an alchemist. Bill is attacking a non-player character (NPC) with a bomb, and Sean declares that Bill's roll indicated that the attack was successful and the bomb damaged the enemy. Here the rules are the main driver of play, so the description of action is dependent on what a character or monster can do within the rules. As the rules dictate what is occurring, the utterances are short, consisting primarily of numbers that indicate success of failure of a roll. The use of first person pronouns show that this is not a story-telling narrative, but rather a performative act on behalf of the players as they perform representative actions of their characters fighting.

Example 3.2

1. **Sean:** yep, that's right... um...To=m is first up
2. **Bill:** okay... I throw an acid bomb at him [4 lines omitted] ((dice))
3. **Bill:** ah twenty-one, no sorry thirty-one!
4. **Sean:** thirty-one
5. **Bill:** thirty-one ranged touch?
6. **Sean:** yep (pause)
7. **Bill:** big dice, damage time, damage ((dice))
8. **Bill:** bit better (pause)
9. **Bill:** a=h twenty and, and then I got to roll another two... no another one ((dice))
10. **Gaz:** nicely done
11. **Bill:** thirty-three points of acid damage
12. **Phil:** pretty good
13. **Sean:** okay that seemed to actually affect him (pause)
14. **Pete:** that stings a little bit
15. **Gaz:** he's not [xxx anymore
16. **Sean:** [a light wound... for him. Ah Gaz

Session B3, Segment 12, Irrelevant data removed

It is primarily the GM's responsibility, at least initially, to make sure players understand the world, can follow and enjoy the game's storyline. They must also keep the game flowing without getting caught up in any one facet of the rules, fictional world or game itself. This is not to say players have no say in the world, nor does it mean they are not responsible for general enjoyment of the game. In a long standing game, the world is just as much a product of the actions of the players as the desires of the game master. If a player decides to kill a key character in the storyline, the game master must compensate for that death. It is considered bad form to disallow actions that are in the bounds of the rules.

The choice of roleplaying data came from my own experience as a player. I had observed how I and other players used reference in complex ways with little to no confusion as to whether something was spoken by the character, referred to something within the game or whether the speaker was referring to themselves. While communicating about the fictional world and their actions within it, players must also manage spaces and landscapes outside the fictional world. Several mental spaces, including reality, memories of past events, plans for future events, additional fictional worlds (past, present and future), rules, game paraphernalia and present situations outside the direct context all have a place in the conversation and the participants' attention. This is done with little to no specialised vocabulary to refer to participants or any entities associated with them. On the contrary, players often avoid the use of references that distinguish between themselves and their characters. I also began to observe similar patterns in other contexts, such as DVD audio commentaries and watching people play video games. I chose to investigate the use of reference in the management of these worlds as a way to understand the integration of real and fictional self in the mind and to better understand how a limited number of referring expressions can have a seemingly infinite number of referents.

3.1.2 Recorded Groups

Two roleplaying groups were chosen for this study[8]. It was important to find more than one group, to ensure the observed phenomena were not simply a quirk of one group. I also felt it important to match the gamer demographics of my study to the tabletop gaming community as a whole. I therefore chose groups based on willingness to participate in conjunction with a market research survey conducted by Wizards of the Coast (publishers of Dungeons and Dragons) (Dancey, 2000)[9].

The market research survey indicated that, as of February 2000, only 19% of gamers who played on a regular basis were female, a number that may have increased in recent years as the internet and livestreaming make RPG gaming more popular[10]. The groups chosen reflect the demographics of the market research. Group 1 consists of seven males, while Group 2 is mixed gendered, with two females and four male participants.

The age range for the Wizards of the Coast study was, by their own admission, arbitrarily chosen. The survey was only conducted on participants aged between 12 and 35, with the 25-35 age range showing the highest number of players (34%). The age and experience were varied between the groups in my data. The participants in Group 1 were aged between 34 and 49 at the time of recording, older than those accounted for by Wizards of the Coast, and they all have several years of role-playing experience. Group 2, on the other hand, were between 18 and 24 at the time of recording, reflecting 25% of Wizards of the Coasts's respondents. Three of the participants in Group 2, two males and one female, are

[8] Ethics approval provided by Monash University Human Research Ethics Committee for project number CF/093570-20000011929 on January 7th, 2010.
[9] The cited version of this article is a reproduction from a third party website. This was required to keep the statistics as they were when I selected the groups (see "updates" on the cited page), and because the original was unavailable.
[10] Critical Role ('Critical Role | Geek and Sundry', n.d.), a popular livestreamed roleplaying game, has 3 female players of 8, with several female short-term players.

playing for the first time. The differences in experience were chosen to see if veteran role-players were more likely to refer to their characters using player names or pronouns than newer gamers. Wizards of the Coast did provide data directly on gaming experience, only the likelihood of those over 1 year of play to continue to do so.

All participants in this study are native speakers of English and all come from Victoria, Australia, but one, who was from New South Wales (Bill in Group 1). This removes region-based language as a variable between the two groups, allowing the analysis to focus only on activity-based language use. All participants but one (Jacob in Group 1) are tertiary educated or in the process of being tertiary educated. The disciplines represented vary from the sciences and engineering to accounting and the arts. Two of the participants in Group 1 have PhDs. The lack of variation here was largely incidental, but reflects the demographics given by Fine (1983) in his treatise on the sociology of role-players.

The groups chosen also had different play styles. Wizards of the Coast indicated that just over half (56%) of players used miniatures with their games, and as a result one of my own groups (Group 1) use miniatures. They also indicated that 66% of players played Dungeons and Dragons and the remaining 34% a mix of others, and 42% of players crated their own (home brew) adventures. The groups are playing two different games in two different gaming systems. Group 1 is playing the *Pathfinder Role-playing Game* (Schneider, 2009)[11], a similar game to the edition of Dungeons and Dragons that was current at the time of the market research[12], of which I have recorded two partial campaigns. The first is a single

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[12] Wizards of the Coast released 3rd edition Dungeons and Dragons in 2000 (Cook, Tweet, & Williams, 2000). Pathfinder is based on the 3.5 edition rules which are similar (Cook, Tweet, & Williams, 2003). The rules and playstyle of Dungeons and Dragons changed significantly in 4th edition (Heinsoo, Collins, Wyatt, Crawford, &

session published module run by Phil, *Voices of the Void* (McCreary, 2009), originally designed for tournament play. During Sessions 2 and 3, the group picked up a long running campaign that had been put on hiatus. This campaign uses the 5th published module in the *Rise of the Rune Lords* adventure path, *Sins of the Saviors* (Greer, 2008). A fourth session was recorded and transcribed from this group, but was not used in the final study so that the amount of data was equivalent to Group 2.

Group 2 is playing using the Generic Universal Role Playing System[13] (Jackson, 1996), which only 3% of participants in the Wizards of the Coast survey reported playing. The need for a game played independently of the research meant participants were left to play this game rather than a more popular one. The game, run by Mike, is a GM created adventure based on other media. This is the first and second sessions of a new campaign set in this homebrew world. Earlier recordings from this group were taken, but were discarded or not transcribed due to over-reference to the researcher.

Having each group play a different game allowed for as much variety in the language use as possible. Having both groups play the same game, perhaps a pre-written module, would have made certain elements more comparable, such as battle reference or space description. However, prewritten modules include descriptions for the GM to read, as in the extract below, from the *Voices in the Void* module. These modules also often include pre-generated characters, both non-player and player run (although the player characters are not used). These elements remove some spontaneity and creativity from parts of the game, and invalidate some of the questions being investigated in this study.

Mearls, 2009), thus making Pathfinder the nearest equivalent. Wizards of the Coast has since released a 5th edition of the game which is a different system and style again (Mearls & Crawford, 2014).

[13] Used with the Permission from Steve Jackson Games.

> Osirian herself and a pretty successful adventurer and fortune hunter by all accounts. She just arrived in Absalom out of the blue a few days ago, after a couple of years' worth of tomb-raiding in the Osirian deserts, and carrying an odd metal cylinder covered in hieroglyphs, like nothing Nigel has ever seen before. Nigel says she went straight to the basement of the museum to do some research in the family's library, muttering something about 'whispers in the dark' and 'old tapestries,' or something. He didn't hear from her for a couple of days, which isn't unusual when someone is deep into their research in the archives, but he got worried when strange noises started coming from the basement. He sent a watchman down there to investigate, and when he didn't return, Nigel sent a few more. That was last night, and they haven't come back up either. "Go to the museum and find out what happened to Imrizade Blakros and the watchmen. Nigel would prefer them alive, of course, especially the Blakros woman, but the Society is more interested in what she brought back with her. I've got a hunch it wasn't just grave goods and pretty jewelry [sic]. Whatever she found, the Society wants it, or at the very least some information about it." (McCreary, 2009, p. 4)

Recording pre-existing, or at least games planned independently of the study, also prevented any elements of researcher-stimulated discourse from entering the data, so no participant was induced to perform in any particular way.

3.2 Data Collection and transcription

One participant from each group was given the recorder to take to their games with them. They were given instructions to place the recorder in a central, inconspicuous position, and not to talk to or about the recorder[14]. The positioning of the recorders caused loss of audio at times, being often situated near, or even underneath, the snacks. I was not present for any recording session in an attempt to keep the recorded language as natural as possible. Participants were only told that the study was designed to investigate the uses of noun phrases while gaming, but not what specific kinds, or what functions, were being

[14] The recorder was an Olympus VN-5500

investigated[15]. Overall, approximately 30 hours of data were recorded, 24 hours transcribed and 20 used in the analysis (See Section 3.1.2 above).

Table 3.1: Recorded Sessions

Recording	**Sessions**	**Segments**	**Status**
Group 1: *Voices in the Void* (McCreary, 2009) (B1)	1	22	In Study
Group 1: *Sins of the Savior* (Greer, 2008) Session 1 & 2 (B2 & B3)	2	19 (session 1) 17 (session 2)	In Study
Group 1: *Sins of the Savior/ Rise of the Runelords* #6 (Vaughan, 2008)	1	18	Recorded and transcribed, not used
Group 2: *Legend of the Five Rings* (Aeg, 2008)	2	N/A	Not transcribed
Group 2: *GURPS* (G1 and G2) (Jackson, 1996)	2	14 (session 1) 12 (session 2)	In Study

Once the data was collected, each session was divided into ten minute segments for ease of transcription and for tracking data upon completion. The first segment of each session was removed to ensure the participants were behaving as they would on a normal game and were not 'playing to' the recorder. Transcriptions were produced verbatim, using a simplified form of the DuBois's (1991) annotation system (a summary table is below, and a fully tabulated list of conventions is found on Page XII in the preface of this thesis). Transcription was produced using Sscriber[16] and Word for Windows.

[15] Samples of documents provided to participants are provided in Appendix 4.
[16] http://www-personal.umich.edu/~ebreck/code/sscriber/

Table 3.2 Summary of transcription symbols

Symbol	**Gloss**
@	Laughter (one symbol per particle)
(laugh)	Laughter longer than 1 second
(Pause)	Pause longer than 1 second
…	Pause under 1 second
<R>	Read from text
((X))	Transcription notes
[, [[, [[[	Overlap
[X]	Omitted for privacy
Phil:	Speaker
ALL:	Multiple speakers
?:	Unknown speaker
xxx	Inaudible segment
<X>	Uncertain transcription
=	Lengthened segment

Initially, any mentions of the recorder were removed to prevent an overuse of third person and character reference, and to prevent 'playing to' the recorder[17]. However, these were found not to be particularly disruptive in Group 1, and stopped entirely by Session 3 of Group 2. They were interesting linguistically in Group 1 when they came up, due to features of reference where the tape itself was referred to as the researcher. A sample of transcribed data is presented in Appendix 1.

[17] Session 1 of Group 1, first and second segments were the extent of the removed portions.

3.3 Initial Data Coding and Coding Issues

Once transcribed, the data was coded for person reference forms. In order to perform this coding, a system of XML style tags were devised and programmed into macros for Word (macros given in Appendix 5). These tags were applied directly to words or phrases, which were also bolded for ease of analysis[18]. Tagged forms were often embedded in other tagged phrases where they included other person references within them:

Example 3.3:

Sam: Ø Better than **<Player_possession><Person_Pronoun>**my**</Person_Pronoun>** **<Definite_description>**barbarian**</Definite_Description></Player_possession>**
Jake: That's cause **<Player_possession><Person_Pronoun>**his**</Person_Pronoun>** **<Definite_description>**barbarian**</Definite_Description></Player_possession>** wasn't a front line fighter

Session B2, Segment 14

Example 3.3 shows two possessive forms with two embedded person forms each. Both possessive forms refer to the same entity. The first possessive form, used by Sam to refer to a past character, contains a deictic first person possessive, followed by a definite description of a character class type (Barbarian). The second possessive, spoken by Jake, in 3.4 refers to the same barbarian, but with a third-person possessive also coded as a pronoun.

The overall coding process involved some hurdles regarding expressions with several possible coding categories. The choice of what to code for in this data was relatively straight forward. All full NPs that refer to people were included. The problem became what categories certain terms were to be put in. I chose not to include my hypothesis of broader deictic categories within the coding for the first pass.

Based on the justification presented in Chapter 2, I chose to code anaphoric forms as deixis in this data. I chose also to treat referring expressions that function as demonstratives separately, to investigate whether "pointing" had a place in discourse where there is nothing

[18] An example of coded data is given in Appendix 2.

physical to point to. Due to this treatment of demonstratives, and the lack of visuals in the recorded data to track pointing, gestures or eye movements made by participants, certain forms were debatable as to whether they were demonstrative or simply deictic. Example 3.4 below shows a third person pronoun used demonstratively:

Example 3.4:

Jake: Well he thinks it's [still the search skill and h**e** hasn't got it written down @@@
Gaz: [you said search, you said search and he said search and he said search
Session B2, Segment 5

Gaz's use of *he* in the example above, and the second person pronouns preceding them, are likely demonstrative. The repeated use of "you/he said search" suggests several subjects, and that those subjects must be selected demonstratively. The use of demonstratives was usually restricted to reference to miniatures, but in this case the referents are people in the room.

The representation of elided constituents was an important consideration for this data. In most cases, the null segment was in the position of omitted subject, for phrases such as that presented in Example 3.6 or imperatives such as "Ø go and get the sword" (3.7). The null was included for coding for occasions where the world context of the subject differs between the null reference and its antecedent or assumed referent:

Example 3.6:

1. **Tim:** I watch him back
2. **Ed**: Ø Evaluate
3. **Mike:** Ø Evaluate?
4. **Tim:** Yeah

Session G2, Segment 10, Tags removed

Example 3.7

1. **Pete:** Gaz, why Gaz?
2. **Phil:** he's got the highest perception, if Sam fails to see him Gaz can go he's over there!
3. **Pete**: and then Ø go and Ø grapple him Gaz, we can just cast all our spells on you
4. **Phil:** Ø keep tripping him over

Session B2, Segment 17, Tags removed

In some cases, the inserted nulls had to include a verb, usually some form of the verb "to be" on stative verb phrases (Example 3.8). These cases were included for similar reason to omitted subject nulls. In line 2, the null indicates the monster the characters are fighting (equivalent to “it is still up”) as sixty-four points of damage was not enough to kill it. Jake in Line 5 repeats the use of null for “it is”:

Example 3.8

1. **Sam:** sixty-four points
2. **Phil:** yep Ø still up
3. **Sean:** nyeh
4. **((pause))**
5. **Jake:** Ø just still up
6. **Phil:** okay after Sa=m i=s hmm

Session B1, Segment 19

A number of forms were treated as indefinites. These forms were those with generic referents ("If you add red and blue you get purple"), or referents that are not nameable ("we'll say that was a six"). The personal form "who", whether used relatively or interrogatively, was coded as indefinite. Interrogatives were treated as indefinite subjects, as they still needed to carry a context element. Instances of filler phrases that contain pronoun-like particles ("you know"), which could have been treated as indefinite, were not counted as referring at all for the purpose of this study, because the phrase itself is empty, behaving in a similar way to “um”.

After coding the reference types found in the data, a set of clean transcriptions were coded for the target entity of each of the person references. This was done in the same way as the codes for referent type, and coded to reflect the target context:

Example 3.9

1. **Phil:** And what did **<context_fiction>they</context_fiction>**? And what was that **<context_real>Gaz</context_real>** for **<context_fiction>you</context_fiction>**?
2. **Gaz:** **<context_fiction>I</context_fiction>**= u=m cast shield... **<context_minis><context_fiction>all the up fronts</context_fiction></context_minis>**
3. **Phil:** **<context_real>Pete</context_real>**?
4. **Jake:** **<context_fiction>You and him</context_fiction>**?
5. **Gaz:** Yes, **<context_fiction>we</context_fiction>** had a system
6. **Phil:** Protection from evil, **<context_real>Sean</context_real>**?

Session B1, Segment 15

The initial coding for person versus character (and, in the case of Group 1, on-table miniatures) did not adequately reflect all of the possible entities being referred to in the data. Further contexts were added to the coding are provided in Appendix 2.

Example 3.10

1. **Susan:** Oh thank **<context_fiction>you</context_fiction>**, here let **<context_alius>me</context_alius>** take those
2. **Mike:** **<context_fiction>She</context_fiction>** passes **<context_fiction>you</context_fiction>** one and starts- drags the other one in straw pallets are heavy... And puts them on the floor, um gah says **<context_alius>I'll</context_alius>** [be back in-
3. **Susan** [**<context_table>You</context_table>** gonna make **<context_table>me</context_table>** make a strength check cause **<context_stats>I'm</context_stats>** on strength eight
4. **Mike:** Sure
5. **Ed:** Is **<context_stats><context_fiction>anyone</context_fiction></context_stats>** [strong at all
6. **Mike:** [Actually what's **<context_stats>your</context_stats>**- just **<context_stats>your</context_stats>** carrying capacity. What's **<context_stats>your</context_stats>** max?

Session D1, Segment 8

Where the target referent of a form was uncertain, the instances were tagged with <context_unknown>. The coding of context was for ease of testing of previous theories and a method for assessing patterns of context change quickly. To aid in legibility, examples in the thesis are presented with target contexts represented by superscript numbers. In later chapters, the indexed entity appears in subscript where appropriate.

Several data samples were given to independent coders to ensure that the contexts were understandable by others. All identifying information was removed from the samples, and the test participants were given a list of potential contexts and entities to apply to the sample, specifically whether the referent was a character, player, external self, miniature or object. The test included people with experience levels in linguistics and gaming, and were all native speakers but one. The participants in the test were largely able to discern character, player and external self reference in the samples they were given, except in an instance of reference to a miniature figure among references to both player and character. The example below,

taken from the test segment, shows referring expressions that were problematic for the testers (Line 1) and some that were not (Lines 5-12):

Example 3.11

1. **Phil:** yeah, doesn't matter it was where **we** started. How'd we go at hitting me from off the map
2. **Sean:** ((mumbling)) [blah blah blah
3. **Gaz:** [which one are you?
4. **Phil:** I'm the one with the sword pointing above his head
5. **Pete:** each round there are from [your turn
6. **Gaz:** [off the map
7. **Pete:** it strikes the opponent you designate starting with one attack in the round the spell is cast and continuing each round [thereafter, on your turn
8. **Phil:** [@@@@@
9. **Sean:** yep, okay
10. **Gaz:** thank you Phillip
11. **Pete:** so it's not like you can tell it to hit it on his turn
12. **Sean:** no, no that's right so it can't you can't do anything special with the sword you can just keep smacking Sam with it

Session B2, Segment 18

In the example above, in which the participants are discussing which miniatures represent which characters, the first line was found problematic by those asked to code the data. Testers indicated that it was difficult to determine whether parts of Line 1 were referring to the miniature or the character due to the lack of visual cues. Phil's use of *we*, shown in bold, was the only referring expression marked as unknown in the tests, and only by one participant. The other participants marked this instance as player or miniature figure, indicating that there was some confusion. The referent here is the figure; the players are determining where their characters are standing relative to a monster, and the positions the miniatures were in before the battle were irrelevant because of non-combat movement that had occurred in game without the miniatures being moved.

The results of the tests showed that the contexts provided were valid and were used in the final model, albeit in an expanded form. Except where indicated above, the participants were able to identify the correct referent.

3.4 Method for Testing Existing Theories

After the data was coded for reference type and entity, several existing theories were tested against the collected data. The aim here was to discover if anything previously written could be applied or adapted to account for the use of reference in the data. In order to perform this test, each theory was applied to a sample of data consisting approximately 5 minutes of data, 2.5 minutes per participant group, selected at random and different from that used with the independent testers (samples are shown in Appendix 3). Each data set includes between four and six world space or entity references and as many participants as the size of the sample and need for multiple worlds would allow. The world spaces found in the test data are given in the beginning of the following chapter, which provides a description of the reference use found in table top roleplaying games.

Chapter 4 Reference Behaviour in Roleplaying Games

In this chapter, I will briefly outline the nature of person reference in the collected data. This description will be framed around the behaviour of proper names. Their use will first be described then compared to definite descriptions and deixis in the data. This will provide the framework for the tests of existing reference theories presented in the following chapter.

The chapter begins with an exploration of the behaviour of proper names in the data, focusing on the use of player names. This is followed by comparisons of this behaviour to the behaviour of definite descriptions and deixis. This discussion leads to a description of the way entities are used and referred to in the data, including the way participants shift between referring to particular entities and how participants mark shifts in target world.

4.1 Behaviour of Proper Names

The proper names used in the data primarily fall into two categories, the names of real people (the players), and the names of fictional characters. Non-participant names are also mentioned, as are the names of fictional characters from other fictional worlds. Group 1 does not use the names of their own characters, except for a single instance that is likely a joke. Outside of the recording, one of the participants indicated that they often do not name their characters or the names they give are (often crass) jokes. Group 2, on the other hand, often use the proper names of characters. A prime example is Susan, who refers to her character by name more often than any other participant:

Example 4.1

Susan: He's trying to help people... Anyway... Sads over sads over, @@ anyway at the end of this epic which just happens to be a romantic tragedy, ***Eirra*** is in tears. And um, you know sobbing in the front row and she just stands up to applaud etcetera etcetera
Mike: How much has she had to drink at this point
Session D2, Segment 2

Susan uses the name *Eirra* (bold and italic) here to describe what Eirra is doing in the fictional world. The speech is taking the form of a narration, so is use of the name is more

like telling a story than roleplaying a character. This usage is less common in the data than using player names for characters. Group 1 only uses player names when referring to player-controlled characters, while Group 2 switch between player names and character names.

Susan uses a character proper name in a manner not seen anywhere else in the data:

Example 4.2

1. **Alan**: I try and make a -
2. **Susan:** This is why Eirra took all the diplomacy and talky skills
3. **Alan**: I tried to take, I did try and make a slightly [talky mage

Session D1, Segment 4

The example above, Susan uses the name *Eirra* (her character) to refer to herself. The 'diplomacy and talky skills' refer to rule-based abilities that player can choose for the character to have. It is possible that this is a form of cross-reference or a reference akin to use a character's name to indicate the actor (for example, "Frodo is a voice in Broken Age"). It occurs nowhere else in the data, suggesting Susan's use is non-standard in a roleplaying context.

Aside from the example above, the character names used in my data always refer to the character. Proper names of players, however, can be used for several entities including the player themselves, the character, past characters, miniature representations of characters or character sheets. Examples of some of these are given below:

Example 4.3 (Irrelevant utterances removed)

1. **Bill:** [nah nah nah that's what I want
2. **Phil:** Sam can- Sam can take the paddle steamer up and back
3. **Sam:** boat for the day
4. **Sam:** a speedboat and just ride down next to you say hello

Session B3, Segment 9

In this example, the proper name *Sam* (jokingly) refers to a future version of Sam himself, as the group had been planning an annual trip to a riverside town. In Example 4.4, the same name is also used to refer to Sam's current character, who has no name of its own:

Example 4.4

1. **Sean:** that's right you can't just have an [entire room going tsh tsh tsh tsh
2. **Phil:** [though between Sam and me we can have two light spells going
3. **Sam:** yes

Session B3, Segment 9

Phil mentions that "Sam and me" have the ability to use the spell 'light'. This use of a player's proper name to refer to a character is the standard form for reference to character in the data, also occurring in Group 2. This use of proper names presents interesting issues for the idea of proper name rigidity (discussed in Chapter 2). The rigid designation theory of proper names states that a proper name should refer to the same entity in all possible worlds in which that entity exists, and nothing in possible worlds where it does not (or, in some readings, where they do not (LaPorte, 2012)). The above example demonstrates the issue with this statement: The proper name "Sam" above, while rigidly indexing its owner, refers to a fictional entity in a fictional world where Sam himself does not exist. Although the index of the name is rigid, the referent is not, so the issue cannot be dismissed by simply saying it is a case of hyponymy. Rather, it is a single name with two distinct entities as referent and index. I will leave arguments against rigid designation theory here, instead focusing on more flexible theories of proper names in the tests presented in the following chapter.

Beyond the player and character, a proper name can refer to items associated with the player or character. In the example below, the proper name Jacob refers to a miniature figurine used to represent the position of Jacobs's character in the fictional world:

Example 4.5:

1. **Phil:** so who's that standing next to it?
2. **Jacob:** no one
3. **Sam:** Jacob
4. **Phil:** makes a concentration che=ck
5. **Bill:** Captain no one

Session B1, Segment 21

In the example above, Phil is asking who the miniature figure next to the figurine of a monster they are standing next to represents. When Sam says the name "Jacob", he is

referring to the miniature itself (identifying who it belongs to) and Jacob's character, identifying them as the character closest to the enemy. As will be discussed in Chapter 5, this goes against the current understanding of representative reference, namely the statue rule (Jackendoff, 1992).

The lack of character names in Group 1 is indicative of their lack of treatment of player characters as entities in their own right. Group 2, on the other hand, use a combination of narrated separate characters and depicted player-as-character. This results in a mixture of indexes for the fictional entity. The example below shows Eleanor referring to her character Fred by means of two separate indexes:

Example 4.6

1. **Eleanor**: I don't even think I have any money, do I have money or just clothes?
2. **Susan** You're dead broke
3. **[8 lines omitted]**
4. **Eleanor:** Pull the I am alone and I have no one else with me and, generally pull the best puppy dog eyes a spider person can possibly pull
5. **[22 lines omitted]**
6. **Mike:** [as this strange, short bundle of energy charges up to you and starts making conversation
7. **Susan:** Oh oh, and then I turn to the tender and go she's with me, she's with me how much is it for her room?
8. ((pause))
9. **Eleanor:** Fred is in the bar and has [no idea what is going on

Session D1, Segment 3, irrelevant lines omitted

In Example 4.6, Fred is referred to using the first person pronoun (Lines 1 and 4) and a proper name (Line 9). The first person pronouns index Eleanor as the speaker of the utterance, while the proper name indexes Fred herself. The use of a player index for a character is indicative of a portrayal of character, creating a player/character blended entity, while third person and character proper name use indicates a narrative of the actions of the character as a separate entity.

I will now compare that behaviour to both definite descriptions (Section 4.2) and deictic forms (Section 4.3) to find patterns in proper name use that may explain how their reference works and work toward a unifying theory of personal reference in roleplaying.

4.2 Comparison to Definite Descriptions

In the data for this study, definite descriptions appear where players use roles or classes of characters to refer to fictional entities ("the rogue" or "the monster"), or presented them as possessions of the participants ("my wife" or "Sean's friend"). In all instances of their use in the data, they refer to the described entity[19]:

Example 4.7:

1. **Sam:** seventeen knowledge arcane its only seventeen
2. **Jacob:** That's alright
3. **Sam:** It's eighteen or nineteen
4. **Jacob:** Better than my fighter's knowledge arcane
5. **Phil:** seventeen
6. **Sam:** I'm not saying it's not good

Session B2, Segment 2

Descriptions are relatively fixed to their worlds and entities. In the case of Jacob's use of *my fighter,* he is referring to the character as a series of statistics as opposed to a person. The index is the same entity, "fighter" being a rule-based class as well as a fictional world archetype.

The lack of world fluidity in definite description is more akin to some of Group 2's use of proper name than any of Group 1's. The examples below give a definite description and a proper name use for the same character:

Example 4.8

Susan: Cause a spider dragging fully- you know clothes for a fully sized human being is a little more difficult to slip past easily, or much much easier to spot @@@

Session D1, Segment 3

The description used in this example is that of Eleanor's character Fred ("a spider dragging clothes for a fully sized human being") and is only used to refer to that character, much like the following reference to the same character:

[19] This isn't always the case for roleplayers. For the first group I played with, I was "the Bard" for quite some time, even outside play.

Example 4.9

Susan: By the innkeeper, hi! How ya doing, oh she's with me, how much is her room?
Eleanor: Fred's kinda been shell shocked ever since
Session D2, Segment 6

Fred is used for the fictional character Fred alone, and never refers to anything else in the data. There is very little comparison available beside the examples above that correlate directly between proper names and definite descriptions. Descriptions do not usually refer to an entity they do not index (as illustrated below), while proper names frequently do.

Example 4.10

1. **Phil:** with something completely [useless
2. **Sean:** [it was- wasn't actually that I'm thinking **he's** getting paid out on a bit for the barbarian but **he's** gonna get paid out twice as much for the monk
3. **Sam:** he doesn't learn
Session B2, Segment 14

In Example 4.10, when Sean states that *he* (Gaz) will be picked on for his choice of character[20], it is the class and other rules-based character aspects that are being both indexed and referred to. The examples of proper names given in the section above show that they are frequently used with mismatched indexes and referents.

The seemingly more rigid approach to reference seen in descriptions, possibly coupled with game related reasons such as immersion, means that definite descriptions in Group 1 are usually reserved for NPCs, past characters or non-participants in Group 1. Dual reference, found most often in Group 1, behaves similarly for both proper names and definite descriptions as for the single-referring terms. Almost any reference to the miniature figures will also refer, via representation, to the associated character. This goes for both proper names and definite descriptions. The difference remains the choice of indexing designator:

[20] "The barbarian" is Gaz's past character. A barbarian is a character class that is primarily built for melee fighting and usually has little intelligence. "The monk" is Gaz's current character. A monk is a class of fighter that uses no weapons or armour, and are notoriously difficult to create effectively. Gaz has a reputation for not making particularly effective characters.

Example 4.11

1. **Jacob:** Brown's gonna get himself reported cause he's a fucker
2. **Phil:** can everybody please put their characters where they'll be before we enter the room
3. **Pete:** Before we enter the room
4. **Phil:** Well, as you enter the room

Session B1, Segment 15

In Example 4.11 above, Phil uses the definite description "their characters" to refer to the miniatures. This use indexes the character the miniature represents, referring to it as a possession of their player. In the example that follows, the index is the player themselves, while the referent is still their character and miniature:

Example 4.12

1. **Pete:** nah round after the first you can use a move action to redirect weapon
2. **Gaz:** oh that's Jacob!
3. **Phil:** no that's the monster
4. **Gaz:** that's the monster. Once again.

Session B2, Segment 18

The use of definite description indexes the target entity (the monster) to refer to both the miniature and the target (a direct use of the statue rule, discussed in Chapter 5). The proper name *Jacob*, on the other hand, indexes the player who is not either of the entities referred to by the designator.

4.3 Comparison to Deixis

The proper name use of roleplay gamers has been shown to be largely non-rigid. Proper names were shown above to be *less* rigid than definite descriptions, which are considered to be non-deictic indexicals.

Unlike the use of proper names, deictic expressions are fairly consistent in their use across both groups. There are players, specifically Susan and Eleanor, who use deictic forms for characters less often than other players, but the cross-world deictic use still occurs. A typical use of the first person deictic pronoun is given below:

Example 4.13

1. **Gaz:** I'll do that next round
2. **Phil:** Well I wouldn't get an attack. I'm gonna channel
3. **Jake:** you've got additional rulebook
4. **Phil:** Actually I'm gonna channel a vampiric touch

Session B2, Segment 9

Here Phil from Group 1 uses the first person designator to explain what his character is doing in the fictional world. This player-indexing character reference system is identical to the use of proper names described above. The question then becomes whether the same behaviour is seen in both proper names and deictic forms for all entities.

The only case of deictic index/referent match for character is in-character speech:

Example 4.14

1. **Alan:** So what brings you all to the city?
2. **Susan:** It was happening, and I was here, that was about it. And I got to talk to Lydia again heehee
3. **Alan:** Who's Lydia?

Session D2, Segment 5

In this example, Susan is speaking as her character Eirra. She is portraying the character, rather than narrating. As this is a first person reference use, the index is the speaker. However, as Susan is pretending to be Eirra (rather than narrating her actions as in a player-as-character use), the index is then Eirra.

Similarities of use between deixis and proper names go beyond first person. A direct correlation can be found between the use of proper names and the use of the second person pronoun for character. The examples below both refer to Sam's character by way of indexing Sam:

Example 4.15

1. **Sam:** [cast haste
2. **Phil:** have you got anything offensive you can cast on him? [[xxx hold person
3. **Gaz:** [[u=m
4. **Sean:** he can't see him
5. **Sam:** I can't see him
6. **Phil:** is he invisible?
7. **Sean:** no Sam's [not in the room @@

Session B3, Segment 14

The use of reflexive deictic pronouns is also similar to the use of proper names. Take the example below and compare it to Example 4.15 above:

Example 4.16

1. **Phil:** anyone else got perception
2. **Sean:** yep
3. **Sam:** yes
4. **Phil:** well **Ø** put yourself where you're searching
5. **Pete:** Is that the only door?

Session B1, Segment 12

Phil refers to the miniature figures by the term *yourself*, indexing the player, the player being the null antecedent (bold) in both index and refent. The later use of *you're* indexes the player and refers to the character. Reflexive pronouns are an interesting case in the data. A reflexive pronoun uses the subject of the sentence as an antecedent to establish a referent. In roleplaying, the antecedent of a reflexive and the reflexive itself often do not have the same referent. In the above, the referent of the reflexive is the miniature figure representing a character (but in this case, only the miniature), while the antecedent refers to the player themselves without a direct link to the character.

The discussion above has shown that deictic pronouns can refer to any entity a proper name can refer to, while definite descriptions are more restricted. This indicates that proper names in the data behave more like deictic terms than the more rigid (but not completely rigid) definite descriptions. The frame of proper names was also a useful vehicle for describing multi-world reference in general.

4.4 Flow of Entities

There is a distinct pattern to the way that participants switch between referring to entities in one world to referring to entities in another. While several different entities can be referred to within the same utterance, entities in vastly different and disconnected worlds are usually only switched after distinct marking. The "free flowing" entities, those that can be switched without marking, will usually be within the same world or have similar function.

Those entities directly related to the game in some way can be referred to within the same utterance or speech even without marking or a change to a lower-access term, while the real world, past fictional worlds and fictional worlds from other media are either preceded by some form of discourse marker or unavailable for reference. A timeline chart showing the shifts in referred entities is provided in the accompanying file named *EntityFlow.html*. This short section will give an overview of the shift between referred entities as shown in the chart. Section 9.3 of Chapter 9 discusses the shifts in relation to the final model created in more depth.

The accessibility of an entity for reference is decided at the individual level as well as at a group level. If a speaker was previously referring to a character entity, for example, they are able to refer to any other entity relating to that particular character's fictional world without marking even if other members of the group have shifted to an inaccessible world, as long as the speaker had referred to the fictional world within a reasonable amount of time.

The way in which the shifts mentioned above are marked give clues to the way entities are related in the speakers' minds. This section will briefly describe the kinds of discourse markers that are used in the data. Although discourse marking is not a key focus of this thesis, it does seem to be a key part of reference use and interpretation, and so it is important to discuss them to some extent.

The most distinctly marked shifts are from the real world that is independent of the game and the fictional world. When the game goes off track due to an anecdote being told or plans for future non-game events, a participant, usually the game master, will use some form of marker to bring the game back. This marker is often preceded by a pause in speech:

Example 4.17

1. **Tom:** even working... oh sorry
2. **Phil:** I'm a shift worker mate you gotta get used to it
3. **Gaz:** @@@
4. ((pause))
5. **Sean:** yeah Gaz smacks one around but not as impressive as his last effort
6. **Phil:** now their attacks
7. **Sam:** no it's my turn

Session B3, Segment 17

Example 4.17 begins during a conversation about Phil being able to sleep even after drinking coffee or tea, to which Tom jokes that work is also unable to prevent him sleeping. This conversation was originally the result of an interruption to the game by the wife of a participant offering tea to the players. The end of the conversation about tea is marked by a laugh and a pause. This is followed by Sean marking the shift back to the game by beginning his utterance with "yeah". The marker brings the group as a whole back to the game. A marked shift like the one above is only required if the majority of the group, the participant whose turn it is, has moved their attention out of the gameplay space.

There are scholars who would contend that the kinds of world shift markers are not in fact discourse markers as they have no lexical content (Fraser, 2009). They do, however serve an important pragmatic function in signalling the cognitive context of an utterance chain and therefore the types of referents that are accessible in the discourse.

4.5 Next Steps

The reference behaviour outlined above leads to several questions relating to the use and interpretation of reference to person, particularly in terms of its context dependence. The first step in answering these questions is to test existing theories of reference on the data. The results of the tests will be used to devise a model for the use of reference in the data. The chapters that follow outline that process, beginning with these tests, followed by the resulting issues and their potential resolutions.

Chapter 5 Testing Existing Theories

In the previous chapter, I described the behaviour of referring expressions in roleplaying games by way of comparing proper names with definite descriptions and deixis. It was found that not only did proper names behave similarly to deictic terms, but neither the proper names in the data, nor the deictic terms, behave as would be expected from these kinds of reference. In this chapter, the data is tested against various theories of reference to attempt to account for this behaviour. I will begin with theories of how proper names refer, beginning with a brief discussion of Kripke's (1980) rigid designation theory before moving to indexical theories of proper names. From there, I will test deictic theories on both proper names and deixis in the data. Theories of reference in fiction and cognitive linguistics will also be investigated. The chapter will conclude with theories that apply to only one aspect of the data such as the use of miniature figures and anaphora.

The findings of this chapter will be consolidated in Chapter 6, where the shortcomings of the tested theories will be discussed and solutions devised. In parts of this chapter, examples are coded using superscript for referents found in tested theories, and subscript for the actual referents. The following table is a key to the coding in the examples, with each entity assigned a separate number.

Where a participant has more than one character being discussed, an identifier is added to differentiate them, usually the character's class[21] (such as 'Gaz$^{\text{Monk}}$'). Where the entity being referred to is in a past space, the letter 'm'[22] (such as 'Gaz$^{\text{1M}}$') is placed after the code, and the letter 'f' is included for entities in a future space, such as a character being planned

[21] *Class* refers to the kind of character being played. A monk, for example, is a martial artist that fights without weapons or armour, while a wizard is a magician who casts spells from a book.
[22] *M* was chosen to represent memory, as *P* may also refer to player.

around. Finally, where important for the discussion, a 'j' is included where the reference use is specifically joking or insulting, and is thus operating differently than the average use of the sign in the data.

Table 5.1 Entity Coding Guide

Coding Number	Entity	Description
1	Self	The participant outside the game, the real person
2	Fictional character	The character being played by a participant, or an NPC controlled by the GM. An entity that resides only in the fictional world
3	Player as character	The player depicting the character, or describing a player's action as if they themselves were performing them
4	Character as statistics	The character treated not as a person, but a series of numbers representing their attributes as dictated by the rules
5	Miniature figure	A miniature representation of the character used to show the character's position relative to other fictional entities. A reference to the miniature is usually also a reference to the character

5.1 Proper Name Theories

5.1.1 Rigid Designation

In this section, I explore the rigid designation theory of proper names, including a brief note on nicknames and insults as equivalents to proper names in terms of use. A longstanding theory of proper names is that they are what Kripke (1981) calls a *rigid designator*. That is, they always refer to the same entity in any situation, and nothing where that entity does not exist. Rigid designation theory is directly linked to possible world theory (Chapter 2, Section

2.2.1), in that the concept of a name referring to a single thing includes "all possible worlds" where that entity exists. In this section, I will consider these two features of rigid designation in turn, applying the theory to my data by way of a test, starting with the idea that a name can refer to only one entity in a possible world. The instances of names in the data refer to separate, but not independent, entities. The entities using the name are closely linked through ownership, portrayal or because it is a past or future version of the parent entity. This may indicate a type of metonymy, in that the name of the creator or owner of a character, miniature, sheet or other linked entity is used for the linked entity as an index.

This, in turn, brings me to the problem of rigidity for such separate yet linked entities. Take, for instance, Example 5.1 below:

Example 5.1
Sean: yeah **Gaz**$^{1}{}_{3}$ smacks one around but not as impressive as his last effort

Session B3, Segment 7

In the example, the proper name *Gaz* (bold) uses the name of an entity in the real world, but refers to an entity in the fictional world. The rigid designation theory requires a name to refer to the same entity in any world. In the real world, this instance the name *Gaz*[23] refers to Gaz himself while in the fictional world it refers to a Dwarf monk who has no name. The name does not, then, refer to the same entity in any possible world.

The second element of the theory, that a designator refers to nothing if its link entity does not exist in a world, is just as, if not more, flawed than the initial statement. Example 5.2 shows an interaction in which a player is talking about the actions of another player's character, coded for target entity:

[23] I am not taking into account situations of people with the same name in this test.

Example 5.2

1. **Sean:** just split up the damage as much as we possibly can
2. **Gaz:** well
3. **Jake:** Sam's$^{1}_{3}$ gonna
4. **Gaz:** Sam's$^{1}_{3}$ magic missiles
5. **Jake:** Sam's$^{1}_{3}$ gonna take two of them out hopefully
6. (10 utterances omitted)
7. **Phil:** Sam$^{1}_{1}$ five missiles?
8. **Sam:** yes, sorry
9. **Sean:** that's with [Sam's$^{1}_{3}$ haste?

Session B3, Segment 5

The designator *Sam* is used for an entity in the fictional realm, a possible world where the owner of that designation does not exist. The use of the name of the player for their character is not considered a homonym in this case, as by definition two owners of a homonymic term cannot have a shared connection, something that is clearly evident between the player and character.

Even where the character's actions are not being discussed, the player's designator can be used for an entity in a non-real realm:

Example 5.3

1. **Phil:** I reckon with your acrobatics you'd be able to tumble across the hole Gaz$^{1}_{1}$
2. **Jake:** and enemies down there
3. **Sean:** Um
4. **Phil**: some want us back
5. **Sean:** he says we've heard terrible howling unearthly dog noises coming from the hole
6. **Phil:** still Gaz$^{1}_{3j}$
7. **Sam:** no that was Gaz$^{1}_{1pj}$ last night

Session B2, Segment 2

The three uses of Gaz refer to three different entities. The first instance is directly addressing Gaz about the abilities of his character, indexing and referring to the real entity. The second mention continues to index the real Gaz, but this time he is being treated as the source of fictional sounds. The final mention brings the joke back into a semi-real world that is based on a joke.

The case of Gaz in the above example is an interesting one. The entity it refers to is clearly within the fictional world, indicated by the term being used as an origin of unearthly dog noises. However, the referee is also not Gaz's character. Instead, the referee is a mix between the character and Gaz himself, using the situation of the strange noises to insult the real Gaz through the device of the fictional world. This then would appear to be a conceptual blend (Section 5.4.1). This kind of mixed world for insulting is a feature of the interactions of Group 1.

Despite all of the issues with rigid designation, there is an element of rigidity in the data, found in the use of the character's name. In the recorded data, the character's name is only used for the character when separate from the player, as with Mike's use of Eirra below. The rigidity found here, as seen in uses discussed earlier, have an important function; to separate the player from the character's actions to some extent. There may be several reasons for this separation. A player may wish to distance themselves from actions that they find morally wrong. Players may also be reluctant to talk about a character death using player terms as death is an uncomfortable subject. Finally, a participant may chose to use a proper name for as a story telling device, as seen in Example 5.4 below:

Example 5.4

1. **Mike**: and there's more of the other colours of mana, as well as occasionally touches of, um, light mana
2. **Susan**: what does he see when he looks at me?
3. **Mike**: I was about to get to this oddity
4. **Alan**: @@@
5. **Mike**: Um when you glance at your companions. Eirra... has... a normally, normally it's a couple of touches of the terrestrial elements, plus a lot of life, and a lot of moon. $Eirra_2^2$ has a lot of life and a lot of air
6. **Alan**: Far away
7. **Mike**: And a little bit of life and the other three terrestrial elements

Session D1, Segment 12

Example 5.4 show's Mike's use of the name *Eirra* (Line 5) for narrative effect, describing what kind of magical aura she presents to the mage character. This use comes after the use by Susan of a first person pronoun to refer to Eirra. This kind of mixture between

signs indexing character and those indexing players but both referring to the character are frequent in Group 2, sometimes in the same utterance:

Example 5.5

1. **Mike:** so.. you wander up and find a, pleasant spacious room which unfortunately means you're probably gonna have [people sleeping on your floor
2. [((dice bouncing))
3. **Susan:** meh
4. **Mike:** so
5. **Susan:** hmm... Eirra$^{2}_{2}$ is all about the experience @@

Session D1, Segment 2

Example 5.5 shows reference to the character Eirra in two ways. Mike begins by referring to Eirra by addressing and indexing Susan. Susan herself indexes and refers to Eirra with her proper name.

With rigid designation shown to be an unacceptable explanation of the phenomenon of reference in the data, I will investigate the theories proposing names as indexical forms.

5.1.2 Indexical Names

Having shown that rigid designation theory is unable to account for the use of proper names in the data, we must look to other, less conventional theories of proper name reference. Although many writers on the topic of proper names believe they are rigid (see above), there are also those that view proper names as context dependent. These indexical views usually relate to the picking out of a name's referent where several people share the same *sign* form of a name, while the proper name use in the data has multiple entities sharing both the sign and index of a proper name. These indexical views may be informal, which claim that intrinsically indexical terms are semantically equivalent to proper names, or formal, which believe the formal semantic framework of indexicals is applicable to proper names, thus indicating that proper names are also indexical (Rami, 2014). It is a variant of a formal view that, at face value, seems to fit the situation presented in my data. In this section, I will test

the basics of formal indexical views, as well as subsets of the formal views, including salience based views, reference chain views and descriptive views.

Pelczar and Rainsbury's (1998) paper, *The Indexical Character of Names*, presents a view of names as "rigidly designating indexicals". This means that, despite Kripke's (1980) description of names as only ever referring to the same person, Pelczar and Rainsbury see names as having a rigid index, always pointing to the bearer of the name, and a sense that is context dependent, meaning the name can refer to anyone until the name is used for someone specific. The authors' theory relies on the concept of "dubbing", or the assigning of a name to a particular entity. The most contextually appropriate entity dubbed with a name is likely to be the referent. By making the salient entity attached to a name part of the indexical context, the theory explains how interlocutors can determine the appropriate referent of a name where several people share it. Many indexical theories of names are concerned with the interpretation of shared names, rather than the interpretation of entity where several entities share the same index:

Example 5.6:

1. **Sean:** Well you know I said if there's a TPK, then we should make full Pathfinder characters
2. **Gaz:** That makes sense
3. **Sean:** Its only cause... I'd have to completely rebuild... basically Sam^{1}_{4} and $Pete^{1}_{4}$... cause they'd be completely different and I'd have to ban $Phil^{1}_{4}$

Session B2, Segment 1

In the example above, Sean is discussing which of the game's characters would need to be adapted to a new rule system. All proper name uses in Line 3 (Sam, Pete and Phil) refer to the rules-based characters created by Sam, Pete and Phil. The entities dubbed with the names *Sam, Pete* and *Phil* are not the referents of the names, but the names of the indexed entities; the players. The referent entities, in fact, do not have dubbed names, or if they do, those names are never used within the data. The contextual appropriateness is also somewhat prohibitive if only situational context is considered. Sean is talking about what he himself

will have to do if the game results in all the current characters, who are written based on an early draft ruleset, should die in the game[24]. This would indicate that the context to be used for interpretation at a discourse level is the real world. However, Sam, Pete and Phil in this case are abstract entities that exist in the real world as numbers on paper, with those numbers representing the skills and abilities of fictional characters in the fictional world. To interpret the names based on the active context at a discourse or even utterance level, two real people would have to be rebuilt, and Phil would no longer be allowed to play. It is clear, then, that situational context and context at an utterance level do not adequately represent the way reference is interpreted in the context of roleplay.

Although a dubbing-based interpretation does not help us in finding the final referent of a proper name, Pelczar and Rainsbury's theory does help establish the index, or would, if there were several players with the same name in the groups in the data[25]. The index narrows the available entities that can be referred to the name, and is the bearer of a name that the speaker intends to label.

There is another testable theory that names are variables in the same way as anaphoric pronouns or definite descriptions (Cumming, 2008). Cumming claims that a name's first use, much like a dubbing, creates an antecedent, and subsequent uses of the name refer back to that initial use. This theory accounts for situations that Cummings presents in his works, such as the example below:

Example 5.7
There is a gentleman in Hertfordshire by the name of 'Ernest'. Ernest is engaged to two women and is the elder of two brothers (example taken from Cumming, 2008)

[24] "TPK" stands for "total party kill".
[25] This did occur in roleplaying data in an earlier study, where two players were called Nathan. In this case, rather than relying on context, one participant was redubbed "Nate" and the other kept "Nathan".

Here, an entity is dubbed "Ernest", and the subsequent Ernest refers back to that dubbed entity. Cumming claims that this parasitic use based on the dubbing of an entity is valid for both indefinite and definite names. An indefinite name is the use of a name where the intended referent is any given person who has that name, rather than a specific person, such as *Ernest* above, with Ernest in the first instance possibly referring to any man in Hertfordshire. A definite name is given to a specific person, such as the example below in which the inventor of the zip is dubbed *Julius*:

Example 5.8
Let 'Julius' name the inventor of the zip. Julius was an Englishman

An anaphoric account, for much the same reasons as a dubbing based account, does not hold up to the data presented for this study. In the following example, an expansion of example 5.6, the two uses of the name *Pete* (Lines 2 and 5) have different referents (but the same index), and do not have an anaphoric relationship:

Example 5.9
1. **Gaz:** That makes sense
2. **Sean:** Its only cause... I'd have to completely rebuild... basically Sam and Pete... cause they'd be completely different and I'd have to ban Phil
3. **Pete:** I have the time
4. Sean: @@@
5. **Sam:** Pete has the time
6. **Pete:** I can rebuild me
7. **Phil:** Not my character just me

Session B2, Segment 1

The first use of *Pete* refers to the rule-based character Pete is playing, while the second refers to Pete himself. Should the first Pete (the first use of the name in that session of recording) be the antecedent, then Sam would be declaring that Pete's character statistics have time to rebuild themselves. Cumming also argues that names are not world dependent, but are functions of context. There may be several people with the name Ernest in a world, so the world cannot dictate the referent. Instead, the discourse context must dictate the referent.

However, in the case of roleplaying, the referent of a proper name is world dependent. To determine whether a name refers to a real person or a fictional one, the world must be known as part of the context- and so to must the sub worlds in the case of rule based characters, miniatures and so on. As many of the worlds and spaces used for the game are created and exist only for a specific function within the game, it is unlikely that a gaming group will deliberately dub several entities with the same name.

Rami's (2014) later account of indexical proper names claims that a formal view is too general, as names can behave in similar ways to bound anaphoric pronouns, or may be unbound. He instead offers the explanation that names are more akin to complex demonstratives than to definite descriptions and similar indexical expressions. He also claims, much like I myself do, that the salient context of an utterance can only narrow the potential referents of a name. This is moving further toward the way the use of names and even deictic forms are seem in my model, with the cognitive domain of the usage context narrowing interpretation to a specific set of available entities (see below).

Throughout the section so far, I have assumed what Rami would call an ambiguity view of names, in that I have been treating cases of shared names as a non-literal sharing, that people with the same name are still indexing different entities. There seems to be little in the indexical view of names that can directly contradict this. If a name is equivalent to the description "bearer of name X" for all bearers of the name X (a descriptivist view, see below), the description is still indexing the particular bearer the speaker intends. Dubbing, as shown above, has a similar problem in that it indexes the specific dubbee the speaker intends. I am seeking an explanation for the use of reference where the various entities referable by name X all share the same intended index. We then need to look at the indexical theories of names as component parts, in particular the part that claims to base referent on the entity appropriate to context. As Rami claims, context is useful for narrowing potential referents.

We will take the context as present in a roleplaying game. We then say that the possible available entities are players, characters and anything needed for either of those two base entities to function in the game. The use of a name then narrows even further. Rami would then say that if there were only one entity with that name, you have your intended referent. In my view, however, you have only an index. We now have the available entities as the player and character and so on linked to the bearer of a particular name, but not which of those specific things is the intended referent. We must now move to other theories to understand how the interpretation is made beyond this narrowing.

The descriptivist view of referent determination contends that there is a definite description associated with a name that aids in determining the referent of that name (e.g Searle, 1958). The name "Henry Tudor VIII" is associated with the definite description "King of England, the eighth named Henry, that had six wives" or something similar. In most cases, the associated definite description is related to the introduction of the name, and is therefore a kind of anaphora, as discussed above in relation to Cumming's "Ernest" examples above. To test the descriptive view of proper name interpretation on the data, we must first determine what definite descriptions each proper name could be associated with. During this test, I will take Gaz as an example of Group 1's use, and Susan/ Eirra for Group 2. The most basic potential definite description that could relate to the proper name is "the bearer of the name Gaz", or possibly "the entity that was dubbed Gaz". This description *may* describe instances of use for each. The fictional character may be considered to bear the same name as its player (as we have already seen, no dubbing of the character occurs in Group 1), as occurred in Waggoner's (2009) study for the book *My Avatar, Myself*. This does not solve the problem of determining referent in the data, as the same description would relate to every possible referential use of the name. We could treat "the bearer of the name Gaz" as the description that allows us to determine the *index* of the term, but this brings us no closer to the referent.

Should we apply a description to each possible *referent* of the proper name, the problem of selecting a referent is simply displaced as the determination of the possible description of the proper name. The table below provides all possible descriptions for the proper name Gaz in the data, except time-displaced versions of other entities:

Table 5.2 All possible descriptions of the bearer of Gaz, with entity names and examples

Entity	**Example**	**Assigned description**
Self	**Phil:** hey *Gaz*, here's a question for you	Bearer of the name Gaz
Player/Character	nup two on *Gaz*... you're at thirty-six now Gaz?	Character played by the bearer of the name Gaz
Miniature	[there's two that are wounded, one on *Gaz's* side and one on Andrew's side	Miniature representing the character played by the bearer of the name Gaz
Character/rules	nup two on Gaz... you're at thirty-six now *Gaz*?	Rules-based statistics representing the character played by the bearer of the name Gaz
Joke/Player	**Pete:** even in centimetres it's not a foot **Phil:** He might be the first man to please Gaz then	A jocular version of the bearer of the name Gaz
Joke/Player/Character	*Gaz* goes two days before we do	A jocular version of the character played by the bearer of the name Gaz

The basic definite description works much better in the case of Eirra. The description "the bearer of the name Eirra" will only describe the character Eirra, as will "the entity that was dubbed Eirra". That is, except in one case:

Example 5.10

1. **Alan:** I try and make a -
2. **Susan:** This is why Eirra took all the diplomacy and talky skills
3. **Alan:** I tried to take, I did try and make a slightly [talky mage
4. **Mike:** [Fast talk defaults to psyche minus five

Session D1, Segment 4

In the example above, Susan uses the name *Eirra* to refer to herself making choices about the skill choices for the character. This would mean the associated description would

be "The entity that decides the numerical values assigned to the skills possessed by Eirra", a description that describes Eirra, not Susan. This description also does not apply to the index. If we were to apply the descriptivism view of *index* determination suggested above, the description "the bearer of the name Eirra" would be more appropriate. The name Eirra here is indexing Eirra and referring to Susan.

The description "bearer of the name X" is not usually enough to determine a referent without some knowledge of context even outside the realms of imaginary speech. As we saw earlier, the proper name "John", and its description "bearer of the name John" could refer to anyone from kings named John, Prince John of the Robin Hood mythos (and various iterations thereof), John Howard, or even euphemistic references to a toilet. Many authors (e.g. Pelczar & Rainsbury, 1998; Rami, 2014) have already argued for the indexical context dependence of names, so I will not go into detail here. Suffice to say, if this dependence is true in "simple contexts", then it will hold in imaginary contexts with an extension of the required context.

In Chapter 2, we established that the sense of an indexical proper name is "an entity that is contextually appropriately associated with the bearer of the name X"?. This does indeed establish a sense for the proper names used in the data, but does not help us determine a referent. In fact, it does not help us determine an index, as the index is simply "bearer of name X". This description allows us to determine a set of potential referents, as we will have the context to which the use is associated (playing a roleplaying game) and the index the entity is associated with. This change in the sense does not cause issues with standard uses of names, as a name can both index and refer to the same entity (its bearer). The entities established by the context are discussed and established later in this chapter in the discussion of cognitive domains. A similar description can apply to the use of deictic terms that appear in the data.

The communication chain view of names is directly related to dubbing. There is considered to be an instance of initial association of a name with its bearer, and the name is then "passed on from user to user" (Rami, 2014, p. 127). Unfortunately, we do not have any instances of the initial assignment of a name in the data, both because the initial naming of the participants occurred at their birth, and because the act of character naming often occurs outside game sessions and usually non-verbally. There are instances of name passing in both groups, both out of character (Example 5.11) and in character through recited speech:

Example 5.11

1. **Phil:** He's probably not gonna tell me
2. **Jacob:** ((end phone conversation)). Who'd call their baby Alfred?
3. **Gaz:** who? Who called their baby Alfred?
4. **Jacob:** My sister in law
5. **Gaz:** Oh she had him?

Session B2, Segment 6

In Example 5.11, Jacob passes on the freshly dubbed name of his nephew, Alfred[26]. The name pass is through general use, rather than an explicit statement of a name such as "I have a nephew called Alfred". The continued use of the name reflects a true chain, as the name is used the same way for the same entity by Gaz (Line 3) and by later by other participants (not shown). Communication chain style uses of names also occur in-character:

Example 5.12

1. **Eleanor:** Everyone else just looks at you
2. **Susan:** You're funny. @@@ I'm Eirra, what's your name
3. **((pause))**
4. **Tim:** Would you like some
5. **Alan:** Tennant!
6. **Susan:** Nice to meet you Tennant

Session D1, Segment 8

[26] Although the names of non-participants (who are not public figures) are largely removed from the data to protect privacy, the name here is replaced with a pseudonym to ease discussion.

Example 5.12 shows the passing-on of two character names (Eirra and Tennant) by the character by way of the player reciting their character's speech. The characters then proceed to use the names in a chain in much the same way the communication chain view is described; all uses of a name by a character spring from their introduction, and are used for the same entity in the same way.

The communication chain does not work as well for the names of participants. If we take into account the (untranscribed) recorded introductions of participants as the beginning of a chain, the later uses are not parasitic as the names are not used the same way during each subsequent use. A participant may introduce themself by saying "I'm Sean, I'm the ranger". Notwithstanding that Sean himself and the ranger are different entities and so the two identity statements here should not be possible (see deixis section below), the communication chain for the recording has set the use of the name Sean as the real Sean. The use of *Sean* does indeed continue to refer to the real Sean for some six uses in the recording, until the following occurs (Line 3, bold):

Example 5.13

1. **Sam:** He's gonna do a strength check, It's gonna be fairly obvious
2. **Sean:** erp nineteen
3. **Phil:** okay **Sean**$^{1}{}_{2}$ manages to push it over it fall=s goes crack on the ground breaks into pieces
4. **Jacob:** wow you can see him look even more prestigious than before

Session B1, Segment 2

Example 5.13 shows Sean's character's attempt to push over a statue of Mephistopheles to find something hidden inside. The "nineteen" in Line 2 is the total of Sean's character's strength score and the result of a dice roll. The push is successful, resulting in Phil's use of Sean in Line 3 to refer to Sean's character, who was able to push over the statue. It is possible to consider uses like this as dual, with the success of the roll belonging to the player or the rules-based character and the success of the push belonging to the character, but such dual reference does not change the outcome of the test of communication chain. The chain of use here is broken. The name use that started the chain, referring to Sean as a real person,

changes to referring to Sean as a character. If the chain is considered to have started much earlier, when Sean first introduced himself to the group of players, then the chain was broken long before the recording, as this group had played together for several years, and Sean had had several characters in that time that presumably had been referred to using his name.

Much like most of the theories tested, the names of characters do not prove particularly problematic for the theory, aside from the Eirra example presented above. The general use of player names, however, presents the biggest problem. Take the example below:

Example 5.14

1. **Phil:** What's your character's name Gaz$^{1}_{1}$?
2. **Sean:** On commemorative ah Goblins giants and dragons day
3. **Gaz:** Moorow
4. **Pete:** Maltese for moron
5. **(13 lines omitted)**
6. **Sean:** It seems an acolyte of Desna has come all this way from Sandpoint
7. **Phil:** if only we knew someone who worshiped Desna
8. **Sean:** @@@
9. **Phil:** That's a [gay god
10. **Gaz:** [Don't we know somebody who worships Desna?
11. **Sean:** ah
12. **Pete:** Wouldn't have been
13. **Phil:** Some gay
14. **Sean:** He introduces himself as Father Zanthas$^{2}_{2}$
15. **Jacob:** alright
16. **(19 lines omitted)**
17. **Sean:** [alright just so we can write Gaz$^{1}_{2}$ in what the hell, we're actually gonna xxxx points
18. **Gaz:** bing oh there I am
19. **Sean:** the priest has turned up with a Dwarf in robes
20. **Phil:** After we all pick ourselves up off the floor after we finish laughing at him

Session B2, Segment 1

In Example 5.14, two characters are introduced. The first is Father Zanthas, an NPC. Father Zanthas' introduction (Line 14) is an example of an anaphoric use of a proper name, as the name refers to a previously provided description ("an acolyte of Desna"). The second introduced into the fictional world is Gaz's character (who was introduced previously as a joke and as statistics). The character introduction itself is as a "Dwarf in robes" (Line 19), a description referring anaphorically to the proper name Gaz in Sean's previous utterance. While the description is part of an anaphoric chain, the proper name it refers to anaphorically

is not in a direct line from the entity that began the chain with that name, the referent of the first instance of *Gaz*, Gaz himself. There is a joke instance of dubbing included in the example, where Gaz provides *Moorow* as the name of his character. Because this is a joke name, this dubbing does not initiate a communication chain.

As the above two examples illustrate, the communication chain view has much the same problems as dubbing. The chain begins with the naming of the entity that the name belongs to- the player. The name then collects a set of associations that don't directly relate to the dubbing process. Rami, too, has argued against the communication chain view, arguing that the communication chain assumes that a name is "used in a parasitic way" and, if true, would mean that it is used in exactly the same way each time. This data shows that a name is not used the same way in all cases of its use, and so that use is not passed from user to user.

An object-relative intent names an object based on its salience in the discourse or situational context. Descriptive and parasitic intents operate the way descriptive and communication chain determinations respectively. The object-relative determination method does seem a better fit for my data. This view, which picks out a proper name referent based on either the presence of the entity in the context or its salience in the discourse, allows us to restrict potential referents to those participants present (where there may be several potential people with the same name), and to those entities available in roleplaying. It does not, at face value, help when there are several possible entities present and available for reference in the activity. If we consider the object that is the focus in a given context can mean world context, then when combined with the index determined by other means, we may successfully determine the referent. The idea of a world context focus is discussed in Chapter 6.

5.2 Deixis Theories

In the discussion so far, we have established that existing theories of proper names do not account for their behaviour in the data. Rigid designation theory and its later iterations did not allow for the use of a proper name to refer to entities in worlds where the bearer did not exist, while indexical theories assumed several bearers of a name in the same world, rather than several referents for a name with a single bearer.

As the proper name tests earlier in this chapter showed, proper names in the data are best treated as some form of indexical. It makes sense, then, to test proper names and other reference forms in terms of context dependence, and thus against deixis. To attempt to find a working model for reference in the data, the remainder of this chapter will focus on testing specific reference theories. While many are tested on reference use as a whole, such as Buhler's deixis tested in this section, others are tested on specific elements of reference. As the traditional interpretations of reference were found to find the index of a sign easily, the theories below will not be tested for use for index determination.

Deixis is traditionally considered to be reference that requires a knowledge of the immediate context (origo or ground) of an utterance to identify a referent (Bühler, 1934; Hanks, 2009). The context used for interpretation includes the time, place, and interlocutors involved in the discourse event (the deictic centre). The deictic context of the data given in the sample from group one is the dining room of one of the participants (Jacob), the time is between 7pm and 10pm on a weeknight, and the interlocutors include only the six direct participants. Group two's sample takes place in the dining area of two of the participants (Mike and Susan), roughly 7 to 10pm on a weeknight with participant interlocutors. If, for the sake of testing proper names, we include contextual constraint as some part of this context (perhaps a pre-deictic context), the reference of proper names will need to be related to those participants and to roleplaying game play.

With the deictic contexts established, the traditional model can be used to assess its viability. Of the five kinds of entity found within Group 1's data sample (see Section 5.1), only one was found in the test of traditional deixis, both in proper names and in standard deixis. This number increased to two for when allowing for the fictional world as its own independent context. For easy of interpretation, I will use the description "bearer of the name X" as the sense for proper names for the time being:

Example 5.15

1. **Phil:** [But what I was trying to say Gaz[1], what were you doing this weekend when I[1] was working Friday Saturday Sunday
2. **Gaz:** I[1] worked Sunday morning
3. **Sean:** oosh Ø[2] smacks you[1] with his[2] spiritual, something @
4. **Pete:** You[1] haven't got spell resistance Sam?
5. **Sam:** No, I[1] don't
6. **Sean:** What are you[1] at?
7. **Sam:** twenty [two
8. **Phil:** [I[1] got- I[1] work an average of forty-two hours a week

Session B2, Segment 18

The example above is superscript coded for standard deixis. Each use of deixis here should, based on an as-written deictic interpretation, refer to the real speaker or addressee. In the case of references to the fictional monster, a superscript 2 was used to indicate the projection into the fictional in the same way a person may refer to a character in a novel. The discussion of Sam's character's defence against the monster give the starkest indication of the problem with standard deixis. In Line 3, Sean is explaining that the monster is using a spiritual weapon (a summoned magical weapon) to hit Sam. The problem here is that the fictional monster cannot use a magical weapon to hit the real Sam. Sam and the monster do not exist in the same world. Line 4 has much the same problem. Pete is asking Sam if he has spell resistance, a rules-based ability that allows a character to reduce the numerical value of damage taken from magical attacks. Real people do not have such abilities, so it is not possible for Sam to be the referent of the address term, even though he is the addressee.

Example 5.15A below provides the coding for the true referents of each term, based on the possible entities described in Table 5.1 above[27]:

Example 5.15 A

1. **Phil:** [But what I_1 was trying to say Gaz_1, what were you_3 doing this weekend when I_3 was working Friday Saturday Sunday
2. **Gaz:** I_3 worked Sunday morning
3. **Sean:** oosh $Ø_2$ smacks you_3 with his_2 spiritual, something @
4. **Pete:** You_5 haven't got spell resistance Sam_1?
5. **Sam:** No, I_5 don't
6. **Sean:** What are you_5 at?
7. **Sam:** twenty [two
8. **Phil:** [I_3 got- I_3 work an average of forty-two hours a week

Session B2, Segment 18

In the new coding, the monster is still "smacking" a different kind of entity than itself, but this time the action is possible, because the entity exists in the fictional world. It is a blend between the character and the player that allows the player to take action through the character in the fictional world. The second person reference in Line 4, and Sam's reply in Line 5, now refer to the character as a set of statistics that belongs to Sam. This character with statistics can have the spell resistance ability, so the reference is now possible. The need to allow for so many potential entities shows that there needs to be more to the context used for the interpretation of deixis than the basic origo.

Example 5.15 shows a portion of the results of the Group 1 test. When compared to the same sample's entity coding (5.15A), it is clear that the traditional interpretation of deictic forms will not suffice in explaining the use of reference in the data. A similar result is found in group two. Group 2's test, with six total entities in the sample, showed one entity via the deixis test, and two when a fictional context is allowed:

[27] Code numbers are also provided on the accompanying bookmark.

Example 5.16

1. **Susan:** Yeah. More than enough in fact... yeah pretty much… no no no she's[2] she's[2] standing up crying applauding the um poet. <teary>That was so wonderful<teary> she[2] says in Heiran @. To the man
2. **Mike:** Well <x>you[1] have<x> white hair so you know, not quite unexpected
3. **Susan:** That is true... but I[1] do have an accent
4. **Mike:** hmm hmm
5. **Susan:** Does he[2] comment?
6. **Mike:** Um, the crowd is a little loud for him[2] to pick it up
7. **Susan:** Okay fair enough @@@ Alright then, all of two point five seconds later Eirra's[2] eyes are dry, she's[2] smiling and looking for the next adventure, come on Fred[2]!

Session D2, Segment 2

Example 5.16A

1. **Susan:** Yeah. More than enough in fact... yeah pretty much… no no no she's[2] she's[2] standing up crying applauding the um poet. <teary>That was so wonderful<teary> she[2] says in Heiran @. To the man
2. **Mike:** Well <x>you[7] have<x> white hair so you know, not quite unexpected
3. **Susan:** That is true... but I[7] do have an accent
4. **Mike:** hmm hmm
5. **Susan:** Does he[2] comment?
6. **Mike:** Um, the crowd is a little loud for him[2] to pick it up
7. **Susan:** Okay fair enough @@@ Alright then, all of two point five seconds later Eirra's[2] eyes are dry, she's[2] smiling and looking for the next adventure, come on Fred[2]!

Session D2, Segment 2

In the examples, Susan is describing a trip to a poet's recital for Eirra. Susan is treating Eirra as a character in a story she is telling. She briefly moves to referring to Eirra as herself (Line 3) after Mike uses the second person pronoun to refer to Eirra. For standard deixis, Mike is describing Susan herself as having white hair, which in the middle of a narrative is a strange segue, and Susan responds in kind with a first person pronoun for Eirra. In truth, Susan and Mike are both referring to the same type of blended entity referred to by Sean and Sam in Group 1, a mix of the player and the character.

Looking at only the deictic components of Group 2, a similar pattern emerges to Group 1. In both cases, all references to characters using "I" or "you" are interpreted as the player themselves, an interpretation that is clearly problematic. The issue can be partially alleviated by allowing for quoted speech when players are speaking for their characters:

Example 5.17

1. **Eleanor:** @ hmm, she's[2] not very good at this so she[2] looks over at, Ira[2], kind of, worryingly
2. **Susan:** Eirra[2] decides to go help @@@@... Hi, I'm[2] Eirra[2]! This is my[2] friend Fred[2], what's your[2] name?
3. **Mike:** Um.. Simon[2]
4. **Susan:** Hello Simon[2]
5. **Mike:** I[1] need to write down some names

Session D1, Segment 13

The recited speech interpretation works well when the participants are speaking as their character or when recounting past speech. The problem arises in the segment of speech leading up to the recited speech. Except in cases such as 5.17 above in which Susan indicates that Eirra is performing to action of "helping" through the speech ask she performs, the preamble generally begins with "I say" (Example 5.18 and ideal in 5.18A):

Example 5.18

1. **Alan:** I[1] walk in and I[1] go up to the barkeep, I[1] say, mate you[2] got a little mm going on
2. **ALL:** @@@@
3. **Alan:** And a little mm, and a little ehn, and a little eh and a fft... don't worry about it, um
4. **Susan:** @@@
5. **Mike:** We[2] only have pallets on the floor at the moment if that's alright you[1] will be sharing a room
6. **Alan:** Really?
7. **Mike:** Unfortunately yes, I[1] don't know if you'd[1] noticed but the city is rather full
8. **((pause))**
9. **Alan:** I[1] pull out- I[1] pull out a about a fist full of silver coins

Session D1, Segment 4

In Example 5.18, Alan announced that he says something to the barkeep. In a standard deictic interpretation, he himself should have spoken to the fictional barkeep, but doesn't. In the alternative coding, the *I* in *I say* refers to the blended player and character entity again.

Example 5.18A

1. **Alan:** I[7] walk in and I[7] go up to the barkeep, I[7] say, mate you[2] got a little mm going on
2. **ALL:** @@@@
3. **Alan:** And a little mm, and a little ehn, and a little eh and a fft... don't worry about it, um
4. **Susan:** @@@
5. **Mike:** We[2] only have pallets on the floor at the moment if that's alright you[7] will be sharing a room
6. **Alan:** Really?
7. **Mike:** Unfortunately yes, I[2] don't know if you'd[2] noticed but the city is rather full
8. ((pause))
9. **Alan:** I[7] pull out- [7]I pull out a about a fist full of silver coins

Session D1, Segment 4

Unlike Example 5.17, Alan does not explicitly state that it is his character that is speaking. The tense of the word "say" indicates he is not recounting something he said in the past, but speech that is occurring at the time it is spoken. Something more is required to determine the potential entity. The reference within the speech to walking into the bar and addressing the barkeep is the only indication that the world has shifted to the fictional one. The preamble, then, is as problematic in the case of reported speech as other deictic forms, although the speech context itself provides more of a clue to the referent.

As seen in the examples above, the basic deictic context is rather limited in its ability to explain the reference use in the data. For the rest of this section, I will explore three deictic theories that offer a potential solution to this problem; Bühler's deixis (1934), Rauh's deictic types (1983) and Rubba's alternative grounds (1996).

5.2.1 Buhler's Deixis

Bühler's model of deixis presents three main "modes of pointing" (Bühler, 1934) to account for the various possible deictic grounds (or *Origo*) in everyday language. His first mode, *ad oculos*, is grounded in what is visible, a process Bühler calls *demonstratio ad oculos*. This mode of pointing is thus grounded in the real world. Those referents that can be

pointed to using the oculus mode of pointing are done so using the process of demonstration in some way, whether physical pointing or through gesture or verbal pointing. The second form, *deixis am phantasma*, is grounded in the mind, with anaphora, discussed later in the chapter, grounded in the text or discourse itself.

Deixis am phantasma refers to deixis that points to a referent in memory or imagination. As it is not possible to physically point to entities in the memory of imagination, the pointing must be done using verbal cues. This involves the use of cues such as tense, phrases such as "I remember", location indicators or lexical items specific to a context. An example of context-related lexical cues is given below:

Example 5.19

1. **Alan:** I walk in and I go up to the barkeep, I say, mate you got a little mm going on

Session D1, Segment 4

In the example above, the first line of Example 5.17, Alan uses "I say" to indicate the shift from his description of his character's actions and his character speaking. Unfortunately, as both the narration of character action and the character speaking are referring to entities through the phantasma mode of pointing, Bühler's differentiation between oculus and phantasma are not as useful in this case. Where the differentiation helps to determine a referent, the change in active world is usually otherwise unmarked within the discourse (Example 5.20, a superscript 'p' indicates phantasma, 'o' indicates oculus):

Example 5.20

1. **Tom:** Ah= ah yeah it^{p} gets nine for yeah nine points reflex DC 17 for half
2. **Jake:** you^{o} better roll to save um against your^{p} own bomb
3. **Tom:** yeah I^{o} know

Session B1, Segment 14

In this example, Tom is having his character throw a bomb at a swam of centipedes that the group are fighting. Jake informs him that he, the player, needs to roll a dice to see if his character takes damage from his own bomb. The shift in mode of pointing from oculus to

phantasma in the second line goes without marking, relying simply on context to indicate to whom Jake refers.

The example above shows that. although not by design, determining which of Bühler's mode of pointing a sign uses allows interlocutors to narrow down potential referents. The following example codes for oculus (o) or phantasma (f) in superscript rather than number coded referents:

Example 5.21

1. **Mike:** um, now how badly do you$^{o/p}$ want to hit him^{p}?
2. **Tim:** I$^{o/p}$ want him^{p} to die
3. **Susan:** oh no
4. **Mike:** You$^{o/p}$ want him^{p} to die
5. **Tim:** No I$^{o/p}$ want to knock
6. **Mike:** Do you$^{o/p}$ want to um, are you^{p} still fighting balanced, do you$^{o/p}$ want to go all- all out or do you$^{o/p}$ want to go all defensive?
7. **Tim**: Um, I$^{o/p}$ want to do as much damage as I^{p} can
8. **Mike:** You$^{o/p}$ want to do as much damage as you^{p} can, alright, now we^{o} can flip this^{o} lot
9. **Tim:** Oh yay
10. **Mike:** The all-out attack options… now, the problem with all-out attack is that it forego- for the next round, you^{p} forego your^{p} parry and block. You^{p} still get your^{p} dodge, but your^{p} dodge is never as good, however, all-out attack generally comes with some fairly hefty bonuses

Session D2, Segment 10

In the example above, Tim is deciding what he would like his character to do in a combat situation. The uses of the phantasma mode of pointing are all fictional or a fictional blend in this case. The single instance of a demonstrative (Line 8) refers to a set of index cards on the table that have various combat manoeuvres on them (Line 8 "this lot"). The act of Mike touching the cards (and presumably flipping them) takes the role of the demonstration in this case. The only case of a definite oculus mode of pointing in this example is the instance of *we* in the same line, as *we* refers to Mike and the other participants there at the table flipping the cards that are reachable in front of them. Many of the instances of pronouns in the example are dual coded as both oculus and phantasma. This is due to an issue in the term *want*. In the case of actions taken, a character wanting to do something and the player wanting them to do it are inseparable unless the player is distinctly narrating the

character's inner monologue. In the case of Tim's character's desire to do damage, it would seem to be Tim's intent too, thus requiring a dual reference.

The example above shows that the oculus mode of pointing is useful in determining referent. If a sign is used in demonstratio, only the objects on the table (as in the example), miniature representations or present selves are possible referents, and often true demonstratives are restricted to miniatures, with real-selves restricted to forms that use the oculus mode of pointing. Phantasma is the least restrictive of the pointing modes, as all entities in the data aside from those mentioned are signified through phantasma. These entities include remembered past selves, planned future selves, fictional characters and planned and remembered characters, including those from other games.

This lack of restriction may be mitigated by increasing the possible modes of pointing by creating sub-types of phantasma to separate past (m), future (f) and fictional (c)[28]. Example 5.21 below is coded including these new subclasses. Proper names have also been coded as the interpretation can be useful there too.

In this example, several of the participants discuss a past trip to Echuca, a town on the border of Victoria and New South Wales situated on the Murray River, where they went kayaking. This is part of planning for a trip they take every year. Sean and Bill are having a side conversation about game rules and equipment Bill wants for his character. Bill and Sean's conversation uses primarily the oculus mode of pointing with some fictional reference.

[28] For ease of coding, past has been coded m for memory, future as f and imagined as c for cognitive.

Example 5.21

1. **Sean:** for the moment stick to existing rules- I^{o} mean you^{c} shouldn't have the money for that sort of thing anyway
2. **Bill:** I^{c} do, I^{c} haven't used
3. **(3 lines omitted)**
4. **Bill:** I^{o} suppose all I^{o} want to do is take for example [xxx wound poison but instead of being DC twenty four DC [[xxx
5. **Gaz:** [I^{o} still reckon you^{f} should kayak
6. **Phil:** [[I^{o} would love to kayak, I^{o} just don't want to do it where people feel like [[[xxx Pete^{m} had a bad experience last time
7. **Sean:** [[[I^{o} know what you^{o} wanna do, I^{o} just um xxx how much I^{o} should reduce [the cost for that
8. **Gaz:** [really
9. **Jacob:** @@ I^{o} think Sam^{m} had a worse experience
10. **Phil:** @@ he^{m} probably did @@@ Sam^{m} would have to be the [the worst kayaker I've^{o} ever seen
11. **[5 lines omitted, continuing discussion of trip]**
12. **Sam:** the first question they^{m} asked when they^{m} got me^{m} was do you$^{o(recited)}$ want a beer, and I'm^{m} [like yeah alright
13. **Phil:** [he^{m} wasn't very skilful but he^{m} was going @ I^{o} don't know how many times [[he^{m} nearly fell in
14. **Bill:** [[xxx is it possible for me^{fc} to pay that price and after the xxx is um DC twenty [[[to make a DC twenty-eight and the other one's DC twenty-four to DC twenty-eight xxx
15. **Phil:** [[[Gaz^{m} kept going out into the middle of the river where the waves from the boat would go right past him^{m}, every time he^{m} looked around he's^{m} like ((gesture)) though he's^{m} going in, no, it's alright

Session B3, Segment 8

One instance in their conversation, the first *me* in Line 14, where the referent could be considered fictional or future, or a combination of the two, as Bill is trying to determine the possibility of something his character might do with a rule change. The majority of the other participants' conversation takes place in memory. There is one instance of reported speech, in Line 12, that was coded as oculus, as the speaker at the time was referring to Sam who was present with them. It is possible this may have been coded as past, as the utterance is recounting what is said.

By allowing proper names to be coded in the same way as deixis, we see that the same treatment as such goes a long way toward solving some of the issues that arose with the proper-name specific theories. We see that proper names are indeed context dependent, and with Bühler's types applied to them, we can see the kind of context and the type of entity that a name can refer to, further narrowing the potential referents alongside the domain and index narrowing discussed earlier in Section 5.1. Bühler's modes do not allow us to determine each

individual entity available in the data. Instead, they allow us to determine if a referent is imagined, remembered or real, narrowing potential referents rather than determining them. If a speaker uses the phantasma mode of pointing, for example, they may be referring to any number of characters, hypothetical events in the real or fictional world, or several other potential fictional worlds.

If we are to add a memory-based mode of pointing to Bühler's modes, we mitigate some of the issue in that we can now separate the remembered from the newly imagined, but may instead create new problems. Roleplaying would require choosing between past or fictional, or future or fictional, for instances of past characters or planning for characters respectively. The subclasses must be made able to overlap, something which is better served by other theories discussed below. As the inclusion of more types of deixis appeared to disambiguate potential imagination- based reference, the following section will test Rauh's deictic types, which includes seven potential types.

5.2.2 Rauh's deictic types

So far in this section we have tested standard deixis and Bühler's deictic types against the data. Standard deixis was found to relate too much to the immediate deictic context, restricting interpretation to the real world. While able to discover the index of a term, standard deixis was not able to find the referent where the referent was in a different world to the index. Bühler's deictic types mitigated the problem of being linked only to the real world by allowing for a mode of deixis that is centred in the mind (phantasma). Bühler's types require expansion to account for the various ways the phantasma mode is used in the data. To this end, I will now test Rauh's (1983) seven deictic 'types'. These types, unlike Bühler's, define the way that deixis can be used, and what it can be used for. This section describes and tests each type in turn.

The first type is ‘canonical’ deixis, where the current spatiotemporal context is the centre and all related objects are in the visible area. This is equivalent to Bühler’s deixis ad oculus, and to standard deixis tested at the beginning of this section:

Example 5.22

Phil: good on you Gaz I share my lollies with ya and you put [them on the other [[side of the bloody board
Gaz: [sorry
Session B1, Segment 1

In the example above, the use of "I" refers to Phil and “you” to Gaz, both of whom are in the immediate spatiotemporal context. All referents are in visible distance from the interlocutors. As this type has been previously tested above, I will not repeat tests on proper names here. The use of the proper name *Gaz* is also canonical, referring to Gaz himself.

The second type relates to situations where the context is still canonical, but related objects are not present. Rauh does not provide examples of their use, describing it as displaced speech or a version of Bühler’s deixis ad phantasma. As the centre is still the present speaker, this type can be inferred to refer to objects, people or notions belonging to the speaker or addressee that are not present:

Example 5.23

1. **Pete:** He’s never been known to stay later
2. **?:** @@@@
3. **Gaz:** I don’t really care
4. **Sam:** your wife would move before you got home but she can’t afford to
5. **Phil:** okay everyone roll an individual spot check plea=se

Session B1, Segment 16

In Example 5.23 above, the use of *your wife* for Gaz’s non-present wife represents a Type 2 deictic form. The possessive pronoun *your* refers canonically to Gaz, so the reference still uses an oculus-based mode of pointing. Similar reference forms occur in a cross-world form, particularly with instances of possessive forms and *character*:

Example 5.24

Mike: okay so that's just a pass... basically if you roll equal to or under, you pass, if you roll a three or a four, you critically succeed, if you roll over, you fail. If you roll a seventeen or an eighteen you critically failed and I get to make up whole things to happen to **your character**

Session D1, Segment 2

The noun phrase *your character* in this instance refers to an entity in the fictional world, also indexing that same entity. The phrase is made up of real world indexing components, as *your* is indexing and referring to Eleanor. This could theoretically work in reverse, with Eleanor referable as *Fred's player*, but there are no instances of this type of use in the recording. The type is troublesome when a non-canonical deictic form or proper name is the possessive pronoun component:

Example 5.25

Sean: Is that plus nine even in your armour?
Phil: No its not in my armour
Session B2, Segment 4

In the example, Sean uses *your armour* to refer to Phil's character's armour as well as imply the potential skill penalty for wearing armour while climbing. The term *your*, although it indexes canonically, refers to a fictional entity, and the noun phrase refers to fictional armour alongside statistical information about the armour. The non-canonical possessive indicates that this is not quite able to fit into Rauh's second type, and some form of adjustment would need to be made to account for its use. The use of proper names as the possessive element of the NP functions much the same way as a possessive pronoun in this case.

Type 3 relates to situations where neither the deictic centre nor related objects are part of the current, visible situation. This directly relates to fiction, as in novels or movies, or recited speech. In this data, only reported speech is Type 3 in terms of basic deictic forms, where the character is talking:

Example 5.26

Mike: Well at this stage I can put you up for say a silver a night, it'd be less, but, um raw meat ain't cheap. Not as cheap as bread and cheese anyway

Session D2, Segment 5

Example 5.26 is the in-character speech of a bartender. Mike uses *I* and *you* to refer to and in the fictional world. The index in this case matches the referent. Situations such as Example 5.15 earlier in this chapter, in which Eirra introduces herself and Fred to another character, are this deictic type applied to proper names; a fictional index for a fictional referent.

Types 4 and 7 constitute text deixis and anaphora respectively. Type 4 encompasses deixis outside the scope of this investigation, and anaphora is discussed below, so I will leave it here.

A non-egocentric form of deixis is found in Type 6, where the centre becomes a nominated person, place or object and the deictic term is relative to it:

Example 5.27

1. **Mike:** There we go, glasses just to the right of the range hood… yeah so
2. **Susan:** Can you grab me one too, Ed?
3. **Tim:** I really shouldn't drink that much, like I could drink all that by myself
4. **Susan:** Can you grab me a glass? Ah sweet, yeah

Session D2, Segment 9

In this example, Mike is directing Edward to the glasses in the kitchen, giving the position relative to the range hood. This type seems to be rarely, if ever, applied to person reference.

The final type, Type 5, was left until last as it is the most applicable to this data. The fifth type is analogous deixis, for use where something in the canonical deictic domain (or potentially a related object) stands for something else, as in the example below:

Example 5.28

Mike: Yep at which point the center of um town is a giant rectangular square say about the table, and where Susan's sitting, is the palace. And coming out of the palace is a large entourage of very well dressed people. The center of which is, well you're not sure if it's a fairly sparkly chunk of sky that appears to be in the shape of a large pretty dress

Session D1, Segment 6

In Example 5.28, Mike is using the table the game is being played on as an allegory for the city square. Susan's position at the table is treated as the palace and the description from there is to be imagine relative to her.

The most obvious possible example of this in the data is the miniature representations used by Group 1, as in Example 5.29 below:

Example 5.29

1. **Phil:** full of statues so you're standing up at the door
2. **Jacob:** yes
3. **Pete:** where's the smashed one?
4. **Phil:** can I have everyone else on there, [um oh yeah there's the smashed one [[he's
5. **Jacob:** [[He swapped one over
6. **Sam:** that's Pete
7. **Gaz:** that's Pete
8. **Jacob:** Pete's there
9. **Sam:** Pete was standing [outside the room
10. **Hen:** [xxx already [[there
11. **Sean:** [[I'm somewhere the [smashed one

Session B1, Segment 3 (missing 'near' in line 11 is as-spoken)

The example above shows Group 1's party positioning themselves in a room they just entered by placing miniatures on a mat. Although I cannot confirm this, it is likely that Phil had drawn the statues on the mat, including the "smashed one" that Sean's character had recently toppled. In Line 4, Phil calls for people to place their own miniatures on the mat before pointing the smashed statue's position out on the allegorical mat. The position of Sean is then determined relative to the smashed statue (Line 11). Lines 6 through 9 are demonstrative uses indicating that the miniature they are indicating belongs to Pete. The term indexes Pete and dual refers to Pete's miniature and his character.

There seems to be a need for analogous deixis to be demonstrative. The analogy also needs to be real-for-imagined, which is where a problem arises. The analogous instances

described by Rauh include pointing to somewhere on your own body and mentioning that that is where someone hurt themselves, or performing an action that they took. This does not happen in the case of characters. The character is more like an avatar in a video game, controlled by, but separate from, the player, except that, rather than steering a visual image, the character is controlled through narration.

When combining all types in an attempt to apply them to the data, there is a need to code with several types for any given deictic term:

Example 5.30

1. **Phil:** now you[1] can go have your[3/1] action now Sean
2. **Sean:** nup
3. **Phil:** oka=y
4. **Jake:** So someone[?] who needs to run down stairs
5. **Phil:** Tom's got a bit after that, Sam
6. **Sam:** I'm[3/1] just gonna move away from it
7. **Sean:** absolutely nothing I[1/3] can @ use on this one[5/3]
8. **Jake:** where to?
9. **Sam:** Ah back towards those other guys[5/3]
10. **Jake:** over here?

Session B1, Segment 14

Most of the deictic forms used in the example above require multiple of Rauh's types to be used at once on order to account for both the index and referent of the term, as well as the blended entities found within the data. The use of *I* in Line 7, for example, needs to be interpreted both as Type 1 to find the speaker and Type 3 for the fictional context. There is an element of Type 2 that links the associated character and player in the same use, and this final contention stretches the definition of Type 2 a little far.

The types system provides ways which deixis can be used, not how those uses are interpreted. Rauh presents a set of criteria that help to define the deictic component of a term's lexical definition, the deictic determination. It determines whether the centre, related objects or unrelated objects are part of the definition and what combination is needed to determine the form. This still has the issue of being related to definitions and chosen forms

rather than interpretation. For example, first person pronouns are 'encoder-only' or centre only forms, and second person reference forms are centre and related entities. Rauh later adds distance and person, place or time to the determination criteria on top of these determinants. Even taking this as a way of determining what deictic forms can be used, it is not particularly helpful for this data. If first person a considered a centre only use, how does it explain situations of use such as Example 5.30 discussed above?

The concept of multiple types of deixis may be applicable to a final model for reference in the data. But is it strictly necessary? Several new types or deterministic approaches would need to be added to explain how or why certain forms can be used differently than predicted by Rauh. Later theories of reference, including Rubba's mental space based deixis tested below, simplify the process of non-origo deixis.

5.2.3 Rubba's deixis

In her 1996 paper "Alternate Grounds in the Interpretation of Deictic Expressions" Jo Rubba proposes the use of Mental Spaces as a kind of deictic centre (Rubba, 1996). Rubba's model uses mental spaces instead of the immediate spatio-temporal context to interpret reference. Unlike other theories, this concept allows for movement outside of the physical world, moving the context wholesale to wherever the speaker may want. This makes an interesting answer to situations such as Example 5.31 below:

Example 5.31

1. **Alan:** I walk in and I go up to the barkeep, I say, mate you got a little mm going on
2. **Alan:** And a little mm, and a little ehn, and a little eh and a fft... don't worry about it, um
3. **Mike:** We only have pallets on the floor at the moment if that's alright you will be sharing a room
4. **Alan:** Really?
5. **Mike**: Unfortunately yes, I don't know if you'd noticed but the city is rather full
6. **Alan:** I pull out- I pull out a about a fist full of silver coins

Session D1, Segment 4

In Example 5.31, Alan is speaking as his character (marked by "I say") in and about the fictional world. The utterance after "I say" exists in a mental space of the fictional world, where the I is Tenant, Alan's character, here is an Inn in the fictional land of Parshay and now is that point in time in the fictional realm. The problem arises, instead, with the "I say". A better example of the problem is shown in example 5.32:

Example 5.32

1. **Phil:** the scribbler is trying to convert [you
2. **Gaz:** [do I understand the whispers?
3. **Sean:** u=m
4. **Jake:** that's probably not a good idea
5. ((pause))
6. **Gaz:** why? I choose to ignore them
7. **Sean:** yea=h the voice is suggesting to you that... your friends are [about to sacrifice you to lamatsu @@
8. **Sam:** [plotting against you
9. **Phil:** well, that probably could happen
10. **Sean:** that may actually be true @@@@
11. **Phil:** it's that bit when they say, is this is an unbelievable request, that one's probably not
12. **Sean:** @@@
13. **Gaz:** ten years of me and my assorted clones in the party [xxx

Session B3, Segment 10

The referent of *you* in the example above refers to Gaz's character in each instance. For the full ground to be moved, the addressee of you would need to be Gaz's character as well. Instead, the addressee (and thus index) is Gaz himself, but the referent is his character. An interpretation of the addressee needs to be available separately from the referent. If the context is fully moved for the interpretation, the addressee is lost, and so the interpretation of the referent is no longer available. We must know that Gaz is being addressed to understand that his character is being spoken of.

Rubba's ground shift approach works well as written for situations where the context shift is either needed for recited speech (as discussed above), full fiction, or where the origo is simply a projection somewhere within the real world but the interlocutors remain the same. It is also useful where the speaker or other contextual element is in the same world as the

referent to be interpreted. This is not the case with the data, however. Example 5.33 below shows a key issue with movement of an entire origo:

Example 5.33

1. **Mike**: Okay, cause it is already a couple of hours after sundown
2. **Susan:** Mmm, okay, in that case, you know, we'll probably trawl a little bit more and then go to bed
3. **Elanor:** See if we can find [xxx
4. **Alan:** [tra la la la la
5. **Susan:** Pretty much
6. **Mike:** Alrighty
7. ((long pause))
8. **Susan:** Actually I'm going to see if anybody I know is like.. like you know some of the people I might have gotten in trouble with in past years
9. **Mike:** It's a big city
10. **Susan:** It's a big city? Fair enough

Session D2, Segment 2

If we take the interpretation of deixis at face value, as we must without qualifiers such as the "I say", the use of "I" in Example 5.33 is difficult to interpret. It is clear that "I" here is not referring to the speaker in the real world, but a character in the fictional. However, if the origo is the fictional world, then the character was speaking, and that is not the case. In fact, in the fictional world there is no speaker, instead for that element of the referent interpretation the real-world speaker is required, even if they are out of the origo. This also leaves two 'person' elements in the interpretation. However, this is not a dual reference, as the I only refers to the character, it simply requires knowledge of the real speaker for interpretation.

The problems found with Rubba's deixis also apply to the use of proper names in the data. Allowing the potential interpretation of a name to shift to a different mental space is invaluable in allowing us to interpret names in worlds outside the real. Unfortunately, the inability to provide interpretation across mental spaces is hindering the theory for interpreting proper names in the same way that it hinders its use for cross-world deixis.

This does not mean that Rubba's deixis is wrong. This theory is instead one of the key models that are adjusted to create a solution as outlined in Chapter 6. For now, it is sufficient

to say that the problem does not lie with using mental spaces as origo, but instead the problem lies with using them as the whole ground. This leads to the problem of deciding what mental space is the involved in the ground.

Until now, this chapter has mostly treated context as a domain or as the situational context of an utterance, following the use of context in the theories tested so far. It is important now to discuss the potential options for a more narrowing context, and particularly look into works on fictional contexts for interpretation. Ultimately, mental spaces are used as part of the immediate context of the utterance to be used in interpreting reference. Mental spaces are discussed in terms of the data below. Speaker intent is also an important part of determining referents in this model.

As discussed in Chapter 2, I will only be taking into consideration contextual elements that narrow potential referents from the index. Because of this, and for brevity, the indexical context is not discussed in this section.

The types of context that are of specific interest in this thesis are the situational and discourse contexts. It is clear from the data so far that the ego-centric deictic context of here, now and I is not sufficient to determine the target referent of a referring expression is a multiple-world context. It is, however, sufficient to discover the index of a sign. To find the referent, something that is more specific needs to be applied to the data for interpretation. Speaker intent, discussed below, is a key part of that interpretation. The next few sections of this chapter discuss the types of worlds and spaces that may be applied as part of the context for interpreting the data.

5.3 Speaker intent for interpretation

Having tested several theories of reference including rigid designation, indexical name theories, Bühler's and Rauh's deictic types, and Rubba's mental space based deixis, some

functional aspects of reference need to be discussed in terms of the data. In this section, I will investigate the potential of intention being a major part of reference in the data. In his paper on intention in reference, Stokke (Stokke, 2010) contends that intent must be taken as part of the narrow context (see Chapter 2), narrow context referring to those elements of a situation specifically required to determine a referent. This is in contrast to the wide context, which are cues that are used to determine a speaker's intent. He contends that context should be considered "a tuple of an agent, a time, a location, a world and a collection of referential intention" (Stokke, 2010 p. 10). He explains that he intends intention sensitivity to be a function that links an index to a referent. Stokke equates the intent to the index, although I would suggest the intent is the 'leap' between index and referent.

Stokke indicates that there are some indexicals that are intention-sensitive and some that are not. Pronouns such as *you, he, she, we, this, that* and *here* all have a component that requires an inferred intent for interpretation. We see this in the data for this study in those pronouns:

Example 5.34

Phil: Sam <R> you find a= logbook detailing the Blackross illegal activities smuggling slaves and other contraband throughout the inner sea region <R>[29]

Session B1, Segment 12

In the example above, Phil signals the intended referent of *you* by first drawing the addressee's attention. The intent is not always directly signalled, but is inferable by various factors. Take the following example:

[29] Phil is reading directly from the Voices in the Void module Pathfinder Societies (McCreary, 2009).

Example 5.35

1. **Sean:** okay ah that was Phil so Sam
2. **Sam:** oh shit Ø still don't know what to cast
3. **Gaz:** fireball!
4. **Tom:** @@@@@@
5. **Phil:** now that you're back on your feet and you can evade stuff
6. **Sean:** that's right

Session B3, Segment 16

In the example above, several pronouns require speaker intent for interpretation, particularly the second person pronouns used by Phil. Sam is unable to think of what he would like his character to do now that his turn has come up. He omits the subject when he intends to refer to himself. The understanding that the null refers to Sam is based on contextual cues indicating he is referring to himself, particularly that it is his turn and he had been directly addressed in the previous utterance. Phil's pronouns are a little more complicated, as he is referring to Gaz's character by way of Gaz as an index, but is referring in a way to a joke version of the character, as he is teasing Gaz for only wanting Sam to use offensive spells when there is a low chance that he himself will be harmed. Phil's intent to refer to Gaz, rather than Sam whose turn it is indicated by Gaz being the previous speaker, his character having been previously prone, and his character having the dodge trait (which Sam's character does not). There is little in the construction of the utterance itself to indicate intent. Compare the utterance above to an alternative intent with the same sentence structure:

Example 5.35A

Gaz: fireball!

Phil: now that you have line of sight and can hit him point-blank

Invented example

In this case, Phil would intend to support Gaz's idea that Sam should cast fireball.

The interpretation of Phil's intent to tease Gaz about his choice to ask for a fireball spell is evidenced by Tom's laughter, Phil's tone when speaking[30] and the knowledge that the group, and Phil in particular, will take every opportunity to insult and tease Gaz for any reason[31].

Intent is difficult to test on audio-only and text-only data, especially where there are non-real contextual cases, as semantic input is not necessarily limited to a word's phonetic form (Stokke, 2010). Intent is also difficult to discern as it is rarely mentioned unless it is mis-inferred:

Example 5.36

1. **Bill:** any any [other crates or boxes in here or just?
2. **Gaz:** [Hey who's good at drawing things
3. **Sean:** no
4. **Jacob:** actually I think
5. **Jacob:** I think I could draw something
6. **Gaz:** What do you use [what skills do you use to draw
7. **Sean:** oh you're talking in game
8. **Gaz:** yeah oh yeah
9. **Sean:** drawing would be like... craft... [painting

Session B1, Segment 3 (irrelevant lines omitted)

In Example 5.36, Gaz requires a party member to draw a statue's shield as part of his personal quest. The other interlocutors, particularly Sean, misinterpret Gaz's question as asking if someone real can draw. It is possible that this is because of the use of *hey*, which is usually used as a discourse marker by the interlocutors to indicate a major shift in active world, usually between fictional and real. As Bill had been talking about the fictional world

[30] Prosody was largely left untranscribed in the data. It is only mentioned here briefly as a marker of intent, and was rarely if ever used as part of the analysis.

[31] A paper on the insult dynamics of this group was presented at the Language and Society Conference in Melbourne, Australia in 2014 under the title *The Unimportance of Being Gaz*. A related publication is forthcoming.

in the previous utterance, the fictional world is active, so the world shift marker is misinterpreted as an intent to refer to the real.

Misinterpretation such as the one given above are rare in experienced roleplaying groups. In fact, the instance given above is the only example of misinterpretation in the recorded data. As Group 1 have been playing together for some time, they do not mark intended world directly as often as Group 2, who will explicitly mark either through explicit statements such as "I say", or with discourse markers such as that found in Example 5.37 below:

Example 5.37

1. **Alan:** Zulu can never die! **Yeah so** how does combat actually work in GURPS?
2. **Mike:** Okay, well we're getting to that um
3. **Alan:** Awesome

Session D2, Segment 8

In Example 5.37, Alan is making a joke related to something that unfortunately was inaudible in the recording. It is likely that "Zulu can never die!" is a quote (or misquote, an internet search provides no clues) from a movie or TV show. He then uses *yeah so* in mid-utterance to signal his intent to move from a non-game related discussion back into the world of the game, asking about combat rules. Similar discourse markings are found in Group 1's data, perhaps indicating that an intent to shift is required outside the active domain. For further discussion on this topic, see Section 9.3 in Chapter 9.

Intent may well be one of, if not the most important factor to determining the target referent of a sign in my model. However, the intent that needs to be interpreted may not be the referent itself, but rather the world or space that the referent occupies. We have already seen that the activity being performed can narrow potentially referable entities, and that the index of a sign narrows referents to those entities linked to that index in various spaces. The

next step in this investigation is to determine the workings of the worlds and spaces by testing some world and space theories against the data.

5.4 Mental Spaces

This test section concentrates specifically on theories surrounding mental spaces. Although mental spaces were not originally designed for connecting mental constructs with real-world referents, they have since been applied to reference theory by various authors, or default to a form of reference theory when giving examples.

Mental spaces consist of 'pockets' created in the mind of the speaker and shared with other interlocutors. This allows for minor imagined adjustments to reality or some other base world (Fauconnier, 1997). These adjustments may be to change the looks of something or ask someone to imagine something in hypothetical situations.

In the case of my data, mental spaces' link to reality or another established world can be a hindrance. As a pre-established world is seemingly needed as a foundation, problems arise with the application of mental spaces to the constantly generated and renewed fictional world found in a roleplaying context. In the following sections, I will explore various uses of mental spaces by other scholars to investigate whether those uses are applicable to my data. Although mental spaces are traditionally connected to the real world, they are easily malleable to whatever world space is needed. A potentially infinite number of spaces could be created for use by all participants in the data to create world space contexts. Each of the entities in the tested data has its own mental space, with past and future iterations having several spaces to account for different times, places, fictional settings and characters. For ease of discussion and coding, the past and future spaces were consolidated into only fictional past/future and real past/future, but this does not mean that the potential mental spaces are in any way restricted.

The question then becomes whether we can use mental spaces for multiple simultaneous, persistent or even shared contexts. In this section I will investigate the possible spaces in the data, testing whether these spaces can be used as a context for a linkable entity in the data. As described by Fauconnier (1981), mental spaces are fleeting, created on an utterance to utterance or exchange to exchange basis. They seem to be shared only to the point of creating a corresponding mental picture in the interlocutors' minds rather than something that is built on and maintained by the participants long enough to specifically create a long-lasting context. I would argue that persistent mental spaces are possible, and are the main functionality of roleplay-like activities.

Evidence for persistent mental spaces for contexts can be found in the data. In the exchange below, the various characters are operating in the same world, and thus base-space:

Example 5.37 (laughter segments and long pauses removed)

1. **Mike:** Anyway, Mattresses are, brought in, she jogs down stairs she comes back with blankets no pillows
2. **Susan:** oh sorry for your back
3. **Mike:** hmm hmm. Also, bobs once and heads out and closes the door behind her
4. **Susan:** have a nice night!
5. **Mike**: Thank you miss
6. **Susan:** @@ She's friendly
7. **Tim:** I take it I'm on one of the pallets
8. **Susan:** Let's flip a coin!
9. **Mike:** Aside from the fact that you're not a hundred percent sure what this, strange cushiony device is
10. **Eleanor:** I give up the bed to one of the people who probably looks like they know what it is. Just in case
11. **Alan:** Find a nice comfortable corner
12. **Tim:** I give it to Eirra
13. **Alan:** Isn't there two mattresses?
14. **Mike:** There are two beds and two mattresses
15. **Tim:** I-
16. **Alan:** Oh
17. **Tim:** Giving it
18. **Susan:** Thank you

Session D1, Segment 8

In the above example, changes to the fictional world presented by Mike are integrated into the mental representation of the world held by the other participants. The mental space Mike creates for himself and the players thus become part of the persistent context used for reference in the minds of all participants in this group.

The real, outside game context is not built by the participants. However, where a participant needs to create a mental picture for another participant it is persistent and based on the reality known by the original speaker:

Example 5.38

1. **Mike:** There we go, glasses just to the right of the range hood… yeah so
2. **Susan**: Can you grab me one too, Ed?
3. **Tim:** I really shouldn't drink that much, like I could drink all that by myself
4. **Susan:** Can you grab me a glass? Ah sweet, yeah

Session D2, Segment 9

In the example above, one of the few truly origo real examples in the data, Mike is giving directions to Edward, creating a mental image of the kitchen for Edward that he can map onto the visible kitchen in front of him to find the drinking glasses. The past real context space is created only for the conversation where the past space is needed. The space rarely lasts longer than a few utterances. The example below shows the entire progression of a space.

Example 5.39

1. **Phil:** [[[Gaz kept going out into the middle of the river where the waves from the boat would go right past him, every time he looked around he's like ((gesture)) though he's going in, no, it's alright
2. **Phil:** then he got back to the jetty and fell out
3. **Jacob:** [I remember that, yeah
4. **Phil:** I didn't see him fall out I look around near the pontoon and there's [Gaz swimming and I'm like what are you doing mate? And he's gone [[xxx to the dock
5. **Jacob:** he got up through the mud didn't he
6. **Phil:** he swam all the way round... [the pontoon was probably that high
7. **Phil:** [[I'd be happy to go kayaking again
8. **Phil:** Sam can- Sam can take the paddle steamer up and back
9. **Sean:** @@@
10. **Sam:** boat for the day
11. **Sean:** @@@@
12. **Sam:** a speedboat and just ride down next to you say hello
13. **Phil:** I can just imagine if you hired [a-
14. **Sean:** [that's what you did last time @@@
15. **Phil:** no he'd run over us. It's like um when I went with my kids, [Phil's daughter] went and slipped our boat... out in the middle of the river and [Phil's brother in law and sister] like we'll help! and she... Bam! over the side of the @@@

Session B3, Segment 9

After Phil utters “no he’d run over us”, the space is closed. From there, a new past space in which Phil’s daughter is doing the kayaking is created, and lasts several utterances.

Similarly, the past fictional spaces are short lived. What is interesting about the fictional past that is the amount of possible entities that can be connected to a speaker, and how they mark those entities when the space is evoked. Take the following example:

Example 5.40

1. **Gaz:** there was an assassin we had in the party at one stage
2. **Phil:** yeah but you thought that being an assassin meant you could actually assassinate things
3. **Sam:** yeah that was ah
4. **Pete:** And actually not be seen
5. **Bill:** How broken is that? Thinking you can actually assassinate [things as an assassin
6. **Jacob:** [Yeah let’s completely leave the party at the other end of the area and die [[somewhere that way we don’t know where he is
7. **Sean:** [[that’s right
8. **Pete:** that’s two giants chased down
9. **Gaz:** actually, we left he died
10. **Sam:** that’s more like it
11. **Phil:** it was a room with like sixteen ogres in it or something
12. **Sam:** no it was the two giants cause he got glitter dust
13. **Gaz:** No
14. **Bill:** I lured them away remember
15. **Jacob:** oh very clever, very no=ble

Session B1, Segment 14

This space relates to the actions of an earlier character played by Bill, an assassin, and recounts the actions of that character. The space is built and shared by several participants, shown where Phil gives his recounting of the event and is then corrected by Sam as to the nature of the monsters, thus adjusting the shared mental space from containing ogres to giants. The space ends with Jake passing judgement on Bill’s actions, moving after this to a discussion of the rules of the assassin character, and so a new, semi-fictional space.

In terms of spaces in use, although future and past spaces and entities are coded as one for this study, they are all new and separate. Unlike the long-standing active spaces for the fictional, real, game or miniature representative spaces, participants must do more work to indicate the active past or future space than they may have otherwise. For the past fictional

spaces, participants often identify the space by referring to the space's inhabiting character, usually by way of a definite description, such as "an assassin" in the example above. Past-real spaces are usually marked by expressing the event that is being recounted, such as someone's work schedule or the mention of Pete having a hard time "last time" that they went kayaking (Example 5.39), invoking the related memory space of the group.

Future fictional spaces, on the other hand, are built on the current active fictional space, much like basic mental spaces are created based on the real world. Future fictional spaces project the imagined events forward slightly, usually to 'hash-out' what the character should do next. The relatively easy space establishment of the fictional future is contrasted by the real future, as the time available for the real future space is much more open, meaning the participant needs to mark the time in the future they are talking of as well as the place.

I have argued that, with some adjustment, a mental space can become a fixed, long term and shared world that the participants can work with to not only play the game, but to go about other conversations. This section did not test the theory of mental spaces in the same way that other theories were tested throughout the chapter. Instead, a foundation was laid for testing later theories that were built on mental spaces and were designed specifically for understanding reference. The following sections outline the tests of those theories as well as some others that can be meshed with mental space theories to fit a portion of the data.

5.4.1 Conceptual Blending

One mental space theory has already been applied to similar data. Fauconnier and Turner's (1998) Conceptual Blending model was applied to a computer roleplaying game by Tea and Lee (2004). The investigation was conducted on the game "Icewind Dale II", a fantasy roleplaying game where the player creates a party of characters to control.

A conceptual blend, as explained by Tea and Lee, is the bringing together input from two independent mental spaces to create a space in which entities from those spaces can be referred to as if they are in the same space. A blend does not mean that two spaces are melded into one, but rather elements from each space are brought into a third space. A fourth space, a generic space, contains "abstract properties that apply to all spaces" (Tea & Lee, 2004 p. 1616). An example blend from Tea and Lee's work is a situation in which a non-player character asks to see the player character's map. The player then needs to open the map in the game interface, which is then marked with a location as promised by the NPC. The authors claim that the marking of the map is performed by a blended entity, namely a blend of the NPC and the game designer (who controls the interface). A simplified version of this blend is shown below:

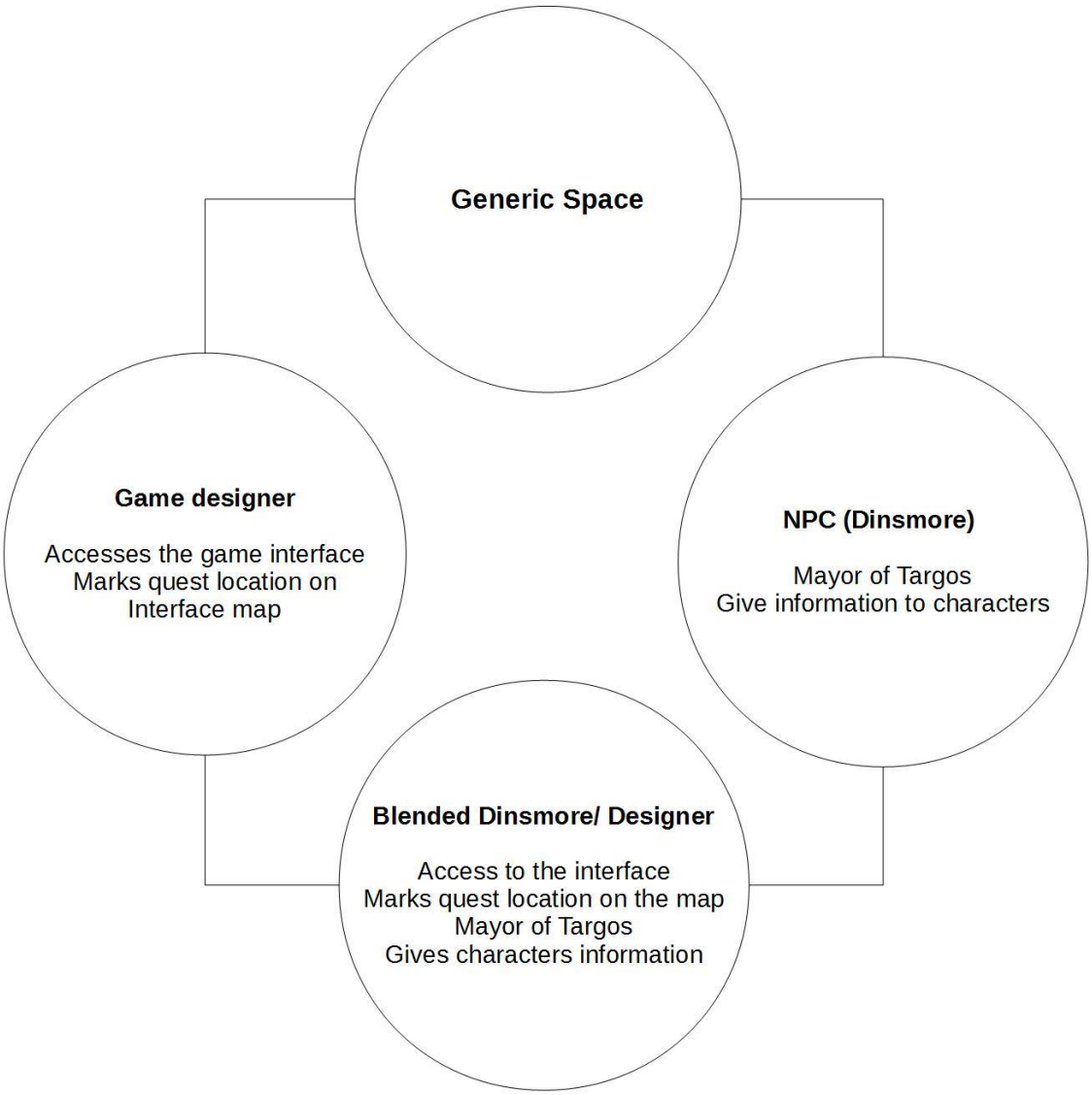


Figure 5.1 Conceptual blend diagram of the interface and fictional world map. Adapted from (Tea & Lee, 2004)

The blend in Figure 5.1 is an adapted (and simplified) version of Tea and Lee's blend. The game designer (left) is able to access the in-interface map and place a marker on that map. The NPC (right) gives information about the quest location to the characters and takes the role of the leader of a town the is part of the quest. The resulting blended entity (bottom) is able to both give information to the characters and mark the map in the game interface for the players.

Certain entities in the tested data appear to be the result of this kind of conceptual blending. The entity of player-as-character, for example, could be considered a blend between the separate fictional world, from which it takes its setting and acting entity, and the play space where the actions are determined. The character-as-statistics entity can be seen as a blend of the rules and the fictional character (or potentially, the player-as-character). Example 5.41 below shows a segment of data coded to show blended spaces.

Example 5.41

1. **Sean:** do you$^{Char/rules}$ actually have <u>any</u> hero points left?
2. **Phil:** no he's^{player} used them [up
3. **Jacob:** [he$^{player/char}$ is a monk
4. **Sean:** no that's it
5. **Jacob:** no that's it, yeah
6. **Phil:** you$^{char/rules}$ only get one a level though
7. **Sean:** yeah... oh no
8. **Sam:** is he$^{char/rules}$ going up a level?
9. **Phil:** yeah at the end of each module
10. **Jacob:** life and death
11. **Phil:** I^{real} think it's o- would the twenty-six have failed, I^{real} think it would have wouldn't it?
12. **Jacob:** yes
13. **Sean:** twenty-six was a fail yeah
14. **Jacob:** but we$^{player/char}$ do have scrolls of flesh to stone don't we$^{player/char}$? I^{real} think they sort it out

Session B3, Segment 17

In the example above, several entities, both blended and unblended, are used interchangeably. The group is discussing how Gaz's character can stabilize, a way to prevent a character dying after being rendered unconscious. The first blend, a character/rules blend, exist when some form of rules element, in this case the hero points that can be used to assist characters, and the fictional world combine. The character/rules blend also appears when the players are discussing character levels in Lines 6 and 8, which are a way of representing the experience a character has gained over time. The player/character blend seen in Lines 3 and 14 is the most common blend in the data. This is used when the players are portraying their characters, except where they are reporting character speech. It indicates times where the player is not treating the character and the fictional world the character resides in as separate from themselves or the physical situation of the game.

As with mental spaces overall, the advantage of the conceptual blending model is its ability to offer a context element for the new model instead of a standalone model for interpretation of reference in the data.

Despite its appropriateness, the conceptual blending model has some flaws that should be addressed before it is used as part of the final model. It is unclear at this stage whether the blend applies to worlds and spaces, or only to entities. The entities in Tea and Lee's study are blended, but so too are objects such as a map, and spaces for the blended entities to occupy. The relationship between blended entities and the possible spaces in the data is not a one-to-one ratio:

Example 5.42

1. **Sean:** so he decided to rope off the sink hole and then this monk turned up and he said ah I don't wanna go in there by myself
2. **Pete:** brave monk
3. **Sam:** might be owlbears
4. **Jake:** It was the last smart thing we heard him say
5. **Phil:** I reckon with your acrobatics you'd be able to tumble across the hole Gaz
6. **Jake:** and enemies down there
7. **Sean:** Um
8. **Phil:** some want us back
9. **Sean:** he says we've heard terrible howling unearthly dog noises coming from the hole
10. **Phil:** still Gaz
11. **Sam:** no that was Gaz last night

Session B2, Segment 2

Example 5.42 above is taken from a segment soon after the introduction of the Monk character played by Gaz. Much of the exchange is played as a joke, so many of the entities referred to are within joke blends. The world they are occupying, however, is primarily the fictional. The joke entity does not occupy its own separate space. The joke, rather, applies a property to the entity or space it blends with, making it non-diegetic. The hypothetical space operates in a similar way. There is thus more possible entities available for reference than spaces they can occupy.

The references to Gaz in Lines 10 and 11 of the above example are instances of blended entities occupying a non-blended world. Gaz being accused of originating unearthly dog

noises is obviously fictional, yet the target is the real Gaz, thus forming a blended form of Gaz that is able to be insulted as real but make sounds in a fictional world.

There are cases of blended worlds and spaces as well as entities, although there are less of them in the data. The two second person references in Line 5 refer to a blended character/rules entity which occupies a space that is a blend of the fictional world and the rules presented on the physical character sheet. The character has a high numerical tumble score, and the tumble allows a certain amount of rules-based distance jumped that translates to a distance in the fictional world. Joke versions of the fictional world are also possible. There are, however, no distinct instances of the real and fictional worlds themselves being blended. They instead rely on the blended entities they are associated with to interact.

A part of the conceptual blending model that is not directly accounted for by Tea and Lee, but is an important part of the model as a whole, is the generic space. The generic space, usually represented as the topmost element in a blend diagram, is a group of traits that a blended world or entity have in common. The generic space is an important part of a conceptual blend, as without the right elements in common, two entities or two worlds cannot blend (Cook, TBD). In the case of the entities in the data, the generic space likely consists of abstract ideas such as emotion, desire for the character to survive, being alive and the desire to gain treasure. Other concepts such as moral attitudes, abilities, gender and personality traits may also appear in the generic space, but they are not necessarily details that are integral. For more discussion on the conceptual blends in the data, see Chapter 7 of this thesis.

5.4.2 Cognitive Domains

Cognitive domain theory is a way of explaining references to people using things associated with them appropriate to a given context. The example used most often involves a restaurant situation where a waitress might say “The ham sandwich at table seven wants a

glass of water" (Sweetser & Fauconnier, 1996). In this case the cognitive domain is a restaurant, where the interlocutors' minds create a set of associated elements, so that the customer becomes linked to their order and can be referred to by that order. It can be assumed that, if the customer had given his name to the waitress, his particular sandwich could be referred to by his name, such as the chef telling the waitress that he had "finished making Jim". At face value, it seems that this theory fits well into the data, during a game associated entities can use a player's designator. In this sense, cognitive domains are a perfect fit for explaining why these shared referring expressions are possible. Unfortunately, they do not explain how these terms are interpreted.

The key to the issue are the number of possible entities that may be attached to a single reference form. In the domain of a restaurant, any number of reference forms can refer to that one customer, including "ham sandwich", "table seven", or "Jim", while in the tested data the one name can refer to up to seven entities, all of which are referred to by other forms. There is nothing that particularly indicates the domain in roleplaying except surrounding lexical cues, while traditional cognitive domains are suggested by the physical context. Outside the restaurant, the 'ham sandwich', for instance, is no longer used to refer to the man who ordered it. In roleplaying, however, the use of player names for characters and related objects and entities is still possible outside the context of the game proper. Discussing what occurred in the game, planning for future games or talking about game-related objects can and do continue to use player reference terms.

5.5 Representational Reference: the Statue Rule

In this final section of the chapter, I will briefly discuss the use of representation miniatures and how they are referred to and used to refer to the fictional world. This discussion focuses on the statue rule.

The statue rule, as presented by Ray Jackendoff (1992), is a rule stating "it is legitimate to identify a statue by using the name of the person the statue portrays" (Jackendoff, 1992, p. 1). This also means that any reflexive, deictic or anaphoric terms for these entities are shared, including the portrayed entity's referring expressions being able to refer back to the portraying object. This enables constructions such as "Ringo ran into himself" where Ringo is running into his wax representation (Jackendoff's example). The representation-based referent entity in the tested data is miniatures. An example of their use is given in Example 5.43:

Example 5.43:

1. **Phil:** full of statues so you're standing up at the door
2. **Jake:** yes
3. **Pete:** where's the smashed one?
4. **Phil:** can I have everyone else on there, [um oh yeah there's the smashed one [[he's
5. **Jake:** [[He swapped one over
6. **Sam:** that's Pete
7. **Gaz:** that's Pete
8. **Jake:** Pete's there
9. **Sam:** Pete was standing [outside the room
10. **Phil:** [xxx already [[there
11. **Sean:** [[I'm somewhere the [smashed one
12. **Gaz:** [there

Session B1, Segment 3

In the example, Sam, Gaz and Jake point out the position of Pete's miniature (Lines 6-8), and as a result his character, on the scale map mat. Sean also points out the position of his miniature using the first person pronoun. The statue rule as-written would assume that the miniatures are representing the real-world players, but instead, they represent the character. This may be less a problem with the statue rule itself, but rather with proper names. In the statue rule, the referent is the representation (i.e., the statue) referred to by the designator of the entity being portrayed (or, on occasion, vice versa). In the case of miniatures, there are two referents using the participant's name, and the represented entity's designator is not used to refer to the miniature. Instead, the miniature takes the designator of the player linked to the character the miniature represents. This does not entirely discount the statue rule as a

possibility for adaptation and integration into a model for interpreting the data. A minor adjustment to the rule to say the representative can use any referring expression (not just a direct designator) that can refer to the thing it represents allows for the use of a participant's designator, as the represented character can take the same form.

5.6 Chapter Conclusion

In this chapter, I have tested several theories of reference against the data. Each theory was found to fit part of the data, but none was able to account for the data as a whole on its own. Bühler's deixis, for example, accounts for the separation of deixis that refers to the immediately visible context and deixis that refers to imagined or remembered elements, but cannot account for the several different kinds of referrable entities across several imagined and remembered worlds that need to be treated separately.

The tests performed showed that most of the theories presented in this chapter can contribute to the creation of a final model through adaptations specifically aimed at overcoming issues found when they were tested on the data. In the following chapter, the issues found in these tests are consolidated and discussed, and solutions suggested in preparation for the creation of a new model in Chapter 7.

Chapter 6 Toward a Combined Approach

In the previous chapter, I tested several theories of reference against the data collected for this study. Although no single theory was found to account for reference across multiple worlds, several of the theories were found to cover aspects of reference in the data. These elements could thus be worked into a combined model.

Three recurring problems were found with the tested theories which would need to be addressed in creating an improved model; the problem of accounting for only a single world, the problem of not allowing cross-world reference where there are multiple worlds, and the problem of missing some functional aspects of reference, either how a term is used or how it is interpreted. In this chapter, I will consolidate the findings of the previous chapter in preparation for the creation of the new model. For each of the three problems, I will begin by describing the problem found in detail, including the key theories that exhibited them. I will then work through potential solutions, working with existing theories that overcome the problem where possible and providing illustrative examples. I will then lay the groundwork for the final adapted model. I will explore the theories that were found to be adaptable, explaining what each theory brings to the model and how they will need to be adjusted.

This chapter is designed to lay the groundwork for the next. The chapters that follow will present the final model, with detail for both the referring and interpretation processes, which will lead finally to a large-scale example of the model in use. Before this can be done, however, the problems found in existing theories must be dealt with, beginning with the issue of a single world or entity outlook.

6.1 Problem 1: One World at a Time

Several of the theories tested in the previous chapter work under the assumption that, in any given context, only one world is in operation at a time, and that the world is controlled at

a discourse level. Recounting a past event in narrative discourse will focus on the past real world, or a planned future event will focus on a hypothetical future world. Most theories tested that exhibit this issue assume that the world being used is the real world. Traditional deixis, for example, assumes that pronouns can be interpreted from the real-world, situational context alone. Projected deixis, too, assumes real world interpretation, be it the past, future or a displacement in space, such as direction giving.

Even those theories that account for fictional reference assume that there is a single world available for part of the interpretation of a referent. The world of a novel or movie, for example, is seen to be a single, separate and self-contained world. Instances of flashbacks or prophecy within the story are all related to the past or future versions of that world. Metadiegetic stories, separate narratives within the overall narrative (Genette, 1966, 1969), are new speech events, and are new, single worlds.

The single world focus in both real and fictional reference is a key issue to be addressed in this study. As discussed in previous chapters, the data involves interlocutors using several different worlds simultaneously. In any given speech event, role-players will switch between the fictional and real worlds, as well as several intermediate worlds such as the play space, the miniature map, rules, character sheets or other unrelated fictional worlds. This switch may happen within speech events, within utterances or even within sentences.

The single world issue is a problem for most of the tested theories, including those based on fictional worlds or mental space theories which were expected to work well. Mental space theories are surprisingly limited as they assume that minor changes are made to the real world to create the target space, rather than building new spaces with real-world elements as the building blocks. This is also true of possible worlds, as they make hypothetical adjustments to the real world (such as Aristotle never existing), and are assumed to exist only

as what-ifs. Possible world theories also tend to treat fictional worlds as impossible, meaning that references to entities in the fictional world are referring to nothing at all.

There is also an assumption within the theories that when a mental space is invoked, the deictic context of the invoking utterance is moved, in its entirety, into that mental space. This means that the speaker, time of the utterance and place of the utterance are projected into the space and the true origo of the discourse is not taken into account in the interpretation of that discourse. This particular problem is discussed in Section 6.2, but is a symptom of the single world issue. This assumption is seen in Rubba's deixis (Rubba, 1996), where mental spaces create new deictic contexts.

The one world at a time problem is the most important to solve in terms of roleplaying reference. The multiple worlds in the game are not just present, but persistent. These worlds are not re-created when they are referred to, but remain available for all participants to use and change through the medium of the game. This persistence means they are constantly active, and any given utterance needs to be able to have access to each world for its interpretation. Take the following example from an earlier study I performed on table top roleplaying data (Cook, 2007):

Example 6.1

> **Speaker: I** cast a spell to make a noise loud enough for him to hear but so no-one outside the room would hear like some kind of dodododo like the Für Elise… *I* don't want **Ø** to poke him to wake him up *I* wanna keep **my** distance while he's awake and *I* have to mark that off as a spell

In Example 6.1 above, two different entities are referred to by the first person pronoun in the same utterance; the character (in bold) and the player (in italics)[32]. The example shows

[32] For the purposes of this discussion, desires expressed in the first person are presumed to be those of the player for the character, rather than the desires of the character, unless the participant is speaking as the character.

that the target referent of a single term can shift from world to world, and that each of the worlds needs to be available as interpretive contexts. Should the utterance context be a simple case of the ground shifting entirely to the new world, the ground would need to be considered on a word by word basis, meaning that there would be no connection between the multiple grounds used in the sentence currently being interpreted.

In order to solve this problem, all active worlds in the current domain must be available at the same time, but worlds must be distinct enough that interlocutors can determine the active world and separate the events of the fictional world and the real. There are several elements from the theories tested that can allow them to be adapted to a final model of multiple world reference. Mental spaces themselves are very adaptable, as long as we assume that the space is persistent and can be created from scratch rather than making slight changes to the real world. This means that, rather than taking the visible context of an utterance, as in Fauconnier's examples, the various mental spaces expressed during a roleplaying game are created and adjusted in the interlocutors' imaginations through verbal description.

These from-scratch mental spaces can be combined with Rubba's deictic grounds for reference to the non-real. Rubba's model allows the deictic context to be shifted in its entirety into the new mental space, which may be related to giving directions or recounting past events. The movement means that the person referred to is moved to a new space and time to a new situational context. The real world, and other worlds, are left out of the reference interpretation during these shifts, creating a new and self-contained space.

The isolation causes issues in interpretation of both personal pronouns and proper names, as the interpretation of these forms requires access to all available active worlds to determine a specific referent. Rubba's deixis needs to be adjusted to allow the world outside a mental space to be included in the interpretation of an utterance. The adjustment required is

related to the way mental spaces operate in relation to the deictic centre. Mental spaces, rather than becoming grounds unto themselves, become an element of the deictic centre alongside space, person and time. When a speaker uses a reference form, the interlocutors will interpret that term by way of knowing the speaker, the place, the time and the salient mental space (where required). This adjustment allows for a freer shift in worlds, as the interpretation can rely on the actual deictic centre without the need for a full re-interpretation for each use. It also retains the links to the real world[33] to allow for interpretation of the index of terms, which are essentially fixed, and applying mental spaces to the interpretation of the referent (see Section 6.2). In the example below, Pete is trying to determine if Bill's character is able to assist his character in removing a gemstone from a wall:

Example 6.2

Pete: he can assist me he's got sixteen strength haven't you?

Session B1, Segment 21

The pronouns *he* and *you* in the utterance above refer to two different entities (character as a person in the fictional world and character as a set of statistics on a character sheet), both indexed as the same entity, Bill. The indexes are interpreted using the traditional person, space and time ground, while the hearer interpret the referent by determining the target mental space's equivalent to the indexed entity (Bill's character is Bill's equivalent in the player-as-fictional[34] space).

The question then becomes how interlocutors determine whether the current mental space is needed for an exact interpretation, and what space that will be. For this purpose, Bühler's deictic types can gain a functional role in determining whether a term relates to the true situational context (oculus), or whether other spaces and worlds must be accounted for

[33] Or other base-world such as the fictional world of a novel. I will continue to use *real* for ease.
[34] A conceptual blend of the fictional and real spaces, see Section 8.2.3.

(phantasma). Uses of the phantasma mode of pointing would lead to interlocutors using contextual cues and interpretations of speaker intent to select from possible mental spaces to determine a referent from the pre-determined index. The index itself may be real or fictional base world, which will be established by the indexical context determined by the activity related to the term's use (novels and stories indicate a fictional index, for example).

We also need to adjust Bühler's anaphora to reflect the ability for a pronoun to anaphorically (or cataphorically) refer to a different entity than its antecedent. This can be achieved by treating anaphora as a property, rather than a type. Take the following example:

Example 6.3

1. **Pete:** so did Sean mark down his prestige point already?
2. **Sam:** yep
3. **Pete:** so we're on nineteen?
4. **Phil:** I've just got to check if [he did something wrong
5. **Sean:** [no I'm not I missed a session so I'm only on
6. **Sam:** yeah he missed a session. So he's down a couple

Session B1, Segment 7

In the example above, Pete (Line 1) and Sam (Line 6) use anaphoric terms to index Sean (antecedent in Line 1). The anaphoric forms in the example and their antecedent are not in the same world. The antecedent refers to Sean the player, while Pete's anaphor refers to the character/rules blend of Sean's character and Sam's refer to the real Sean and the character/rules blends of Sean's character respectively. This would seem to indicate that the relationship between antecedent and anaphor is not one of shared reference, but of shared index, a relationship suggested by Fludernik (1993), although Fludernik likely did not assume a difference in the index and referent of a term. Interlocutors are still required to establish whether a term is referring by way of the phantasma or oculus mode of pointing to determine whether the referent of the anaphor is the same referent, or different, and whether that referent is real or fictional.

Finally, for the purpose of this model the phantasma mode of pointing will need to be divided into a remembered or memory-based type, or an imagined type[35], with imagined type needing further division to fictional and hypothetical or planned. This is indicated by instances such as discussing past real events or game rules (memory alone), current and future fictional events, displaced descriptions such as direction giving and future hypothetical events both real and fictional (imagined alone), or past fictional events (memory/imagined combined). The difference between memory-based and phantasma resides in whether the referent and their actions are related to the memory of a past event or experience, or imagined anew.

The multitude of worlds, and the interpretation of fictional referents based on real-world indexes, means that the theory of conceptual blending (Fauconnier & Turner, 1998) comes into its own when applied to reference in roleplaying games. Conceptual blends solve different elements of the single world problem than other theories. They allow for multiple worlds or spaces to exist within a context, and account not so much for the shift in reference between worlds, but the ability to refer to entities that reside between worlds, such as fictional characters being expressed as rules-based numbers. Blended spaces house many of the referent entities in the data, and are an important part of the function of roleplaying. They allow for real-world rules and objects to make changes to the otherwise independent fictional world, and, to an extent, vice versa. Conceptual blends also help to solve other problems found in tested theories. Their overall role in the model for multiple world reference is discussed in Section 8.2.3.

[35] There may also be an argument for a special type for fictional indexes, and fictional characters using phantasma mode reference, but this will be left for future research for space.

6.1.1 One Entity at a Time

Related to the one world at a time problem is the one entity at a time problem. This problem arises when a theory assumes each referring expression can only refer to one entity, either at all or in a given context. Although this issue is seen in all theories of proper names to varying degrees, deictic forms suffer from this problem as well.

This problem arises most prominently in rigid designation theory. A name is assumed to refer to the bearer of the name no matter what world is being discussed. As the data has shown, however, any given proper name can refer to several entities, many of which are not the owner of the name, and who exist in worlds where the name's owner does not. There is a similar level of rigidity in theories that claim names are indexical. In these cases, while the name is not attached exclusively to an individual, it is considered attached rigidly to someone who bears that name, usually narrowed by speaker intent or by the speech context.

Standard deixis, too, assumes a single entity. According to the rules of standard deixis, *I* always refers to the entity performing the utterance, and *you* to the addressee. As with proper names, we see this is not the case in the data:

Example 6.4
Mike: yep well you manage to scamper down and give me a quick jump roll to, leap across to a rooftop
Eleanor: Good I don't even have jump
Session D1, Segment 3

I here refers not to the speaker, but her character, Fred. The ability for a first person form to refer to a person who is, in fact, not the first person must be accounted for in order to create a comprehensive model of reference. This problem is not restricted to singular deictic forms. Plural forms, too, have issues with reference to multiple entities. *We*, in particular, suffers from similar problems to *I*. *We* is used to indicate the speaker and any intended others (present or otherwise). In this data, *we* is used for the speaker and their intended others in the

real world (Example 6.5), the fictional party of characters (Example 6.6), or both at once (Example 6.7):

Example 6.5

1. **Phil:** [but DND is not a battle of attrition to see who dies firsts, like if you can't do damage it's a foregone concl[[usion
2. **Gaz:** [[ah, if we were playing in the game that the pregens would play, it's a very effective um character
3. **Sean:** sorry? What are you on [about?

Session B3, Segment 1

In Example 6.5, the group are discussing Gaz's character, which they consider ineffective in combat. The first person plural *we* at the beginning of Gaz's utterance is a standard use of *we* in that it refers to Gaz and those intended others that are present in the room with him. Example 6.6 below shows a similar use referring to blended player/characters:

Example 6.6

1. **Susan:** Well [um what time are our competitions
2. **Edward:** [staying with the crowd
3. **Eleanor:** We are in the company of three giant lizard men I think we're ok

Session D2, Segment 7

In the utterance made by Eleanor in the above example, Eleanor is using a first person plural form to refer to a blend between the group of players and their characters. The use of a first person form for character is indicative of a blend between player and character rather than character alone. Another player/character blend appears in the following example, alongside fictional reference:

Example 6.7

Edward: Actually I hadn't- I was actually about to ask you that, can I roll to see if I can get my other two Rai'kur, I assume we're big guys so we have big voices to shout together at the right moment to hopefully distract the other player, is that possible?

Session D2, Segment 12

Example 6.7 represents a single instance of the first person plural that encompasses two different kinds of entity. Edward refers to his character as a blend with himself, and a group

of purely fictional Rai'kur[36] (which Edward refers to as his, despite them being NPCs). The ability to refer to different types of entities with the same single sign seems restricted to cases where one of the entity types is a blend of the other, as with the character entity and the player/character blend in Example 6.7.

The one entity at a time problem is a symptom of both the single world problem and the lack of cross-world interpretation discussed below. Thus the theories that in some way mitigate these two problems will also alleviate the single entity problem. The cognitive domains theory (Sweetser & Fauconnier, 1996), which allows for the use of an object connected with a person to be used to refer to them, or vice versa, will be an integral part of the final model. Its most prevalent function is defining the available worlds, entities and spaces that can be referred to and thus interpreted. The cognitive domains for the data is roleplaying, meaning the fictional world, rules, miniatures and characters as statistics are available for reference, and this group of friends, meaning the group's shared experiences are also available.

The examples above touched on part of the solution to the one entity at a time problem. The use of conceptual blends in the final model provides a link between multiple entities across multiple worlds. The link then allows worlds and entities to be accessible for reference in the same utterance or even the same term, and for entities in the real world to have an effect on the fictional. Mental spaces also aid in alleviating the single entity at a time issue in much the same way they help solve the no-cross world interpretation problem. If we allow mental spaces to be an element of the deictic context alongside the speaker, time and place, we can allow reference to a different space using a real world index. In the case of Example

[36] A fictional race of dinosaur-like humanoids.

6.7 above, the index is the speaker and intended others, and if the referent is then the player/character blend of the speaker Edward and that entity's intended others in the intended mental space, we can explain how the reference to multiple types of entity in the same term are possible. The solution to the lack of cross-world interpretation problem is discussed in Section 6.2.

Combining cognitive domains, conceptual blending and mental spaces allows for the interpretation of the referent across worlds without disturbing the interpretation of the index of the term. The relationship between world, index and referent is discussed in the next section's consideration the lack of cross world interpretation.

6.2 Problem 2: Lack of Cross-World Interpretation

The lack of cross world interpretation problem is also related to the one world at a time problem. Most theories exhibit this problem, not allowing reference to one world to be interpreted based on the content of another. This means that the sign, index and referent of a term must all be in the same world. This is a problem for this data as, without knowing who a term refers to in the base world, it is not possible to interpret the referred entity in the target world. A name may be used to refer to an entity in a world where the bearer does not exist. Take Example 6.8 below, in which Tom is declaring that Sam's character, who is a mage, is acting as the fictional party's light source:

Example 6.8

Phil: okay... Basically it tells you that ah= the ceilings are about fifteen foot hi=gh the doors are mostly all strong wood and unlocked u=m the storage areas are lit but the basement will be all unlit you'll probably need to bring your own light source with you
Bill: yeah that's called Sam
Session B1, Segment 2

Bill's use of the name *Sam* in the example above refers to an entity in the fictional world. However, no entity exists in the fictional world that bears the name "Sam". *Sam* is the

name of the player in the real world, and the target is his character. In order to pick out the referent in the fictional world, we must first establish the bearer of the name, and use that to find the associated entity in the target world.

Cross-world interpretation is related to the way an entity is indexed in the real world. The fictional character, as a blend of the real and fictional worlds, is presented as declared actions by the player, just as the character in the rules-fictional world blend is expressed as rules and the relative position of characters during a battle by miniature figurines. It would thus seem that some form of representative theory would be an appropriate solution to this problem.

The statue rule (Jackendoff, 1992, see Section 5.5), which claims that a representation of an entity can be referred to using the designator of the represented entity, is a step in the right direction for solving this problem. As written, the theory only applies to objects designed to be representation, such as miniatures, statues or photographs, and only where those representations are in the same world. Representations of entities in the same world are rare in the data. Instead, there are two forms of direct, statue-like representation of entities across worlds, namely the miniatures and the character sheets. Character sheet representations are abstract, with numbers representing the level of ability a character has in certain skills. The miniatures, or the other hand, are direct representations of relative positions, orientation and, in some cases, relative size of entities in the fictional world. The ability to use the referring expressions for the *index* of the object being represented is an important part of the way miniatures are used in game.

A minor adjustment, saying that any *linked* entity can share the designator of the owner of the designator, not just as the representing entity, allows diegetic forms to use the reference forms as seen in the data. The interpretation of those terms, however, still requires

the ability to interpret across worlds. The theories mentioned above, including cognitive domains and, to an extent, mental spaces, would also need to be adapted to serve cross world.

To meet this need, we once again turn to the mental space as element of ground solution. In this case, the ability to interpret the base-world owner of a name or deictic form before then interpreting the target space allows the set of entities to be narrowed before the final referent of a name is determined. This gives us the first indication of the potential process required in the interpretation of reference across worlds, especially when combined with the cognitive domain solution to the single entity problem discussed above. The interlocutors are required to determine the available worlds, which are connected to the domain of the activity being conducted and thus part of the overall indexical context, then determine the base world target of a term (using the deictic context), and finally the world being used. A more detailed discussion of this interpretation process with examples is given in Chapter 9.

6.2.1 The function of the Index

The key to the ability to target entities across worlds is the split between the index of a term and its referent. Proper name theories usually allow that a sign may have many referents, but rarely do they allow that an *index* has many referents. Deictic forms, on the other hand, allow for multiple referents to a single index. *I*, for example, always indexes the speaker (as a role, rather than as an individual), but the referent changes to the individual speaking at the time of the utterance. In all cases, the index is fixed, and this does not change in the case of roleplaying:

Example 6.9

1. **Sean:** that's right you can't just have an [entire room going tsh tsh tsh tsh
2. **Phil:** [though between Sam^{Sam} and me^{Phil} we can have two light spells going
3. **Sam:** yes

Session B3, Segment 9

The example, coded for index, shows that the index remains the speaker of the utterance (Phil) and the bearer of the name (Sam). The index of a term in Nunberg's (1993) reckoning is the generic pointing form, the speaker of the utterance without the specific speaker yet pointed out, or the bearer of the name Sam without a specific Sam yet pointed out. Here, the index is more narrow, targeting the specific entity that would normally be the referent. The index is fixed to the base world, in this case the real. The index may also be fixed to the fictional world in the case of more narrative style play:

Example 6.10

1. **Tim**: I try and make a -
2. **Susan:** This is why Eirra took all the diplomacy and talky skills
3. **Tim**: I tried to take, I did try and make a slightly [talky mage

Session D1, Segment 4

Usually, the index in the fictional world is the same as the referent. In the above example, however, the proper name *Eirra* is used to refer to Susan, Eirra's player but still indexes the character. Many of the theories tested on this data, or that are used as baseline theories of reference, are able to pick out the index of the terms found in the data, rather than the referent as they were originally intended. An extra step is required in the interpretation of the referents themselves.

In both the real and fictional cases, the fixed index narrows a set of potential referents based on the indexed entity and the domain of the activity. The proper name *Sam* in Example 6.9 may denote Sam himself, Sam's character, the character as statistics, miniatures, past characters and objects possessed by Sam. As indicated above, the establishment of the referent from among these entities involves determining the world intended by the speaker. It is often the case that theories do not explain the process of retrieving a referent. In the following section, I will explore this issue among other functional issues present in tested theories.

6.3 Functional Issues

Many of the theories tested fail to account for both the form and function of multiple world reference. In particular, the theories account for either why we can use certain forms for non-canonical entities (e.g. and cognitive domains), or how uses of signs are interpreted or formulated (e.g. Bühler's deictic types (1934) and Rubba's alternate grounds (1996)) but not both. To fully account for multiple world reference, a new model must explain both why the use of certain forms is possible and how those forms function.

Much like the solutions to the problems outlined above, the functional aspect of multiple world reference can be explained by combining aspects of several theories. The use of reference to non-canonical entities is explained in the ultimate model proposed in Chapters 7 and 8 by way of using mental spaces as an element of the deictic context, rather than as a context of their own. When a participant refers to an entity in another mental space, the index of the sign they chose is interpreted based on the standard context for interpreting that sign. Knowing the mode of pointing (Bühler's type) that is being used by the speaker, whether oculus or phantasma, allows interlocutors to know whether the mental space step in interpretation is required for interpretation. Phantasma is most useful mode in the context of roleplaying if we can then split the mode of pointing between memory, future and fictional reference.

The kinds of spaces available for interpretation are dictated by the cognitive domain of the activity being performed. This functionally allows the movement between worlds to occur and also narrows the potential entities available for reference to make interpretation easier. When the domain is known and the potential referents established, the interlocutors must then be able to interpret which of the available worlds in the domain are being referred to by the speaker.

There are several factors that seem to come into play in determining the worlds that can be referred to by a given sign. As mentioned above, the mode of pointing is a key factor. Demonstratives used in the roleplaying domain will dual refer to a representative object and to the entity it represents. Oculus modes will refer to the player in the true situational context, referring to them as a player in their capacity as a controller of the character, rather than the "real them" outside the game. References to the real person away from the game use a memory-based mode of pointing to refer to them in the past, or a planning mode for future events. As most of the entities that are part of the roleplaying domain are referred to within the phantasma mode of pointing, interlocutors must be able to determine which is being referred to without the aid of pointing, gesture or gaze. The interpretation of target world is therefore a matter of determining speaker intent, which is discussed in more detail in Section 7.6 of Chapter 7.

6.4 Chapter Conclusion

This chapter has briefly discussed the problems identified in tests of the theories of reference outlined in Chapter 5, and how those problems can be resolved by incorporating elements of various existing theories into a single model. A summary of the theories that are incorporated in the model and their function within it are outlines in Table 6.1 (overleaf).

With the problems established and the solutions put forward, I will now move to a detailed discussion of the final model created for multiple world reference. The following two chapters present the model in two parts. Chapter 7 presents the process of interpretation of a referring sign. Chapter 8 then presents the later part of the model, a series of worlds and world blends within the roleplaying domain. The model is applied to a large sample of data in Chapter 9 with reference to other potential multiple world contexts to demonstrate its potential applications.

Table 6.1 Summary of tested theories and their place in the final model

Theory	**Accounts for**	**Contribution or Adaptation**
Bühler's Deixis	Deixis beyond Origo	Provides the basis/ precedent for a non-physical deictic centre and multiple deictic types. Anaphora adapted to cover oculus and phantasma modes of pointing, rather than being its own separate type. Functionally, indicates whether a mental space interpretation is needed.
Mental Spaces	Anything non-real or representational	Adapted to the fourth element of the deictic centre. Provides participants with the ability to use non- oculus deixis
Conceptual Blending	Player-as-character, joke spaces, character-as-statistics, past/future characters	Some of the possible referents are in blended spaces. Blends allow for interpretation of jokes and insults as non-actual reference or actions, hypotheticals and rule-talk as not happening in game, and rule based things to have fictional world effects. Allows effect across world in general
Divided Person	Functionality	Accounts for the projected entity part of the reference function, rather than accounting for any specific entity. Accounts for the ability to use "I"
Cognitive Domains	Functionality	Partly for interpretation, partly for use. Narrows the potential referent forms to those available in an RP context, but also the potential referents of the term I- a narrowing element in interpretation after indexical and before deictic
Rubba's Deixis	Overall basis. Accounts for full fictional, past, past character	Overall basis for the model with a minor adaptation. Instead of mental spaces being the entire context, they are instead a fourth aspect alongside space, time and person
Statue Rule	Miniatures, Character sheets (to a point)	Minor adaptation to the statue rule that lets it work in this context. Representations can now take the referring expression of a linked entity to the represented entity
Speaker Intent	Functionality	Required to determine target world or space
Rauh's Deixis	Minis (space only), same entities as Buhler	Not really included, only Types 4 and 5 add anything new or relevant. Analogous deixis can account for space in miniatures as the 1-inch square is directly analogous to that relative position, to scale, in the fictional world.

Chapter 7 A New Model for Reference

Having explored the shortcomings of various theories of reference and suggested ways they could be adapted for use in multiple world reference, I will now amalgamate these theories into a new model. In this section, I will discuss the various elements of the model, as pictured in Figure 7.1 (overleaf).

The model outlines a step-by-step process, although the reality is that the use and interpretation of a sign is likely simultaneous, or near simultaneous. The order of presentation of the model is based on the narrowing effect of each step, creating a sort of funnel effect, alongside pre-existing relationships between elements such as sense, index and referent.

Three illustrative examples are used throughout the discussion in this section, demonstrating various types of reference and different active worlds. The examples are provided below:

Example 7.1

1. **Phil:** cast something, can't really whack him from where I am
2. **Jacob:** so he's mildly injured
3. **Sean:** so that one's moderately injured sorry, that one
4. **Jacob:** yep
5. **Sean:** ah the one in f=ront of Gaz is untouched, the other one is untouched
6. **Jacob:** and the one-
7. **Sean:** the one near Phil is pretty, badly smacked, cause he copped [the-
8. **Phil:** [the two in front of me
9. **Sean:** he copped the slay living

Session B3, Segment 6

Example 7.1 from group one includes several kinds of referring expression, particularly demonstrative (Line 3), a definite description based on relative position (Line 5), and proper names (Line 7). This example is particularly interesting as in each case the reference dual-refers to both a miniature representation and a fictional entity by way of a real-world index. The demonstrative points to a miniature which represents a fictional entity, the definite description describes the relative position of one miniature to another and thus the

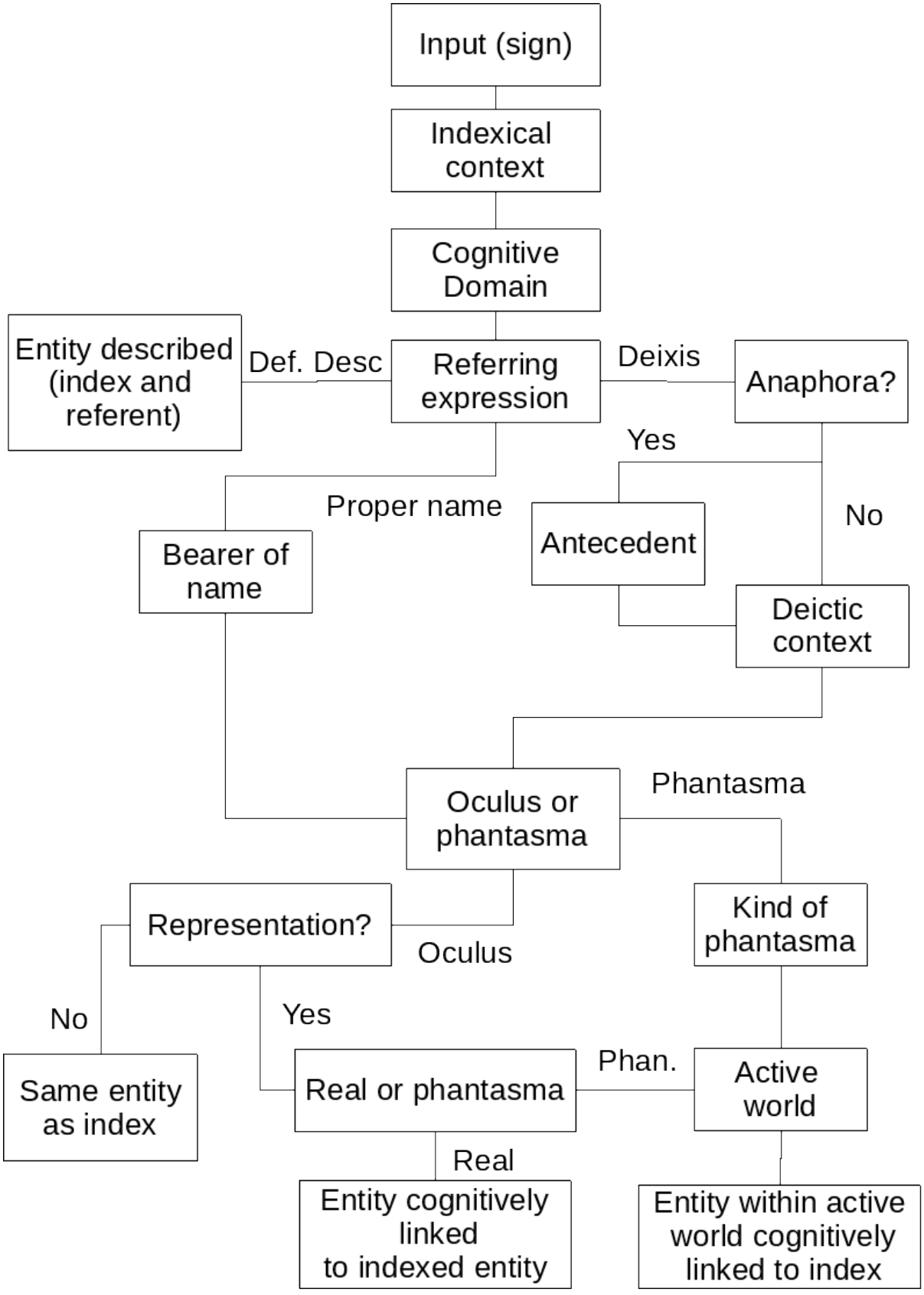


Figure 7.1 Interpretation Model

relative positions of the two represented entities[37], and the proper name indicates the miniature belonging to the bearer of that name and the linked represented entity.

Example 7.2

1. **Jake:** I didn't hit anything as I'm tumbling away. That was a massive waste. That's twenty-six
2. **Phil:** twenty-three the target is
3. **Jake:** I'm gonna go back behind the fighters
4. **Phil:** the fighters all run away and heal themselves
5. **Jake:** yeah
6. **Jake:** oh damn I've left that bloody tosser, and the other tosser, standing [there by themselves
7. **Gaz:** [oh the two tossers

Session B1, Segment 6

Example 7.2 includes first person pronouns and definite descriptions. The references are primarily to the blend between the player and character. This example also presents a combat scene using direct reference to the fictional entities themselves rather than reference via representational miniatures.

Example 7.3

1. **Mike:** Um... ((dice)) it does not this year
2. **Susan:** hmmm... hoar that's a bit more difficult. Whadda you think Fred?
3. **Eleanor:** Well Fred's just following you around
4. **Susan:** @@
5. **Eleanor:** Taking a lot of interest on, all the people around here
6. **Susan:** @@@
7. **Eleanor:** And she's very interested in signing up for the acrobatics contest
8. **Susan:** ooh ooh
9. **Eleanor:** But having no silver
10. **Susan:** Yeah, that's alright you can pay me back with your winnings @@@ if you get any. Neh, whatever, I'm charitable, have a silver @@@@
11. **Eleanor:** And Fred signs herself up for the acrobatics, contest

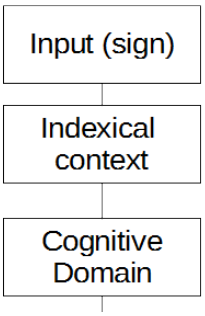
Session D1, Segment 9

Finally, Example 7.3, this time from Group 2, is referring exclusively to the fictional world, both through narration (Lines 3, 7 and 11) and portrayal (Lines 10 and 2). This example demonstrates second and third person reference and a very different play style.

[37] "In front of Gaz" assumes that the character Gaz will be facing the opponent he is engaged in combat with. While it is possible that "in front of Gaz" may mean a mini in front of the player, or one between Sean and Gaz's mini (in front relative to both parties), spacial reference when using miniatures usually treats the battle mat and the miniatures as a self- contained space for reference. This means that reference to miniatures are always relative to other miniatures, rather than things outside the mat space.

It should be noted that this discussion will be primarily focused on the interpretation aspect of reference use. The usage aspect will also be discussed, but as an aside to the main discussion.

7.1 Input and Indexical Context (sign).



The first stage of reference interpretation is the receiving of input from a sign. The choice of sign seems to relate partly to play style, particularly whether players prefer to control or simply narrate the story and characters, and the world that is being targeted. The kind of entity may also affect the choice of sign, as may the topic being discussed. These factors are discussed briefly in Chapter 8.

The inputs in the three examples given above are of various kinds, and have various motivations. Example 7.1 comes from a combat scenario, and most references are to miniatures on a battle map, the corresponding characters and their actions. The signs used in this case are a combination of demonstratives or definite descriptions that use the player characters' miniatures as a point of reference for providing descriptive properties ("the one in front of Gaz").

Example 7.2, while still a combat scenario, is an instance of control by the player over the actions of their character, primarily referring to a conceptual blend between the two entities. This results in the use of first person pronouns.

Example 7.3 also involves some first person reference, though this time the first person occurs as the character is speaking, thus the character refers to themselves through the voice of the player, calling for a self-referential form. This is in direct contrast to Eleanor's use in

the same example, where she refers to her character by name, but refers to Susan's character by a second person pronoun.

The use of a sign carries elements of an indexical context within both its use and its interpretation. The first element involves connotations of shared aspects to a sign that are common to the speakers of a language including language spoken, culture of use and established uses of a sign such as word class and syntactic considerations. The choice of a sign also involves social considerations. The connotations of the sign, which are interpreted following this step, rely on the interlocutors' knowledge of each other, their social circle and the activity being performed.

The knowledge of the culture, the social group, the language being spoken, shared knowledge and shared past experience constitute part of the indexical context. The indexical context is ever-present outside the discourse and does not change at an individual utterance level. For this reason, and because the focus of this thesis is the use and interpretation of cross world uses, the indexical context will not be discussed in detail in this thesis.

7.2 Cognitive Domain

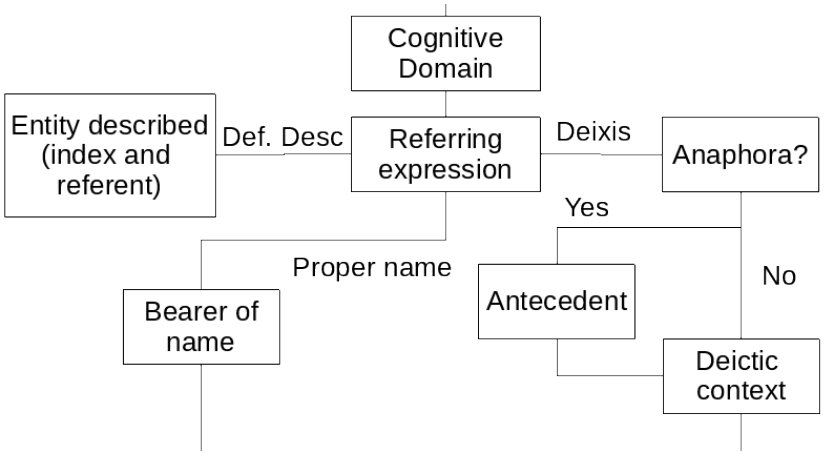
The cognitive domain step in the sign interpretation process will restrict the available worlds that can be referred to by a given sign. The domain is related to elements of the indexical context described in the previous step, as the domain is dictated by the activity, topic of conversation and, to an extent the interlocutors. The domain is established independently of the use of reference and remains fairly constant. The domain is therefore set before sense interpretation in the model.

The domain will default to the primary place and activity the conversation takes place in. In this data, the primary domain is that of playing a roleplaying game, with the social group perhaps constituting another domain. In the roleplaying domain, the available main worlds are the real and fictional, with various blends and spaces connected to those worlds.

The available worlds are discussed in detail in Chapter 7. For now, it is sufficient to say that the amalgamated world and space types provided in Chapter 4 represent the basic worlds available in the domain of roleplay.

In the case of our examples, the cognitive domain is restricting the types of associated objects available as referents (character sheets, miniatures and drinking glasses are seen in the data) and the potential worlds that can be used (those associated with this game's fictional world, or this group's past fictional worlds). There are points in which the domain changes, and these are distinctly marked either when the domain shifts away from the default, or when the domain returns to the realm of gaming.

7.3 Reference type and Meaning (sense)



With the sign and indexical context established outside the discourse, internal elements of the sign itself must be established. The type of reference must be taken into account, as must the meaning or sense of the sign. The knowledge of the type of reference will establish how interpretation will proceed in the next steps of process, while knowing the sense of the term will determine the elements of later context that are required within the interpretation.

In terms of the data used in this research, both the index and referent of a definite description are able to be interpreted at this stage. The index of a definite description and its referent are the same entity. A proper name and a deictic form must continue along the

interpretation process; this stage leads the hearer to the index of a term (see below), while further steps are required to interpret the referent. A proper name will index its bearer with further steps relating to linked entities and active worlds required to determine the referent. Deictic interpretations are more complex. The hearer must first determine if the pronoun is anaphoric. If the term is anaphoric, the hearer must determine the antecedent of the term in order to determine the index. If the term is a non-anaphoric deictic term, the hearer needs to determine the entity within the deictic context that is being indexed. Anaphoric[38] terms will also have an element of deictic context in their interpretation insofar determining whether the term is used anaphorically, cataphorically or exophorically.

7.4 Interpreting the Index

It is at this point in the model that the interpretation process may deviate from existing theories. In this model, the index of a term is performing the role that traditionally determines the referent. Proper names, for example, usually refer to their bearer. In this model, however, the bearer of the name is simply an index.

In Example 7.3, Line 3, the proper name *Fred* indexes Eleanor's character Fred, a character in the fictional world. Although in this instance the referent is also Fred, this is not always the case (Example 7.1, Line 7).

Example 7.3 (Repeat, partial)

3. **Eleanor:** Well Fred's just following you around

Example 7.1 (Repeat, partial)

7. **Sean:** the one near Phil is pretty, badly smacked, cause he copped [the-

Example 7.1's proper name *Phil* indexes its bearer, Phil, but does not to refer to him. Instead, the referent is the miniature figure, and thus Phil's character by way of the statue

[38] *Anaphoric* here used as a blanket term for anaphora, exophora or catophora

rule. In cases where a term has an already shifting index, such as deixis, the interpretation is based on the deictic context, or in the case of anaphora, the antecedent.

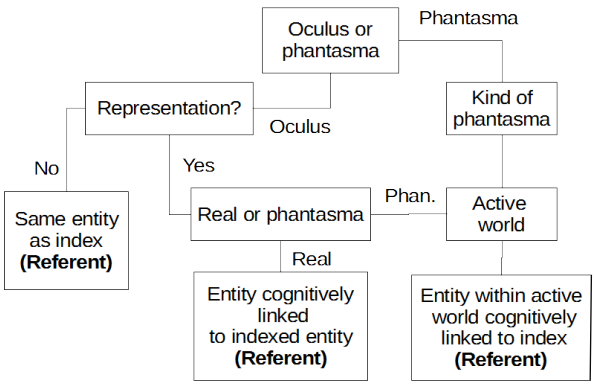
Example 7.2 (Repeat, partial)

1. **Jacob:** I didn't hit anything as I'm tumbling away. That was a massive waste. That's twenty-six

In this example, Line 1 from Example 7.2, the speaker is Jacob, and thus *I* indexes him. As with Example 7.1 above, the referent, Jacob's character, does not match the index, Jacob himself. The determination of the referent therefore requires moving further along the interpretation process, particularly since the index in the case simply serves to narrow potential referents to those linked to Jacob, rather than pointing to Jacob himself.

The index plays an important role in cross world referencing. It restricts the referent to anything or anyone associated with the indexed entity in absolutely any world, possible or otherwise. This means that the referent is now restricted to all characters, owned objects, created objects, past and future iterations of those elements and representations of those elements associated with the speaker. The index also serves as a way to avoid allowing a free-for-all reference to anything in an active world, and can also restrict the worlds available. If there is no entity in a world or space that is linked to the indexed entity, then the world is unavailable for reference (and arguably doesn't exist) in association with that indexed entity.

7.5 Oculus or Phantasma



The next step in interpreting a referent of a sign is determining whether the use relates to the direct and visible context (oculus) or if it is calling forth memory or imagination (phantasma). This is an important determination, as it will indicate whether the world of the referent will need to be ascertained, or whether a reference is representational.

The initial identification of a terms a pointing through either oculus or phantasma leads to further interpretive decisions. An oculus mode may lead to a representative object or to a reference to an entity within the origo. If the term uses the oculus mode of pointing and is non-representational, the referent will be within the origo (or the same world, in the case of names) and will thus be the same as the index. Representational instances will cause a repeat of the 'oculus or phantasma' step in the process to determine if the represented entity is real or imagined. If the entity is real, then the referent is simply the entity linked to the index that is being represented in the real world, usually the entity portrayed. Phantasma representations must still be interpreted based on the world in which the referent resides.

A reference using the phantasma mode must be narrowed down based on the kind of phantasma that is being used. There are three main types of phantasma, established in Chapters 5 & 6, that can help to further narrow the referent. Memory-based phantasma will refer to an entity from the past, or a 'past version' of an entity that is present or available in the current context. Fiction-based phantasma indicates that the referent will be entirely imagined, and future or hypothetical-based phantasma indicates a referent (whether real or fictional) that is to be imagined in terms of what they will or may do. Each of these types of phantasma have associated active worlds and thus associated entities. Memory-based phantasma, for example, will involve entities and spaces blended with the past space, which fiction-based phantasma will point to a world or entity that is related to the active fiction in the cognitive domain and context. The final step, the active world, is discussed in its own section below.

This part of the model requires a more complex interpretation process than the establishment of the index, with each step relying on pragmatic considerations more than fixed meanings. The interpretation of a term's use of either the oculus and phantasma mode of pointing is largely directed by context, understanding of how gameplay works and interpretation of speaker intent. In Example 7.1, where the reference forms are used representationally, the clues come from the type of reference as well as the context of speech. Demonstrative reference usually involves physical pointing with the target object becoming the main indicator of referent. If the object being pointed to is a something used representationally, then the mode of pointing is oculus (as the item itself is in the immediate context) and may represent something that uses the phantasma mode, and is interpreted later. Knowledge that the miniatures represent an element of the fictional world comes with knowledge of gameplay.

Although the demonstrative references to miniatures behave as expected, references to miniatures using other reference forms do not. In these cases, such as in Lines 5 and 7 of Example 7.1, the statue rule applies in an adapted form. In this case, the representing object does not receive the referring expression attached to the entity being represented, but the term applying to the most salient linked entity to the represented entity. This is usually the player who created the character. The choice of linked entity seems to relate to a combination of salience and entity prominence.

References that use the phantasma mode are interpreted through attention to both context and the inference of the speaker's intent. The expressions in Examples 7.2 and 7.3, which refer to elements using the phantasma mode, refer in different ways. Expressions in Example 7.3 refer directly using the phantasma mode, as the indexes are indicated through phantasma as well. The use of present tense in the example indicates that this is neither memory nor future hypothetical phantasma, thus leaving only the fictional world available for

interpretation. Susan's addressing Eleanor as Fred is also a contextual cue that the referent will be fictional.

In example 7.2, on the other hand, *I* indexes Jacob through oculus, but refers to his character (in a player/character blend) through phantasma. The phantasma used to point to the referent is indicated by the action described by the speakers in relation to the referring expression. Those signs that are deemed to refer by way of phantasma (whether they index via oculus or phantasma) need to be interpreted based on the active world, the key step to this model.

7.6 Active World

When a sign is determined to refer to, index or represent something through the phantasma mode of pointing, determining the active world becomes the final step in the interpretation process. The available active worlds are determined early in the process by the cognitive domain, and the determination of the currently active world allows interlocutors to pick the referent from among those made possible by the domain. As with determining whether a term is use to refer via phantasma, the active world seems to be determined through a combination of salience, intent and knowledge of play (although new players rarely take long to move into this reference pattern, and similar patterns are seen in everyday speech). Each of these elements of determination are complex, and with the exception of play knowledge, which is left for a later study, are discussed in depth later in this chapter. The worlds themselves and how they function within this reference model are discussed in Chapter 8.

The examples presented for discussion represent several active worlds and the entities that inhabit them. Example 7.1 takes place in the world of a blended real/fictional space, by way of the miniatures of the map. Example 7.2 refers to the same world, but without the map, although the map is there for the players to orient themselves. Finally, Example 7.3 refers to

the fictional world, but in two different modes; While Susan is speaking her character's words, Eleanor narrates Fred's actions from the outside, rather than portraying Fred herself. Knowing these active worlds allows interlocutors to establish the final referent of a term, as indicated in the coded examples below[39]:

Example 7.1 (repeat, coded)

1. **Phil:** Ø[2] cast something, Ø[2] can't really whack him[1] from where I[2/6] am
2. **Jake:** so he's[1] mildly injured
3. **Sean:** so that one's[6/1] moderately injured sorry, that one[6/1]
4. **Jake:** yep
5. **Sean:** ah {the one in f=ront of {Gaz}[6/2]}[6/1] is untouched, the other one[1] is untouched
6. **Jake:** and the one-
7. **Sean:** {the one near {Phil}[6/2]}[6/1] is pretty, badly smacked, cause he[1] copped [the-
8. **Phil:** [{the two in front of {me}[6/2]}[6/1]
9. **Sean:** he[1] copped the slay living

Example 7.1 shows references that are predominantly representational with the final target entities primarily player/character blends. In Lines 5, 7 and 8, there are embedded referents as participants describe the position of combat opponents relative to their characters, and thus the miniatures relative to other miniatures. The use of representational reference makes determining the active world easier for interlocutors, as knowledge of game conventions and likely earlier dubbing event determines to one entity that a particular representing object can refer to.

The active world partially determines the referent, either directly or via representation. The first person pronoun used by Phil in Line 1, for example, had been narrowed to a play-based domain, restricting the available worlds. The potential referents were restricted further by the use of the pronoun. The pronoun uses the deictic context to pick out the speaker of the utterance, Phil, to become its index. With Phil established as the index, the possible entities for reference are restricted to those related to Phil, and removed potential entities to which Phil has no connection, particularly fully fictional entities. From there, determining the active

[39] Cases where two codes are included indicate a representative reference. Codes with 'j' indicate a joke or insult entity (see Section 8.2.3.4).

world based on lexical cues and intuited speaker intent is the final step in the model's interpretation chain.

Example 7.2 (repeat, coded)

1. **Jake:** I[2] didn't hit anything as I'm[2] tumbling away. That was a massive waste. That's twenty-six
2. **Phil:** twenty-three the target is
3. **Jake:** I'm[2/6] gonna go back behind the fighters[1/6]
4. **Phil:** the fighters[1] all run away and heal themselves[1]
5. **Jake:** yeah
6. **Jake:** oh damn I've[2] left that bloody tosser[2j], and the other tosser[2j], standing [there by themselves[2/6]
7. **Gaz:** [oh the two tossers[2]

Example 7.2 is also a combat scenario. The interest lies in the blends seen in Line 6 and determining their referents. Jake's two uses of "tosser" embedded within full noun phrases, one of which was demonstrative, are joke blends of player/character. The joke space is indicated lexically through the use of an insult term to refer to two of the participant characters. Due to the audio-only nature of data collection, it is difficult to determine the final referent of these signs. The participants would use visible cues such as pointing and the previous position of Jake's miniature, as his miniature (and thus his character) had left the "two tossers" undefended[40]. While the target of the referring expression is a player/character blended entity occupying the fictional world. The targets of the insults are the players themselves.

Finally, Example 7.3 from Group 2 shows a case of reference that is not based on blends but instead on the unblended fictional world. Reference directly to entities in the fictional world is more straight forward than other types of reference. The proper names used in the example above both index and refer to the fictional characters. The interpretation from

[40] There are some clues from knowledge of the group and of gaming conventions that suggest that the referents are mages, and possible Pete, as Mages usually need defending and Pete is the most likely target for an insult if the target isn't Gaz.

index to referent is simple as there is only one world with an entity that links to the fictional name within the cognitive domain.

Example 7.3 (repeat, coded)

1. **Mike:** Um... ((dice)) it does not this year
2. **Susan:** hmmm... hoar that's a bit more difficult. Whadda you[1] think Fred[1]?
3. **Eleanor:** Well Fred's[1] just following you[2] around
4. **Susan:** @@
5. **Eleanor:** Taking a lot of interest on, all the people[1] around here
6. **Susan:** @@@
7. **Eleanor:** And she's[1] very interested in signing up for the acrobatics contest
8. **Susan:** ooh ooh
9. **Eleanor:** But having no silver
10. **Susan:** Yeah, that's alright you[1] can pay me[1] back with your[1] winnings @@@ if you[1] get any. Neh, whatever, I'm[1] charitable, have a silver @@@@
11. **Eleanor:** And Fred[1] signs herself[1] up for the acrobatics, contest

The deictic pronouns that refer to fictional entities are a little more complex. They rely on the initial shift in domain from a play domain based in the real world to a portrayal and narration domain dominated by the fictional. From there, the path is the same as above. The pronoun indexes the portrayal or narration entity indicated by its sense and as the fictional entity is the only linked entity[41], refers to the same entity it indexes.

7.7 Chapter Conclusion

This model shows that the mechanism of referent determination in cross-world contexts is fairly simple. An interactive version of the model can be found in ModelWalkthrough.ppsx, providing a description of each step and walking through an example. The complexity of reference comes from the worlds and entities and their interaction with the real world. The worlds, entities and interactions between worlds are discussed in detail in Chapter 8.

[41] There is the possibility of linked entities to the fictional world, a character may be an actor, for instance. There are no instances of this in the data, however, so I will not consider these for now to avoid over-complicating the discussion.

Chapter 8 How the World Works

In this chapter, I will discuss the worlds and spaces found in the data in relation to their role in the final model. This includes base worlds, stand-alone spaces and blends. The discussion will ultimately lead to the direct application of the model to the data in the following chapter.

8.1 Entities

Before I discuss the functions of worlds and spaces within the multi-world reference schema, the role entities play must be established as they seem to be the driving force for the existence of non-real worlds and spaces.

There are many more persistent entities available for reference than individual persistent worlds (those places that may be referred to using space reference). Spaces, on the other hand, tend to be created alongside entities, existing in many cases only to allow an entity to exist and become referrable. The main example of this is the player/character blended entity which exists in a blended space made up primarily of the fictional world, but with elements of the play space that allows players to manipulate the world. The associated blend space, the play/fictional space, cannot be referred to in and of itself.

Evidence for various entities comes from the language surrounding the reference to the entity. Certain entities are able to perform actions not possible by other entities, for example. Other entities are only associated with specific tenses, such as the real/past blend being associated with past tense forms. The evidence for each world, space, entity and blend is discussed in detail in each section.

Related to the methods of identifying various entities is the ability for certain entities to be said to affect certain worlds. The character entity, for example, cannot be said to be

performing actions in the real world, nor can actions of the character have any significant changes on the real world. If a cross-world effect is required by the participants or by the game itself, such as a player making a change to the fictional world, the entity must be blended with the an entity from the target world. There are spaces that can be blended that prevent an entity from affecting a specific world, the non-diegetic spaces. These spaces can also allow an entity to move its way outside the world it would usually be tied to.

8.2 World Matrices

The world matrices that contain entities for referring can be divided into three types; worlds, spaces and blends. This section will explore all of these types in turn, and describe some of the specific uses.

8.2.1 Worlds

A world is best considered a foundation for reference and for creating spaces. Worlds are persistent and self-contained, not interacting with other worlds except through blends, and not able to be affected by entities that are not inhabiting them. A world can be blended with a space or blend, and are not seen to blend with other worlds in the data.

There are two kinds of worlds in the data, the real world, and several fictional worlds. These worlds form a base. All spaces and blends will relate to one of these worlds and use them as the basis for their internal rules and their truth values.

8.2.1.1 The Real World

The real world consists of everything that actually exists for the participants, including things in the immediate environment and their experiences and past events. In terms of reference, while reference which uses the oculus mode of pointing requires the referent to be present in the real world or to be represented by something in the real world, most real-world

reference in the data is non-oculus. This is because the default, visible referent space is the play space and the various blends there-of. The real world is thus most often referred to in terms of past events, creating a memory-based phantasma mode of pointing:

Example 8.1

1. **Bill:** Jacob can I impose on a cup of tea?
2. **Jacob:** a cup of tea? yeah sure. [Anyone else?
3. **Gaz:** [ten fifteen
4. **Sam:** yeah please, I'll have a tea too
5. **Jacob:** cuppa, [coffee?
6. **Gaz:** [seventeen
7. **Sean:** oh, no its right, getting a bit late
8. **Sam:** tea please
9. **Phil:** you're shocking
10. **Sean:** @@@
11. **Phil:** you look at your clock then before you decided whether you wanted one
12. **Gaz:** thirty eight
13. **Sean:** yeah
14. **Sam:** gonna go [sleep
15. **Phil:** [what you gonna do wet the bed?
16. **Sean:** no it'll just stop me from sleeping properly
17. **Gaz:** thirty eight!
18. **Sean:** thirty eight?
19. **Phil:** nothing stops me from sleeping properly

Session B3, Segment 7

Example 8.1 above is one of the few examples of an interaction that uses the unblended real world. Bill asks Jacob, the owner of the house they are playing at, for a cup of tea, thus bringing the group into the real world. Everyone in the group then moves to referring to the real except Gaz, who continues the game based action he had previously been performing. The unblended real world is identified by a combination of lexical cues and tense. The discussion is not game related, and the participants talk about traits they currently have. The discussion primarily takes place in present tense. The conversation taking part in the real world is also evidenced by Gaz's louder declaration of his roll result as a marker for the return shift to the game world. As discussed in Section 9.3, movements to and from the real world are the most often and most distinctly marked of all world and space shifts in the data.

8.2.1.2 Fictional Worlds

Several fictional worlds appear in the data, and vary from the active fictional world of the game to past game worlds and fictional worlds depicted in movies and video games. As with the real world, a fictional world is self-contained, and can only be affected by its inhabitants or entities blended into the fictional world[42]. Fictional worlds have their own operational constraints that all inhabiting entities must follow. These will be different to other fictional worlds (though may take inspiration from them), and are separately delineated by marking in the discourse of the data:

Example 8.2

1. **Susan:** That's why he's so nice
2. **Alan:** I love Iroh
3. **Susan:** He's trying to help people... Anyway... Sads over sads over, @@ anyway at the end of this epic which just happens to be a romantic tragedy, Eirra is in tears. And um, you know sobbing in the front row and she just stands up to applaud etcetera excreta

Session D2, Segment 2

In the example above, Group 2 are discussing the Last Airbender animated show. They are specifically discussing the character traits of the character Iroh. During her second utterance, Susan shifts the active world with a distinct marking ("anyway").

The cues used by addressees to identify entities as fictional are largely lexical. The use of character names in the data in particular indicates discussion of a purely fictional entity, as does the direct avoidance of 'gamer like' terms such as those relating to the rules and discussing things the character would not know about (called "metagaming"). Where the players use reported speech in the fictional world and are speaking as their characters, the shift is usually preluded by cues such as "I say" or similar, or a slight change in register is found.

[42] The author or GM can be seen as inhabiting the blend between the self-contained fictional world and the play or writing space, and is thus an inhabitant of the fictional world.

8.2.2 Spaces

A space is an adjustment to a world with varying amounts of persistence and function. Worlds are persistent even outside play, while spaces are directly linked to either the domain of play, or to the particular speech event they are used in. Those spaces that are persistent, such as the rules space, are persistent by virtue of being created to be a consistent element for all players of a game, or because they are blends of a world and a persistent space, rather than a mixture of worlds and spaces.

In the case of roleplaying, only one space is able to exist in its own right, the play space (see below). This is because the function of spaces is to grant access to the fictional world by entities in the real, or facilitating gameplay. There are also spaces that allow access across worlds, but deliberately prevent the utterance surrounding the world and blended entity from behaving as a performative[43] and affecting the world (see Section 8.2.2.2).

8.2.2.1 Play

The most often used space is the play space. It can be blended in some manner with nearly every world and space available in the data that is related to the domain of the game. Unlike other spaces, the play space has its own distinct type of entity that can be referred to; the player. The play space is the mediating space between the real world and the fictional, just as the player entity opens the way for a real person to operate on the fictional. The play space exists largely to house the player entity and create the blends that allow the game to function. The player as an entity has one major function in the data, the rolling of dice and the calling of the results:

[43] The role pf performatives in roleplaying is beyond the scope of this thesis, but its intended as the focus of future research.

Example 8.3

1. **Mike:** Yep, so Ø roll me a mana weaving
2. ((dice))
3. **Susan:** Not great, twelve on
4. **Alan:** Twelve on twelve
5. **Susan:** Twelve on twelve
6. **Mike:** Um, no, there are a couple of little bursts of um life. Where um somebody's been injured and one of the few volunteer mana weavers has um, offered their services, but apart from that, no

Session D2, Segment 10

In example 8.3 above, Mike asks Alan for a particular dice roll. The null form indexes Alan and refers to the player entity linked to Alan, while the use of *me* indexes Mike and refers to the player entity. The player entity is identified lexically. It is usually seen in association with calling of numbered dice rolls, or with imperatives by the GM asking for those rolls.

The play space exists as a creation of the gaming cognitive domain, and only exists in itself to house player entities. The space is based on the real world, with many of its functions taking place in that world. The existence of the space separate from the real world is indicated by the use of discourse marking to shift between the play space and the real world, indicating that there is a distinct separation between the two.

The player entity is a direct analogy of the participant the associated reference indexes, and so has the least separation from the participant. This means that any insults directed to the participant, for instance, even when the insult uses the character as the butt, will be in some way a blend of the player entity. It is the player entity that is therefore the *I* centre of the origo in the game domain.

8.2.2.2 Minor and Non-Diegetic Spaces

The final space type are minor and non-diegetic spaces, both of which are transient spaces. These spaces do not create new entities or true spaces of their own, but rather exist to blend with and apply specific properties to other spaces, worlds and entities. Minor and non-

diegetic spaces operate somewhat differently to other spaces when they are placed inside a blend. As they do not have anything to contribute to a blend beside their overall property, they contribute everything to the blend, and cannot contribute to the generic space.

A non-diegetic space is one which enables a narrative, but is not connected to it, nor does it directly affect it. If the non-diegetic property is applied to an entity by way of a blend with a non-diegetic space, that entity can be said to do things in a world, but those actions do not become incorporated into the narrative of that world.

The non-diegetic spaces found in the data include a joke space and the hypothetical or future space. The hypothetical space allows participants to plan ahead, to talk about their characters performing actions and learning their potential consequences without those events becoming specifically applied to the narrative. The hypothetical space is marked by questions or conditional statements. Should the hypothetical statements become part of the world proper, the shift to a diegetic form is marked in some way.

The joke space is another non-diegetic space, although unlike the hypothetical space, there is no possibility for the events described to become part of the narrative of the game, recount or features of the target world. The space is so named because all instances of this kind of use, where the events are described but not intended to be integrated or discussed as if they could possibly integrated, are either jokes or some form of insult. A participant may say "the dog eats Gaz" when a dog appears in the narrative with no intention of the event actually occurring, as they are instead teasing Gaz in some way. The joke space is a special case of a space as it allows for entities to be discussed as if they are occupying a world or space that they normally are unable to inhabit (a player may be seen to be present in the fictional world, rather than just having an effect on it as seen in a standard player/character blend), or having properties that they normally could not have (a real person having a rules-based ability or

skill score, for example). A more detailed account of the function of joke spaces is found below in Section 8.2.3.4.

The minor spaces in the data are the past and rules spaces. The rules space is minor in that it only allows a mode of discussing the functions of characters in the fictional world, and does not have an entity of its own. The rules space is standardised across game groups in that the rules themselves are set out in a book published as a play aid. The rules have a direct effect on the narrative of the game as the rules restrict the possible actions of the entities within the fictional wold. The rules space can be identified by the use of jargon:

Example 8.4

1. **Gaz:** I'm dead
2. **Jacob:** I hope so
3. **Sean:** What's your CMB, Gaz?
4. **Tom:** It's not great
5. **Pete:** Its bugger all
6. **Jacob:** Ten
7. **Gaz:** i i i its... it's not [ten
8. **Pete:** [Its less
9. **Phil:** you're try and cast spells if you're [got
10. **Sean:** [No it's ten. Mine's only eight, his can't be ten
11. **Pete:** No not with minus strength
12. **Gaz:** CMB i=s?
13. ((pause))
14. **Gaz:** nine

Session B1, Segment 18

In example 8.4, the possessive pronouns in Lines 3 and 10 to blended character/rules entities, the first the blended entity linked to Gaz, the second to Phil. The group is enquiring about Gaz's character's combat manoeuvre bonus (CMB[44]) which is an indicator of how good his character is at performing non-combat actions during combat, such as tripping opponents or grappling them. The use of jargon and the calls for numerical values show that this is a rules-based entity, and the inability for non-characters to have numerical skills in something indicates a blend with the character entity.

[44] The character's ability to perform non-lethal actions in combat such as tripping or grappling.

The final minor space, the past space, simply time shifts the entity being discussed into a past narrative. The space is fully diegetic, as the entity becomes part of the narrative of the event. An entity blended with the past space is spoken of using past tense and participants will move to a more narrative style. The past space can blend with the real world or any of the fictional worlds, but does not allow access between those worlds.

As transient spaces, minor and non-diegetic spaces are created an exist only for the period they are required for discussion, and are allowed to dissipate. These spaces also tend to be 'used up' all at once, so that the participants are not flipping between them and other spaces, but rather finish the joke or narrative completely[45]. In the following example, members of Group 1 recount a comedy skit seen on television that involves a fictionalised Tony Abbott (the Australian opposition leader at the time of recording) that has been blended with the popular Old Spice commercial of the time[46]:

Example 8.5

1. **Bill:** no it doesn't cause I've got adaptability which is [xxx
2. **Gaz:** [oh you're xxx a real man, it's quite funny
3. **Phil:** Al
4. **Sean:** and somebody did a sendup after [the end of one of those xxx or something where they had the same
5. **Jacob:** [so it all stacks?
6. **Phil:** [you got ten ranks, xxx plus six to
7. **Sean:** [old spice add except they had Tony Abbott there @@@@
8. **Bill:** twenty eight
9. **Sean:** it's your policies, your policies are now diamonds @@@@
10. **Jacob:** doing, doing the um, it's your policy... the bloody um
11. **Phil:** you dead yet?
12. **Jacob:** guy from um
13. **Gaz:** what are you trying to say

Session B3, Segment 14

[45] Some past spaces are used more persistently, such as the Echuca trip seen in earlier examples, but it is usually reinstated connected to other new spaces such as a future/real blend rather than coming back in its own right.
[46] The parody can be found here: https://www.youtube.com/watch?v=oqHP-LtEN7w

The particular fictionalised Tony Abbott that Sean is discussing existed only for Sean's recounting of the parody commercial, and the commercial itself[47]. When the account is complete, the entity in this form dissipates. The entity has a persistent form in the commercial, but as a referable entity in the group, it had run its course. A blend diagram of the fictional Abbott is shown overleaf.

The diagram below shows a complex blend of Tony Abbott and "the Old Spice guy" with a joke space to create a fictionalised Abbott. This is then blended with Sean and Jacob's memories of the commercial in which the blend originally takes place, creating the entity that is the final target entity of the utterance and the proper name *Tony Abbott* in the discourse. The joke spaces are connected only to the final blend, as they add nothing to the generic space of the blend. The memories of the commercial are themselves blends of the commercial and the past space, but were kept as is to avoid an overpopulated blend diagram. The following section outlines the function of conceptual blends in the data in detail.

[47] Although Sean and Jacob have an inaccurate recount of the parody, the intent is still to refer to the same entity.

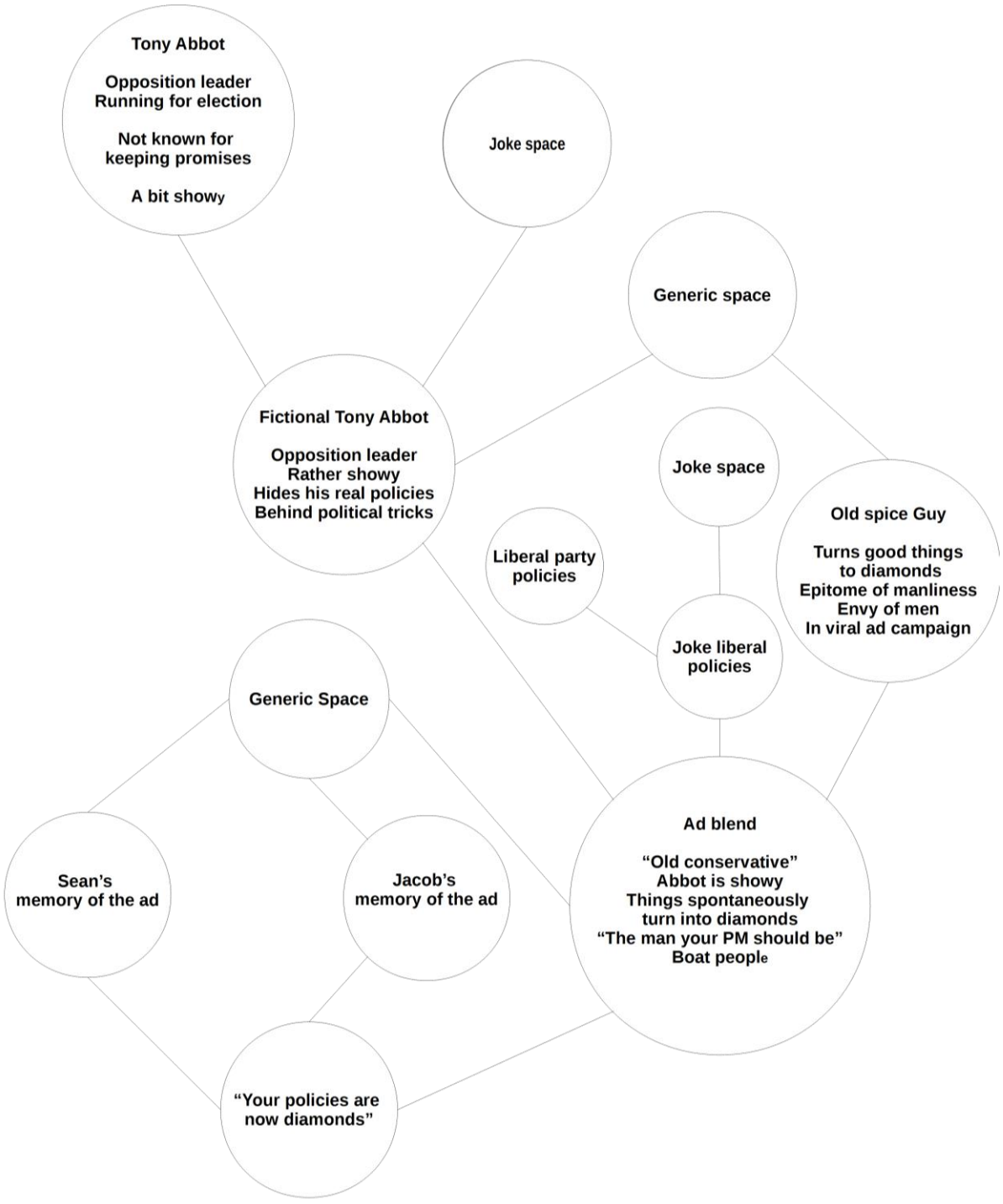


Figure 8.1 Blended blend of the Tony Abbott/Old Spice ad/Narrative found in Example 8.5

8.2.3 Blends

Conceptual blends are an integral part of the function of cross-world reference. No two worlds can interact in any meaningful way without an intermediary blended space. Blends in the data are most often blends of entities, and on some occasions a world or space is created

while blending to accommodate the new entity. For the most part, however, a blended entity will exist within either the real or fictional world. The world the blended entity resides in creates a balance toward that part of the blend, meaning that no entity is an equal blend of two worlds or spaces. The most prevalent blends in the data are discussed in the subsections below.

8.2.3.1 Player/ Character

The player character blend is the entity responsible for the most plot movement in the game, and is the most often referred to by both recorded groups. This blend enables play, bringing the decision making and control of the player into the fictional world of the character and their associated narrative. The entity resides in the fictional world, therefore the truth conditions and world rules that apply to the player/character entity come from the character in the blend's home fictional world.

Every player/character blend is unique, depending on the entities being blended, and the even the blend is created for. Take the blend of the character Fred (a female werespider) and her player Eleanor in the following example:

Example 8.6

1. **Susan:** hmm... Eirra is all about the experience @@
2. **Mike:** Fred!... doesn't know what to make of what's in front of her
3. **Eleanor**: hmm
4. **Mike:** I mean she's seen ant colonies before.. but this just freaks her out slightly
5. ((Pause))
6. **Mike:** huge walls made of perfectly smooth stone, people running everywhere, colours noises. Buildings smoke... like why aren't they running from the fire
7. **Eleanor:** hmm
8. **Mike:** you have found yourself at the gates of Parshay.. and apparently there's a party going on in town

Session D1, Segment 2

Example 8.6 is the introduction of Fred into the game by Mike. He begins by describing Fred's actions as a purely fictional entity, indicated by the use of third person and the storytelling style of the speech. In the final utterance in the example, Mike uses second

person pronouns to shift from the fictional entity and to bring Eleanor in as part of a blend, effectively handing the character over to her control. The balance of the blend is fictional, with Eleanor only providing control to the blend (see Figure 8.2 below). Fred contributes all of her attributes to the blend. Attributes such as being a shape-shifter that turns into a giant spider, the need to enter the city, being shy and cloistered and existing in the fictional world.

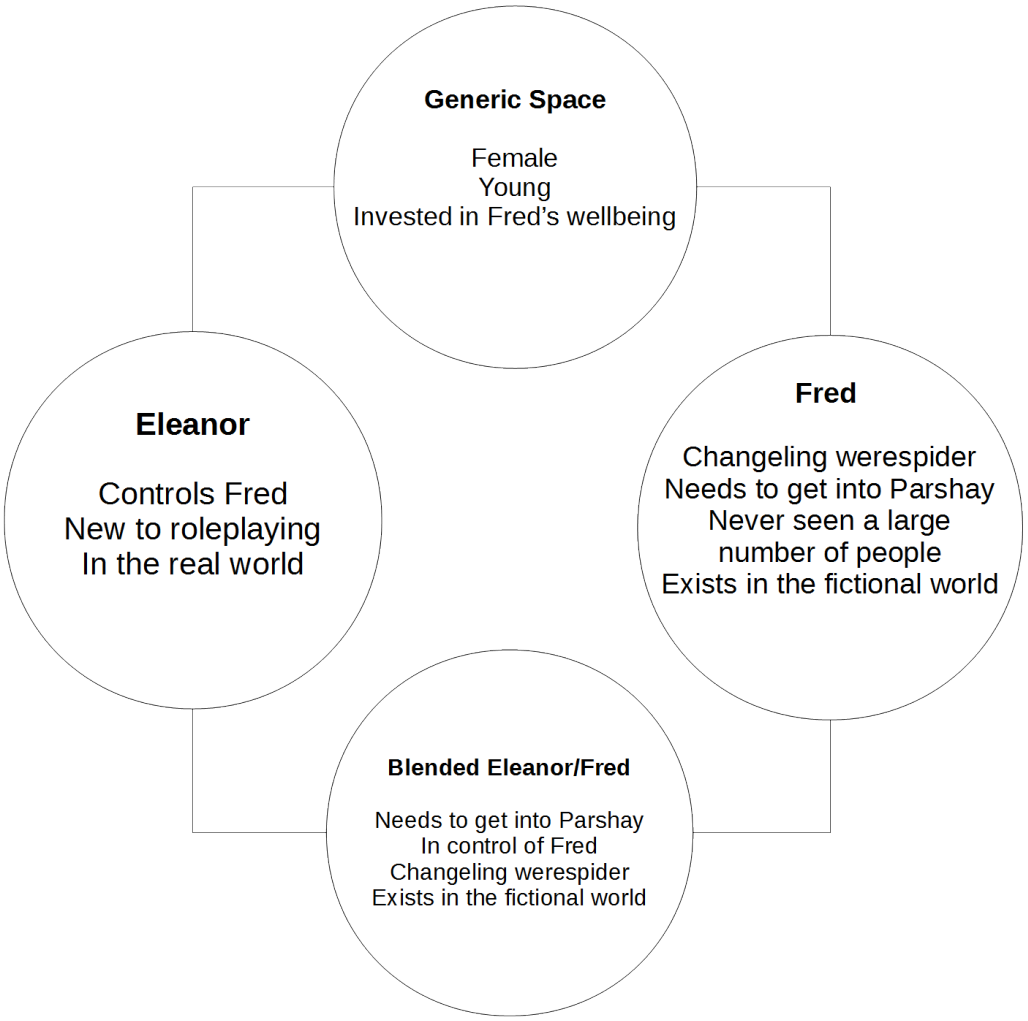


Figure 8.2 Conceptual blend diagram of the player/character blended entity of Fred and Eleanor

Eleanor has unblended pertinent traits that are either unblended or a moved to the generic space. The fact that Eleanor is new to roleplaying is important in that it affects how she relates to Fred and what she has Fred do. The generic space contains much more of Eleanor, as she created a character that was similar to herself in aspects such as age and

gender. The concern for Fred's welfare is key to the integrity of the blend. If either entity no longer cares about what happens to Fred, the blended entity will dissipate.

Although it is the fictional character that is primarily responsible for the contents of the blend, it is the player that carries the reference. Like most uses of reference in the data, the index is the player, and the referent is the blend. Unlike some other entities, such as the rules/character blend discussed below, where the reference is found through association, the reference to this blend is far more direct.

The use of a blend, as opposed to direct reference to the fictional or real entity, is identified by a combination of lexical choice, tense and choice of referring expression. The key identifier of the blend is the use of a player's referring expression in conjunction with reference to fictional places, beings and activities that cannot be performed in the real world. In the example above, Mike is telling Eleanor that Fred is at the gates of Parshay, a city in the fictional world that Eleanor could not possibly visit. There is an implication that Mike is asking for Eleanor to tell him what she will have Fred do next.

As mentioned, the player/character blended entity is constrained by the truth conditions and constraints of the fictional world in which the character resides. The rules that apply to the characters can only be "broken" with the introduction of a minor or non-diegetic space such as a joke space to allow world shifting, or rules to allow the player to use lexical forms that a character would not know. Many of the constraints are not to reference, such as the available world knowledge that a player may know but the character can't.

8.2.3.2 Character/ Rules

The character/rules blend is the most common blend involving a minor space. This blend allows participants to explain the abilities and statistics of their character in terms of

numbers and rule based skills, something that cannot exist in the fictional world. This is therefore one of the few blended entities that exist within a blended world or space.

This blend is physically represented by the character sheet, which in turn is a way of representing the skills and abilities of a character in the fictional world. Reference to this blend uses a player index and refers to the blend though association:

Example 8.7

1. **Jacob:** but what's your fort save?
2. **Bill:** fifteen
3. **Jacob:** ooh well
4. ((dice))
5. **Gaz:** that's pretty nifty, I've only got a fifteen
6. **Bill:** and that's a thirty three

Session B3, Segment 13

In the above example, Jacob asks bill for his character's fort (fortitude) save. A fort save is a rules-based numerical representation of a character's resistance to death, poison, certain magical effects and alcohol. A fortitude save is something only a character can have, and only where they are being treated as a function of the game, and not as a person in a world.

As the example indicates, the character/rules space is identified entirely by lexical cues. Wherever a fictional character is discussed in terms of numbers, the entity referred to is a rules blend. The blended entity still indexed through the use of the player's referring expressions, reflecting that the rules decisions are under the control of the player. The character/rules blend occupies the fictional space, but is balanced toward the rules space. The character is still residing in the fictional world, but the world-based constraints on the character and language use come entirely from the rules space.

As a minor space, the rules do not form an entity on their own, and do not apply to the generic space, and so the generic space does not really factor in a basic character/rules blend. The blend also tends to have the least number of utterances close together, usually appearing interspersed in primarily player entity based utterances. This may be because this blend

balances toward a minor space. The blend is also more likely to appear in Group 1 than Group 2.

8.2.3.3 Time Shifts

A series of blends occur in the data involving time-shift spaces with either the real or fictional world. Blends with the past are most common, invoking shared or individual memories to recount a narrative. These blends are minor, being persistent but applying nothing more than a property of "in the past" to a blend.:

Example 8.8

1. **Gaz:** there was an assassin we had in the party at one stage
2. **Phil:** yeah but you thought that being an assassin meant you could actually assassinate things
3. **Sam:** yeah that was ah
4. **Pete:** And actually not be seen
5. **Tom:** How broken is that? Thinking you can actually assassinate [things as an assassin
6. **Jacob:** [Yeah let's completely leave the party at the other end of the area and die [[somewhere that way we don't know where he is
7. **Sean:** [[that's right
8. **Pete:** that's two giants chased down
9. **Gaz:** actually, we left he died
10. **Sam:** that's more like it
11. **Phil:** it was a room with like sixteen ogres in it or something
12. **Sam:** no it was the two giants cause he got glitter dust
13. **Gaz:** No
14. **Tom:** I lured them away remember
15. **Jacob:** oh very clever, very no=ble
16. **Tom:** that's right
17. **Jacob:** before we go in there we need to do something about spells and shit don't we?
18. **Sean:** I mean he wasn't to know that the giant was going to be a sorcerer, but still it was pretty ambitious taking a pot shot at the end boss @@

Session 1, Segment 14

Example 8.8 above shows Group 1 reminiscing about past characters in past games, triggered by an event in the current game. Gaz begins the recount with a low access form (an indefinite description) combined with a past tense form to move the discussion into a past narrative. After the initial shift mark by Gaz, the participants move to high access player referring expressions for the character/past blend. Interestingly, when although all participants know that the assassin that is being discussed was played by Gaz, when discussing the character's death they move to a third person reference form while retaining Gaz as an index.

The past space is diegetic in the sense that entities blended with it have (or had) a direct effect on the world they are based in. The space also balances toward that base world, with the past applying only a property and the blend having no substantial generic space.

The future space, on the other hand, is non-diegetic, meaning that the actions of entities blended with the space are deliberately kept from having an effect on the world. This blend, too, is balanced toward the base world with the blend lacking a substantial generic space.

8.2.3.4 Joke blends

Blends with the joke space offer an interesting twist to the use of worlds and spaces in the data. The joke space, which includes both jokes and insults, offers only a single function to a blend, making the referred to entity both omnipresent and unable to affect a world space or gameplay. The joke space is thus a noon-diegetic space. A joke entity can shift between worlds within the same blend without becoming part of that world:

Example 8.9

1. **Phil:** <R> draped in shadows with cobwebs and filled with haphazardly placed statues,
2. the air is heavy with dust. Any noise echoes hollowly amongst the figures some [swathed in thick coverings like misshapen ((PRONOUNCED mis haipened)) beasts <R>[48]
3. **Jacob:** [echo echo echo
4. **Phil:** misshapen beasts even
5. **Jacob:** no mis-haipen
6. **Phil:** <R> others bare and uncovered all coated with a thick layer of dust. Leering visages <R>
7. **Jacob:** Gary's not here
8. **Phil:** <R>looming out of the darkness fearsome wooden and stone faces carved in grimaces and scowls. The room has a twenty foot high ceiling... [and from what you can hear a dazzling collection of sculptures effigies and statues of different sizes

Session B1, Segment 2[49]

In Example 8.9, Phil is describing a scene, reading directly from the published module text. His misread of the word *misshapen*, and subsequent repair, lead Jacob to joke about Gaz

[49] Phil's read segments are directly from (McCreary, 2009).

(using his full name, Gary). Jacob is implying that a misshapen beast would be (the real) Gaz, and so those that are being described must be mis-haipen. Although Gaz is not in the fictional world, and should not be able to reside in that world, he is referred to in Lines 5-7 as is he may have been. Such cases of entity movement into normally inaccessible worlds are only available when participants are joking or insulting each other. A blend diagram of this example is provided below:

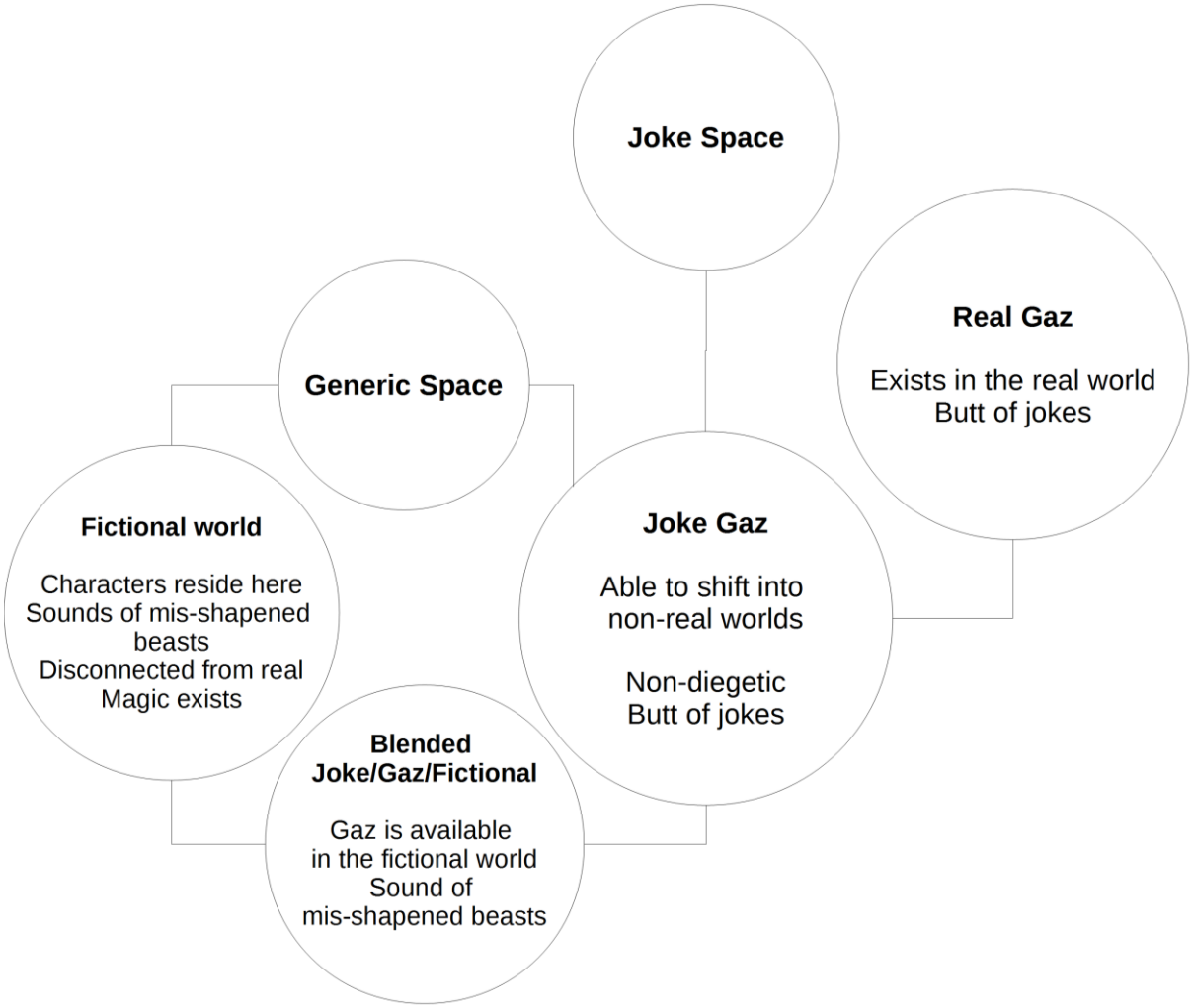


Figure 8.3 Conceptual blend of the Joke/Gaz and fictional spaces found in Example 8.9

The joke space also allows entities to be discussed in conjunction with lexical forms associated with other entities and that could not otherwise appear with those entities. This changes the defining properties of the entity, but does not make them a permanent part of the

entity. The most-used instance of this is the use of rule terms to tease real people. In the example below, Group 1 teases Pete by applying game-based properties to the real Pete:

Example 8.10

1. **Jacob:** yep, I think it's something Pete wants
2. **Sean:** His dex is-
3. **Pete:** No, nah, I didn't see it what brooch?
4. **Tom:** Did you work out what it was?
5. **Pete:** Only wanted something
6. **Gaz:** Pete
7. **Jacob:** We all saw him pick it up
8. **Pete:** What brooch? I didn't see anything
9. **Jacob:** we saw him pick it up. Pete, it put me proud of brooch[50]
10. **Pete:** They didn't heal either. Perception check oh
11. **Sean:** @@@
12. **Phil:** Pete just rolled a plus twenty petulance check
13. **Pete:** Yes
14. **Jacob:** Ah successfully
15. **Phil:** That's a [natural hit
16. **Jacob:** [He made it
17. **Sean:** he's always got [[max ranks
18. **Pete:** [[It's a natural hit
19. **Gaz:** That's a natural ten
20. **Sean:** He's always got max ranks
21. **Pete:** Alright it's a natural ten max mats
22. **Sean:** skill focus
23. **Gaz:** He cows it by three or feats
24. **Sean:** @
25. **Gaz:** Minor petulance. Major pestilence petulance, Two handed petulance
26. **Pete:** Let's put it this way
27. **Sam:** whey
28. **Jacob:** Hey Sean which one do you reckon would have been [worse?

Session B1, Segment 9

Example 8.10 shows Group 1 teasing Pete for his petulant behaviour, as he often refuses to help the group, claiming his character is unable to do simple tasks. The group teases him as if his petulance is a special skill or feat that he could take ranks in[51]. The joke space is evidenced by the treatment of petulance as a skill or feat, which is in itself a blend of joking and rules. The joking allows the participants to also talk about Pete as if he was able to

[50] Transcribed as spoken.

[51] A rank is an amount of points added to a skill in the game to indicate training in a particular skill.

take feats and skills in the same way as a character, creating a blend with the rules/joke blend created by allowing petulance to be a skill or feat.

Joke entities can no longer have a lasting effect on any space that is not a joke. Even then, the space itself is transient and is not picked up in the same form again. This inability to affect worlds and spaces tends to mean that a joke space is left to run its course, and tends to remain within the discourse without any other spaces introduced until it is dropped, and may lead to a different joke blend. This also means that, when a joke blend is discarded in favour of an entity or world that is part of the gameplay, the shift is distinctly marked.

A joke blend is identified in several ways. Many are prosodic and often accompanied by laughter from either the speaker or interlocutors. Jokes in Group 1 are also identified by the use of names as directed address terms and third person pronouns, as seen in Example 8.10 above. The use of the joke space by Jacob in particular is heavily marked, as it is the only space whose entity he refers to by a full name and not a nickname, as with his use of *Gary* instead of *Gaz* in Example 8.9. There are seemingly no constraints on the joke space, as it seems to blend with all spaces in the data and actually functions to remove the constraints of the spaces it blends with.

8.2.4 Blended Blends

Several instances of blends are the result of blends themselves being blended. Joke blends seem to be the most prevalent of this kind of blend, as Group 1 joke-blends nearly all available entities in the data, including blended entities. During their sessions, this group often uses the joke space to bring the fictional world and game elements in to enhance jokes and teasing of real people:

Example 8.11

1. **Sam:** Alright, I will cast on the party that's close
2. **Jacob:** well what for when you should be able to get-
3. **Gaz:** what range?
4. **Phil:** okay well haste is thirty foot blast
5. **Sean:** he wasn't gonna bother he's just gonna leave Gaz out [@@@
6. **Jacob:** [yeah
7. **Sam:** there you go I cast haste on the party
8. **Sean:** can you get Gaz still? five
9. **Phil:** he hasn't got, oh he has [xxx
10. **Sam:** [yeah I have
11. **Sean:** five ten fifteen twenty
12. **Phil:** yep
13. **Gaz:** [thirty five
14. **Jacob:** [he can move forward one more anyway, to there
15. **Phil:** what's the range of haste?
16. **Sean:** oh yeah
17. **Sam:** yeah
18. **Sean:** it'll go- no two targets more [than thirty feet apart
19. **Sam:** [more than thirty feet apart, yeah
20. **Sean:** yeah, now he's in range [[@@
21. **Sam:** [[yeah alright, I cast haste on everyone
22. **Sean:** yep alright... Haste the party
23. **Jacob:** attacks Gary by default

Session B3, Segment 2

In the example above, Sam is having his character cast a magical effect that is beneficial to members of the party. Sean notices that Gaz may have his character out of range (Line 5), thus being left out. The implication is that Gaz is not worth aiding with spells and Sam does not care if he leaves him out. The statement in Line 5 also has the added implication that, if Sam were to have his character cast haste without moving, Gaz would not benefit from the spell, suggesting that Sam should consider moving before casting so that Gaz's character is in range. After some discussion, Sam agrees and the game commences, but not before Jacob gets one more jab in at Gaz (Line 23). Gaz's blend diagram is provided below:

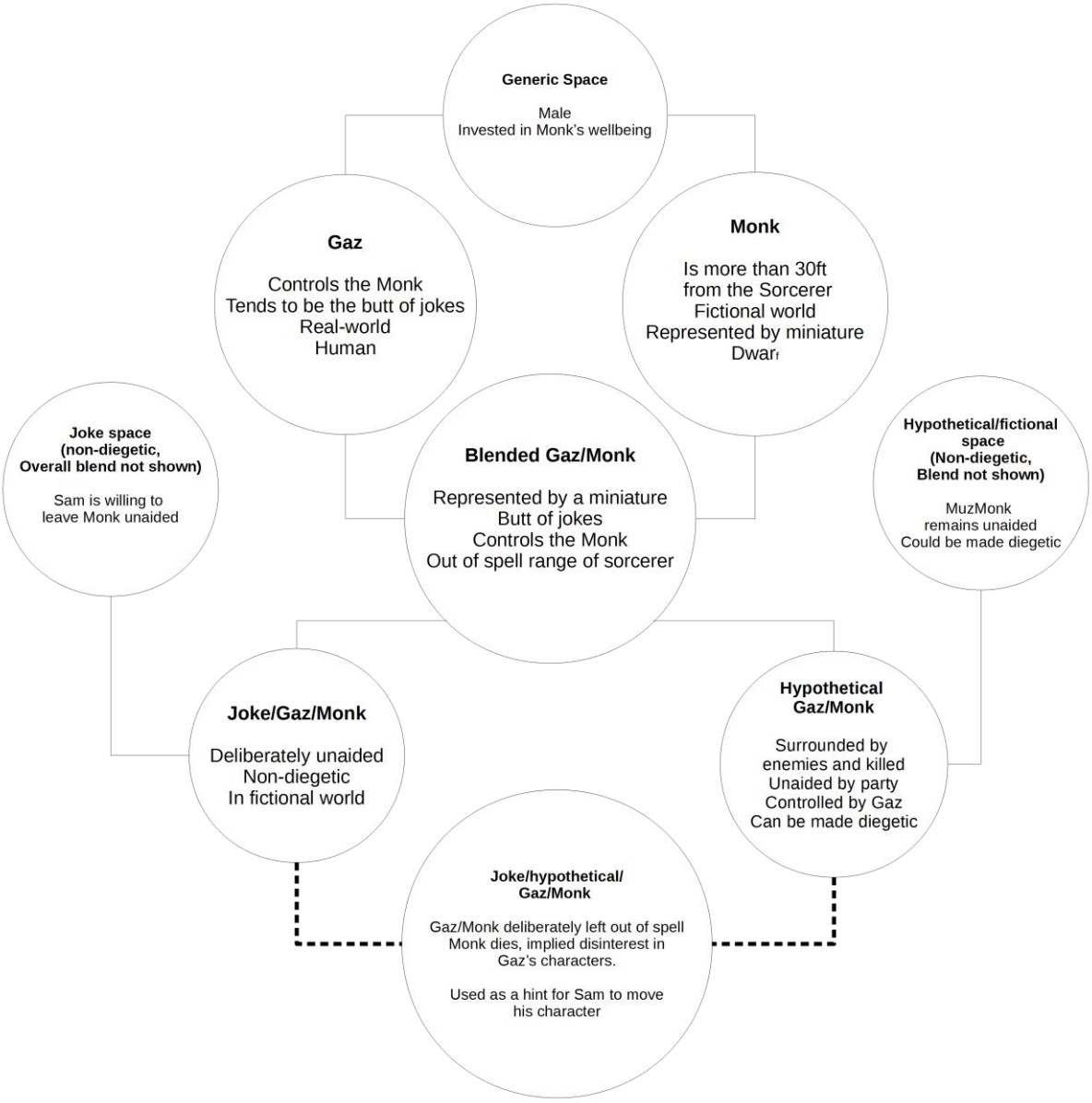


Figure 8.4 Multi-level conceptual blend of Gaz in Example 8.11

The blend takes an initial blend of Gaz and the monk character he is playing at the top of the diagram, bringing control, being the butt of jokes, presence in the fictional world and representation by a miniature into the final blend. This new player/character blend is now simultaneously blended with a joke space, creating a joke/player/character blend and a separate hypothetical/player/character blend. Finally, these two new blends are combined to create a larger blend that serves the function of both teasing Gaz and suggesting that Sam move his character so that Gaz's character is in range of his spell. This may be because the

non-diegesis of the joke space overrides the ability for the hypothetical space to be made diegetic, thus the events of the new blend cannot be undergone and thus must be changed through Sam's moving his character. The use of blends within blends and the relation between several kinds of blend in the same domain shows that the ability to blend, to refer to and distinguish between blends is infinitely complex.

8.2.5 Representation

Representation is a special case, and in terms of reference to person, only occurs in Group 1. This use is through the use of miniatures that represent characters on a scale mat. The miniatures may be arbitrary representations, such as an everyday object of an appropriate size representing a large monster, or iconic in that the miniatures actually look like the characters they represent.

Representation is identified through a combination of demonstration and lexical cues. The use of the terms *this* and *that* often refer to miniatures that represent monsters or characters in the fictional world (although not always). The example below, Jacob uses a demonstrative and (presumably) an accompanying gesture to indicate a specific miniature figure, and thus a specific enemy:

Example 8.12

1. **Sam:** I'll try not to
2. **Jacob:** you're welcome... is this guy injured?
3. **Sean:** yeah lightly

Session B3, Segment 8

In Example 8.12, Jacob is asking if the particular opponent represented by the miniature he is pointing to has been injured. The miniature may represent either an unblended character if Jacob is simply asking if the monster had been hit by a character, or a character/rules blend if he is asking for an indication of how many hitpoints[52] it may have lost (whether expressed

[52] Hitpoints are a numerical indication of the level of injury a character has maintained, with 0 indicating unconsciousness.

numerically or not). The use of *this* is likely to be proximal to him, rather than his character, as proximity to character is usually indicated by a relative space term:

Example 8.13

1. **Sean:** okay ah that was him, so= [Hen, yep
2. **Phil:** [me! Woohoo. Where am I?
3. **Gaz:** right behind me
4. **Bill:** you packed up, you puts dice away
5. **Phil:** he's right in front of me then is he?
6. **Gaz:** yeah
7. **Sean:** oh the stupid spiritual weapon smacks somebody

Session B3, Segment 17

In the example above, Gaz explains to Phil where his character is situated with reference to miniature positions. As mentioned earlier in this thesis, it is difficult to determine where exactly the miniature is based on spoken-only data, but the form the reference takes is indicative of the use of representation. The use of representative miniatures has world constraints based on the fictional world the represented entity exists in, and the rules that miniature movement is based on. However, the referred to entity, the mini itself, is not a blend involving the rules space, rather a reference to an object that has intrinsic rules unto itself that are based on the rules of the game being played.

8.3 Chapter Conclusion

This chapter has detailed the main worlds found within the data in order to facilitate a detailed application of the final model in the following chapter. I do not claim that the worlds and spaces described are an exhaustive list of what is found in a typical roleplaying game, or even in the data collected for this study. Several blends exist in the data that do not appear for more than a few utterances and may not recur. These follow similar patterns to those discussed above and will be discussed if and when they come up in the following chapter. I have also consolidated several fictional worlds into the overarching category of ‘fictional worlds’ to save time and irrelevant description of each world in detail. Finally, I have consolidated the entities in these worlds to types, as, for example, the player/character entity

indexed by Phil is not the same entity indexed by Gaz, but is similar enough to be discussed as a category for the purpose of this study.

In the following chapter, I will begin by discussing some universal results of applying the model to the data, and how the discoveries surrounding the model's application may apply beyond the data to multiple-world contexts in general. This is followed by a step by step application of the model to a segment of data.

Chapter 9 Application and Findings

In this chapter, I will consolidate the model created in the previous chapters and apply it to the data. I will begin by applying the model step by step to a segment of data from Group 1. After the walkthrough of the data is complete, I will discuss certain findings from the application of the model to the data. These findings relate to referent management, the deictic centre where the default world is not part of the immediate context, and cases where the referent is misinterpreted, among other issues. This chapter is designed to be read in conjunction with several accompanying files found on the CD or USB included with this thesis. These files include a data sample, a chart showing the switch between referred entities and two interactive version of the model. This chapter is discussed based on the data sample found in Appendix 1, which is the 17th segment of Session B2, with supporting data from other segments. Line numbers throughout refer to the numbers found in that file, and the example numbering is adjusted to suit. Examples from other segments are each numbered starting at 1.

9.1 Data Walkthrough: Applying the Model

In this final section, I will perform a step by step walkthrough of a small section of the data, applying the model to key referring expressions to person-like entities. I will avoid repeating identical or near-identical walkthroughs in the discussion, instead indicating the earlier instance of the term and where it is described. This walkthrough is best read in conjunction with the accompanying file ModelWalkthrough.ppsx. In the file, each expression is interactive and a click will cause the model diagram for the specific term and the blend diagram if applicable to appear in a separate frame. The discussion does not include the indexical context of the reference terms, as these are fixed throughout (these are shown on the diagrams given in the walkthrough file, however), so each step will examine the referring expressions from the sense and index through to the ultimate referent. The senses used in this

walkthrough are mainly taken from dictionary definitions, with the sense of a proper name set as “bearer of the name X” following literature reviewed in Chapter 2 (Frege, 1892).

The interpretation of a referent is not likely to occur in the linear way presented here for the participants in the conversation, instead all steps most likely occur simultaneously. For ease the model was presented as a step-by-step process, although this means that the walkthrough may reference earlier or later steps in the interpretation process than the step being discussed, especially when interpreting active world in order to interpret entity.

The segment of data discussed here is taken from Lines 216 through 270 from the main segment of data discussed in this chapter. The sample is provided below:

Example 9.1 Walkthrough sample

216. Sam: but he's still now outlined
217. Sean: oh yeah you can certainly see him
218. Gaz: where is he blee blip?
219. Sean: um where are you guys?
220. Sam: I'd assume we'd be back, near the back in line here or out there
221. Phil: Where was he?
222. Sean: you were looking at the tapestry are you or the...
223. Sam: We near the tape[stry?
224. Phil: [we're in a big room are we?
225. Sean: yeah we'll say you're in a big room it's a bit easier
226. Gaz: yep
227. Sam: Something like that. I would have probably would have been close to the front
228. Gaz: oh, yeah... I see we've positioned ourselves to an area that was-
229. Pete: so we're relatively close to him
230. Sam: yes
231. Gaz: yeah
232. ((pause))
233. Jacob: has everyone seen Sherlock Holmes?
234. all: yep
235. Sam: yeah, it's really good
236. Jacob: ah
237. Pete: it's one of ours... one of [workplace]
238. Phil: [The only criticism I have of that movie is just once, his logic should have failed him
239. Sam: [regardless it was still pretty good
240. Pete: yeah
241. Phil: would have been funny. It's an opportunity missed
242. Pete: yeah [specially c-
243. Phil: [it's about when a guy plans a fight sequence out in his head
244. Pete: yeah there's no way [[you can do that
245. Phil: [[I was waiting for it one time where he goes hup hup hup and it doesn't work
246. Pete: yeah
247. ((pause))
248. Gaz: awesome
249. Sean: he says hmm, bother

250. Gaz: he says that after Sam
251. Sean: he does
252. ((pause))
253. Sam: so whose turn's next was [it him?
254. Pete: [you glitter dusted him?
255. Phil: glitter dusted him in
256. Pete: so who's next? Him?
257. Phil: yep
258. Sean: yep... he retaliates with confloosen bloing, gets all of [you
259. Pete: [stifle spell
260. Sean: ha?
261. Pete: stifle spell
262. Sean: is that, that's reaction?
263. Pete: immediate action
264. Sean: ch chchchchch=
265. Sam: fuck!
266. Sean: can you do that if you still flat footed
267. Pete: I dunno
268. Sean: yeah, I don't know either actually @@
269. Pete: immediate action
270. Gaz: so he won initiative Sam just got the shot off

Session B2, Segment 17

Interpretation of Sam's use of *he* in Line 216 begins with the cognitive domain, in this case, the game. The domain is dictated primarily by the activity being performed with influence from the indexical context including interlocutors and the shared knowledge of gameplay and the language conventions related to that play. The domain dictates the available worlds and spaces for reference, allowing reference to the fictional world, play space, rules space and miniature map as a representation, alongside blends of these spaces. The domain also discounts potential real-world blends, particularly past spaces, as the domain of the game separates the participants from the real world to enable the roleplaying aspect of the game.

After the domain is established, the type and sense of the referring expression the speaker used is determined. In this case the third person pronoun is used. The sense in this case is "the man or boy or male animal previously named or in question" (Tulloch, 1996, p. 688). In the case of the model, a third person pronoun is considered deictic (see Chapter 2), as it will usually be either anaphoric or demonstrative. In this case, the use is anaphoric, leading us to require the antecedent of the third person pronoun to determine its index. The

antecedent here is the opponent, the Scribbler, whose full noun phrase, low access antecedent was introduced nearly 2 hours earlier in the game. The Scribbler appears repeatedly, being battled by the party until the sample data appears, thus remaining at least partially salient in the discourse. In this case, the antecedent (index) and the anaphor have the same referent, and so the interpretation may end here. This early completion of the model is a particular feature of the fictional world, as there are, in the data at least, no associated entities outside that world indexed by fictional entities. All instances of the third person masculine pronoun until Line 232 follow this interpretation pattern and have the same index and antecedent, and will not be directly discussed further.

The active space shifts slightly in Line 217, as Sean uses the referring expression *you* to refer to the blended player character entity. As there has been no marking or long pause to indicate that the domain has shifted, the domain remains that of the game. It is uncertain at this stage if the second person pronoun used by Sean here is singular or plural. For the purpose of this discussion, I will treat the reference as plural, as the spell would have rendered the opponent visible to all (fictional) members of the party. The sense of the term is therefore "…persons addressed or one such person and associated person or persons" (Tulloch, 1996, p. 1823). The term is deictic but not anaphoric, and so to find the index of the term the interlocutors must use the deictic context to interpret the intent of the speaker. Here Sean is addressing Sam, but is also indicating that the rest of the party is also part of the intended target. The index, therefore, is Sam and intended others, meaning that the potential target referents must be those entities linked to Sam and those linked to any intended others indexed by the pronoun.

With the index established, the interpretation of the referent can occur. The interlocutors decide if the reference uses the oculus or phantasma mode of pointing based on the domain and context of the utterance. The referent in this case is phantasma, as Sean is

answering a question about a fictional character; the real participants cannot see the fictional character in any actual way outside their imagination. Interlocutors must then determine the type of phantasma being used, whether time displaced, hypothetical or imagination based. This is determined through the surrounding utterance. The tense of the verb is a key indicator, as time displaced phantasma (memory or future) will use past or future tense. In this case, the tense is present, and a lack of questioning forms and conditional constructions rule out hypothetical phantasma. Imagination phantasma also helps to narrow the potential active worlds available for interpretation of the referent from among those already made available by the gaming domain. As it is indicated by the imagined phantasma mode of pointing, the potential referent will be fictional in some way, either as a wholly fictional character or as a blend of the character and another entity, which may reside in either the fictional world (with non-diegetic traits applied to it) or in a more persistent blended space, such as the play/fictional space that houses the player/character entity. The index also only allows spaces that contain entities that are directly linked to Sam and the intended others to be available. As the utterance is not a case of reported speech in which Sean is having a character address entirely fictional characters, this is not a case of a referent to a character as a separate creature to the player, meaning the active world must be a blend of the fictional.

The blended world must now be identified. The surrounding discourse indicates that the player/character entity and the associated play/fictional space blend is the likely candidate for active world and target entity. There are no cues to indicate time displacement or a joke, and there are no jargon terms to indicate a rules space blend. The play/fictional space is also the salient space, as they had been within this space for some time prior to this utterance.

A similar process of interpretation appears in Sean's utterance in Line 219 with the referring expression *you guys*. The process follows the same steps as described in the previous instance of the second person plural, although this time indexing the whole group of

players as addressees rather than Sam and intended others, which may be the reason for the choice of *you guys* over *you* in this instance, to indicate to the others that they too are being addressed. The entities that are referred to are the same as those above- the player/character entities linked to the players. The same interpretation process applies to the use of the second person pronouns in Line 222.

Sam's first person reference in Line 220 is an interesting one in terms of its interpretation using this model. The domain has still not shifted from the game, thus allowing the play and fictional spaces along with appropriate minor and non-diegetic spaces but not the real world disassociated from the game. However, Sam is stating that he assumes a certain position for the fictional characters. In this case, the character is not assuming (in such cases, the utterance usually takes the form of "I would assume" to indicate that is the likely state of the character rather than treating the assumption as an action). The sense of the term is the speaker of the utterance, and the index is Sam himself based on the interpretation of the deictic context of the term, and therefore the referred to entity must be an entity linked to Sam in the worlds available in the active domain. The reference uses the oculus mode of pointing, as Sam is himself doing the assuming, and is not representation. The referent must then be the origo of the current domain, and the target entity is thus Sam in his role as a player entity.

Later in the same utterance Sam moves to a first person plural form and changes active worlds. The sense of the term is the "speaker or writer [referring] to himself or herself" (Tulloch, 1996, p. 737), and the term is deictic and not anaphoric. The index is interpreted based on the deictic context of the utterance, with Sam as the speaker and his intended others as the rest of the participants excluding Sean, making them the index. The utterance is an answer to a question relating to the position of fictional entities, thus indicating that this too is

an instance of the phantasma mode of pointing. The type of phantasma is imaginary as it relates to a fictional entity.

The pronoun is part of an embedded clause indicating what Sam assumes[53], which is an indicator of a hypothetical-like space. An assumption causes a non-diegetic space that does not become part of the active game world until confirmed by the GM or other participants. The use of the first person pronoun relating to the position of fictional entities, but without any indication of reported speech or rules jargon, indicates a player/character blend alongside this non-diegetic space. The target entities should be interpreted as the assumed/player/character entities linked to Sam and his fellow non-Sean participants. Sam repeats a reference to the same entities (this time as a question rather than an assumption) with a first person plural again in Line 223, as does Phil in both instances of the first person plural Line 224, with Phil and intended others as the index. A similar process appears in non-plural form in Line 228 when Gaz states "*I* see we have positioned ourselves…".

The first person plural changes referent when Sean uses it in Line 225. The *we* used in this case is an instance of a 'royal we', as Sean, as GM, is the only one who can dictate the size and shape of the room. The sense of the *we* used here is "[pronoun] used by a royal person in a proclamation" (Tulloch, 1996, p. 1779) with some adjustment to include someone with authority over the active domain making proclamations about the state or contents of the domain. The term is deictic and non-anaphoric, indexing Sean. Much like Sam in his use of the first person with "assume", Sean is making the declaration himself, and so the reference is an oculus mode which is non-representational, thus using the domain's deictic centre. This means that the target referent is Sean in his role as a GM (player entity). Unlike Sam's use of

[53] The term *assume* is an indicator of an opaque context. Although opaque contexts in multiple world contexts is a field worthy of further research, it is outside the scope of this thesis and will be left to be explored at a later date.

"assume", the verb "will say" does not cause the following embedded clause to create a non-diegetic space, but instead declares Phil's non-diegetic "big room" to become part of the space, and thus diegetic.

Sam's use of the first person singular in Line 227 is the first use of *I* in this walkthrough for an entity in a world in which the speaker does not exist, but is the prototypical use of the pronoun in roleplay gaming. The domain has not changed from earlier uses (it changes in Line 232). The sense of the term is the speaker of the utterance and it is a deictic, non-anaphoric use. The deictic context indicated that the index is Sam, meaning the referent must be a Sam-linked entity in the active worlds available in the roleplaying domain.

Unlike the first person pronouns discussed thus far, the mode of pointing in this instance is phantasma. There is no lexical cue that would indicate otherwise, and the contexts suggests that Sam is referring to something in the imagination. The use of "would be" in this case is non-conditional (not a case of "I would if"), but instead a case of what his character would do in the situation. Despite the utterance form seeming to indicate non-diegesis, Sam is making a declaration of his character's position in an instance of the use of the imagined phantasma mode of pointing. The character is positioned in the fictional world (and eventually via a mini on the mat), indicating a fictional entity, and lack of in-character speech coupled with the acts of declaring an action or state for a character indicates a blend with the player entity. As with all player/character blends, this instance is balanced toward the fictional world, with Sam applying control of character and strategy to the blend, with the character supplying most of the rest.

The second and third referring expressions used by Gaz in Line 228 show an example of cross-world reflexive reference. Following the interpretation track, the first person plural refers to participants in their roles as players, and therefore the term is indexing the

participants. The function of moving miniatures must be performed by physical beings in this context, meaning the reference must use the oculus mode of pointing, and is not representative, leaving only the player as origo. The reflexive pronoun, on the other hand, is a representative reference.

The reflexive pronoun *ourselves* has the same sense as *we* ([speaker] and one or more associated entities" (Tulloch, 1996, p. 1779)) used in the form of a reflexive. It is a deictic form that is behaving anaphorically. The antecedent is the use of *we* by Gaz earlier in the utterance. The index is therefore Gaz and the other player members of the group. This instance is an oculus reference, as the positioning was performed on the miniatures on the play mat. These miniatures are representing the fictional characters associated with them, and they are representing and entity that is referred to using the phantasma mode. The active world must be fictional or play/fictional as the entities in those worlds are the ones that are able to be represented by miniatures. The characters are not being talked of as separate from their players, and this is not an instance of reported speech, therefore the active world must be play/fictional, making the target referent the player/character entities linked to Gaz and the other player participants. The representational reference using the first person plural continues in Line 229.

After a long pause in Line 232, the domain of the conversation changes. Long pauses in the discourse seem to allow participants to move the domain without marking, perhaps because it moves the domain to a neutral position due to inaction. The first referring expression used is *everyone*. The cognitive domain shifts to the world outside the game, indicated by the past tense and the topic of the sentence, whether the participants had seen a recently released movie. The referring expression *everyone* in this context has the sense of all people being addressed. The term is deictic, as it requires knowledge of the addressees to

interpret the index, and it is not anaphoric. The index is therefore all of the participants in the group.

Having established the index, we must establish if the reference uses the oculus or phantasma mode of pointing. The domain of the real world outside the game the game will almost exclusively contain worlds that are indicated through the time displaced phantasma mode, either regarding memories or future plans. As Jacob is, in this case, asking if the group had had the experience of seeing the film, the reference is not to a past version of the participants who saw the film, but to the current, present interlocutors. The mode of pointing is therefore oculus, and is in this case non-representative. This means that the referents in this case are the same as the index, all participants addressed by Jake.

In Line 237, the domain remains the world outside the game. The referring expression *ours* is the possessive form of *we,* and shares its sense. The possessed item is the movie, so in this interpretation I will focus on the possessors themselves. The expression *ours* is deictic and not anaphoric, meaning the index is Pete and intended others, in this case his workplace. The intended others Pete refers to are not present, but he himself is, making this mode of pointing a mixed phantasma and oculus form. The phantasma element is memory based, as Pete is calling on his interlocutors' knowledge of his workplace. He later mentions the workplace, cementing this as the proper index and mode of pointing. As with the previously discussed example, the active world is the real world, meaning the referent is the real Pete and his workplace.

Phil's use of the first person pronoun in Line 238 is the only form to use a truly oculus mode of pointing, egocentric origo use of the first person pronoun in the sample tested here. The domain is the world outside the game, as no markers have brought it back to the game proper. This allows references to the real world and its time displaced blends. The form is

deictic and not anaphoric, meaning that the index of the term is Phil, as he is the speaker of the utterance and he is not reporting speech. The reference is uses the oculus mode. Phil is talking about something he possesses, and as the domain allows only reference to real worlds and spaces, Phil must be indicating himself and his presence in the origo. Phil is not using himself as a representation of another entity, therefore the referred entity and indexed entity are the same, and the referent is Phil himself. Line 245's initial first person pronoun follows a similar interpretation pattern, although the space is time displaced into the past, as Phil is talking about what his past self felt when watching the movie.

Phil's utterance also signals a shift in cognitive domain to the Sherlock Holmes movie and its related worlds and spaces. After the shift, signalled by his introduction of his criticism of the movie, Phil uses the third person masculine pronoun twice, both of which follow the same interpretation process. The referring expressions both have the sense of a male entity that has been previously mentioned and is salient. The expression is deictic and exophoric, in that it refers to a salient entity in the domain of the movie but has not been brought up in the discourse. The index of the terms is Sherlock Holmes as depicted by Robert Downey Jr. The reference uses the phantasma mode as the domain of movie discussion is restricted to fictional worlds and discussions of remembered events. In this case, the phantasma mode is imagined and hypothetical, as Phil is discussing his preferred outcome in the film and not what actually occurred. The active world is a multiple-blend of the fictional, acting and hypothetical worlds and spaces, as shown in the blend diagram below:

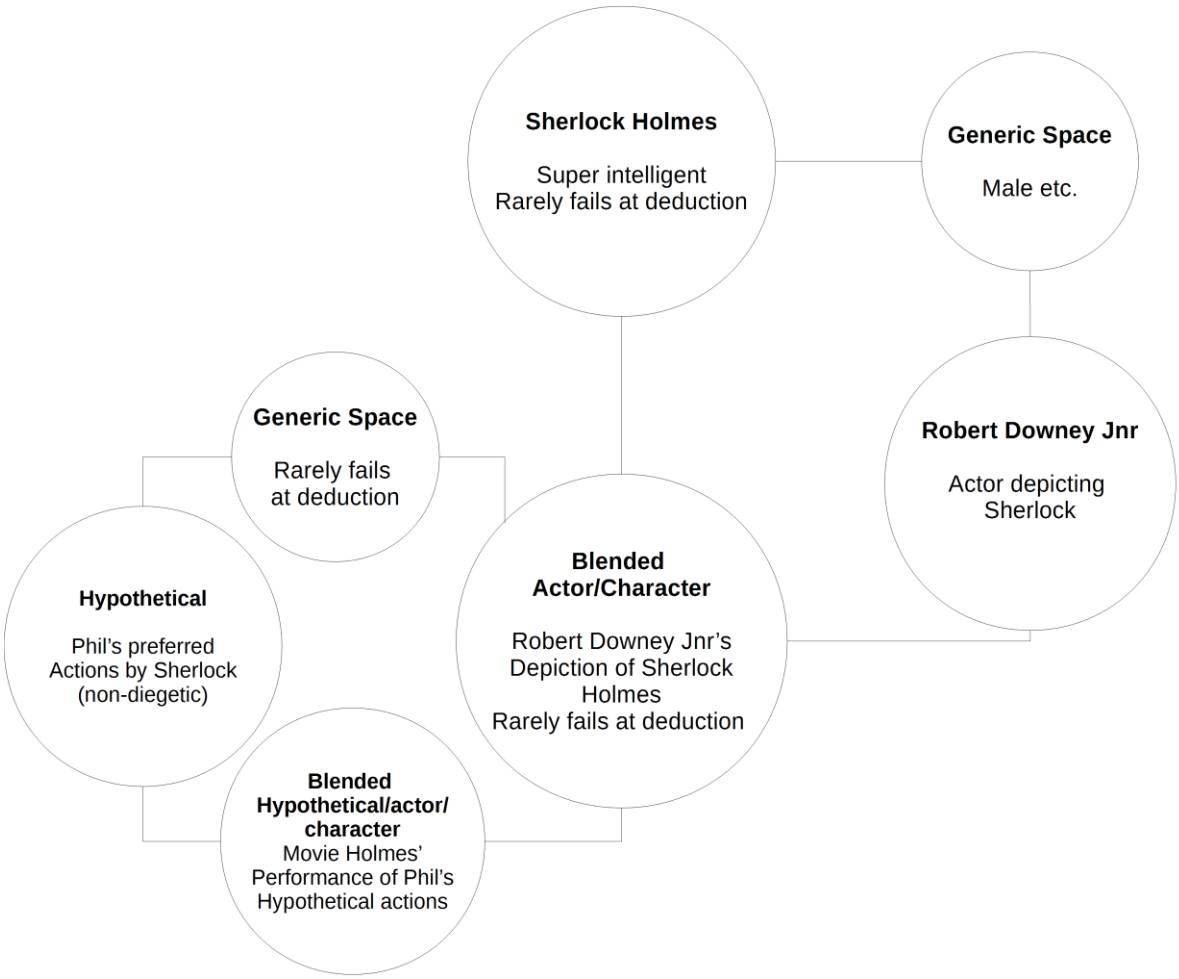


Figure 9.1 Conceptual Blend of Sherlock Holmes and the Hypothetical space

The acting space, and therefore the actor entity, is included as Phil is indicating what he would like depicted in the film, not necessarily what he would like the fictional entity as a separate person to do. The blended entity exists in the fictional world of a fictionalised Victorian era London, and includes the non-diegetic hypothetical space because Phil's desires for the film do not affect the film's narrative in any way. The same interpretation process is seen in Phil's third person pronoun use in Line 245.

In Lines 243 and 244, Phil and Pete use indefinite forms of pronouns and noun phrases. Although each is a different referring expression, the interpretation is similar. In each case, the referring expression has the sense of any given entity to which the expression applies. In Line 243, the expression *a guy* is an indefinite description, and so its index and referent is any

person who could be described as *a guy*. The term *his* is anaphoric, with *a guy* as its antecedent. The use of *you* in the following line is also indefinite and refers to any given person.

As all three indefinite uses are referring to generic entities rather than specific participants in the discourse, they all use the phantasma mode of pointing, and are all imagined, but not fictional, as they are discussing whether Sherlock Holmes' ability to plan out events in his head is possible for a real person. The active world here is a hypothetical reality, rather than the fictional world referenced earlier. The referent is therefore a hypothetical indefinite entity.

The pause in Line 247 and the following use of *awesome* are distinct markers of the group's shift back to the gaming domain. The shift in domain allows the entities that were salient when the domain was last active to return to salience without re-introduction. Sean's use of *he* in Line 249 is an example of this maintained salience. The referring expression is deictic and anaphoric, and has the sense of the most salient entity to which the pronoun can apply. As the most salient entity in the discourse in this case is Sherlock Holmes, rather than the true referent of this term, the Scribbler, we must alter the way the index is determined. The index will be determined based on the most salient entity that can take the pronoun within the active domain. As such, the antecedent will be chosen based on the anaphoric chain established in the game domain as if the domain outside the game and the movie world had not been activated. The chain was last active in the game domain in Line 229, and the antecedent appeared some time earlier in the gaming session. The index of the term is the Scribbler. The remainder of the interpretation process follows the same pattern as earlier uses of the third person pronoun for the Scribbler.

The shift is reinforced in Lines 252 and 253 where a pause and Sam's use of *so* reiterate the shift. Most of the expressions in the remainder of the data sample follow interpretation patterns that have already been discussed. To see each of these displayed, refer to accompanying ModelWalkthrough.ppsx. I will finish this walkthrough with the interpretation processes of the uses of *Sam* in Lines 250, the same process which occurs for the use of *Sam* in Line 270.

The sense of the term *Sam* is "the bearer of the name *Sam*". As a proper name, the index of the term is Sam himself, as the index is fixed for proper names. The mode of pointing must be determined next. The data suggests that, in the game domain, the only oculus uses of a proper name are either representations or directly addressing the bearer of the name to get their attention or indicate it is their turn. As this is not one of those cases, the mode of pointing must be some form of phantasma. The context in which the term is used indicates the type of Phantasma. Gaz is asking for the order of events in the fictional world; the Scribbler is speaking after Sam cast a spell on him. The spell casting event occurred in the fictional world, and as the flow of time in that world was stopped while the domain was inactive, there is no time displacement. The phantasma is therefore imaginary. The active world is the fictional world blended with the play space and the final referent is the player/character entity, balanced toward the fictional. The Scribbler exists only as a fictional entity, so for an event to occur in the same world as him speaking requires a fictional blend.

9.2 Default domain and the Deictic Centre

The establishment of the default domain, and from there the default deictic centre (as opposed to the origo), is an important step in both using and interpreting reference. The usual centre consists of the physical space, the current time and the interlocutors in the current discourse. In table top gaming, however, referring expressions that index the origo do not always refer to the real world, but more often to a player and play-space world that is a

subsidiary of the real world. There is evidence that the play space needs to be treated as a separate world to the real in the data. The participants, especially those in Group 1, mark shifts between the real world domain and the domain of the game, but seem less inclined to mark shifts between active worlds and spaces within the same, active domain.

Example 9.2

29. Sam: from all the turkey slapping that's been going on
30. Phil: going on
31. Jacob: Well you can have one too
32. Sean: @@@
33. Phil: I'll eat that
34. ((pause))
35. Phil: okay
36. Gaz: I-
37. Pete: Which way we going?
38. Jacob: or we could walk down the hallway where he is @
39. Sam: we could

Session B2, segment 15

In the example above, Phil uses "okay" with a slight prosodic boost (not transcribed) to mark the shift out of the real-joke space in the real world domain back into the game domain a pause (Lines 35 and 36). The marked shift from real world back to the game indicates that the players treat the real world as outside the active domain as they play. A marked shift from one domain to the other indicates to the interlocutors that a new domain is active, and therefore that the use of referring expressions will have a fixed set of available worlds related to that domain for use in their interpretation. This means that Pete and Jacob's uses of the deictic form 'we' and the special indicator 'the hall where he is' must be interpreted based on the play-fictional sets of worlds and blends available within the game domain. In the case of these uses, 'we' refers to the blended player character entity and 'the hall where he is' is a fictional place occupied by the fictional opponent. Where the person element of the deictic centre is the player, the index of 'we' is interpreted as the speaking player and intended others, and the referent is an entity linked to a player in the game domain.

Shifts between worlds and spaces within the active domain are not marked. Example 9.3 below shows an example of the typical movement between entities in a game:

Example 9.3

122. **Sean:** yeah... Yeah you can see him sort of lurking down one of the side corridors
123. **Sam:** yep, glitter dust
124. **Phil:** yeah
125. **Sean:** alright, [ah
126. **Gaz:** [at the same time I move... dah dah dah dah dah ((moving mini?))
127. **Sean: I'll** let you have a... no not that much it's not like he particularly trusts you... um... yeah initiative, he knows you're there, you know he's there
128. **Sam:** alright I cast glitter dust
129. **Jacob:** no Ø roll initiative
130. **Sam:** ah
131. **Sean:** yes Sam
132. **Sam:** oh fucking cunt
133. **Jacob:** what'd you roll?
134. **Sam:** ah thirteen
135. **Pete:** it's better than me
136. **Sean:** thirteen Sam
137. **Pete:** ten
138. **Sean:** ten Pete
139. **Gaz:** thirteen for me
140. **Sean:** thirteen for Gaz
141. **Jacob:** how many hero points you got Sam?
142. **Sam:** four
143. **Gaz:** ohho I've got none

Session B2, Segment 17

Here a reference to the player entity (bold, Line 127) is integrated into Sean's utterance without distinct marking. Before the shift to the player entity, the group is consistently referring to player-character blended entities, an entity that is also found in the game domain. The group shifts to player referring consistently in Line 129, a shift that is unmarked, as Jacob's use of 'no' is refuting an action, not marking a shift, and is followed by a null reference form that is an imperative reference to Sam as a player, who needs to perform an action. The consistent use of player reference stops at Line 141, where Jacob begins to integrate character-rules blended reference into his utterance unmarked, with the pronoun *you*

referring to the amount of hero points[54] Sam's character had left of the amount assigned to them by the rules of the game.

The use of space terms in Example 9.3, much like the use of *we* in Example 9.2 above, are references to fictional space. The fictional space referents are linked to the play space through cognitive domain. This re-enforces that the deictic centre is connected to play, rather than the real world, and that a mark in the discourse indicates the shift in domain to the play domain and those worlds connected to it.

The non-reality of the base domain and the deictic centre being situated away from the origo is further evidenced by the rarity of reference to the real world outside of a blend. While the first example in this section shows a real/joke blend, most reference to the real is part of a time-shift blend, either recounting past experiences or planning future events. Where the real world is unblended, it is often in relation to a person being not present, or simple address terms. Where other domains are brought to the conversation, the marking is less distinct:

Example 9.4

237. Pete: it's one of ours... one of [workplace]
238. Phil: [The only criticism I have of that movie is just once, his logic should have failed him
239. Sam: [regardless it was still pretty good
240. Pete: yeah
241. Phil: would have been funny. It's an opportunity missed
242. Pete: yeah [specially c-
243. Phil: [it's about when a guy plans a fight sequence out in his head
244. Pete: yeah there's no way [[you can do that
245. Phil: [[I was waiting for it one time where he goes hup hup hup and it doesn't work

Session B2, Segment 17

In the example above, the group are discussing the movie *Sherlock Holmes*, which had recently been released at the time of recording. Here, the indexes of Sherlock Holmes and his world are related to referents in the film domain (rather than the domain of the novels, or of a

[54] A limited number of points dictated by the rules that can be used to change the outcomes of dice rolls amoung other things.

separate fictional world). Phil is discussing his preference based on an entity that is a blend of the actor Robert Downey junior and the character Sherlock Holmes present in the depiction world, not the fictional. The depiction is present in the real world, or is at least highly accessible to it, and therefore is able to take a less distinct marker of shift than those seen between the real world and play. The marker is simply Phil introducing his statement in Line 238 as an opinion on what he would like to see depicted, rather than what should happen in the fictional world that is disconnected from the movie depiction. I discuss access across worlds in more detail below.

9.3 Accessibility across worlds, and rules for shifting referents

The data indicates that there are rules to the way that reference can work during a roleplaying game in the accessibility of reference across spaces and worlds. Although the entities that can be referred to are not entirely predictable, there are certain reference forms that are not possible to use in the same utterance or speech event without some form of marking. A distinct pattern can be seen in the shift between entities in Group 1, illustrated by the entity map presented in the accompanying file EntityFlow.html[55]. This particular data segment was chosen to present in full as it is typical of most of the data, and shows all available entities in use. The entities within the game domain are most prevalent in the data, and in this chart.

Group 1's shifts between entities occur frequently. Shifting between entities can occur several times within the same utterance, or even the same sentence, such as in Line 5 in the example below, in which Phil shifts from a player/character/rules blend, to the player character, then alternates from the fictional to the player/character:

[55] Where large gaps appear in the timeline of the chart, the participants are spending several utterances not using person reference forms, either because of non-verbal utterances such as laughter or pauses, or because the utterances are simply calling rolls or other game-mechanic related speech.

Example 9.5

4. **Jake:** Gaz, why Gaz?
5. **Phil:** he's got the highest perception, if Sam fails to see him Gaz can go he's over there!
6. **Pete:** and then go and grapple him Gaz, we can just cast all our spells on you

Session B2, Segment 17

With the exception of addressing, generic indexes or the use of phrases such as 'I think', the entities being shifted between must share a common space wherever the shift is unmarked; The player/character, for example, can shift to the fictional as the blended entity and the fictional entity have the fictional world in common. A fictional portrayed entity- an entity that represents the player performing the speech of their character- must be accompanied by a reference to the fictional entity, and is often unmarked. In Group 2, however, the shift to a fictional portrayal occurs most often after a player/character blend, and is marked in some way (usually an "I say" variant):

Example 9.5

1. **Mike:** Dwarven? Um they respond in Dwarven, we are well, and yourself Dwarf
2. **Tim:** I say... ah I go, yeah I'm well, and I introduce, Eirra
3. **Susan:** Hi! I've never met an- um, no I have met a Rai'kur before he used to guard our caravan when i was little he was so much fun my name's Eirra what's yours

Session D1, Segment 13

In the example above, Tim shifts between referring to the player/character, character portrayed and back to the player/character entity in his utterance. The initial part of the utterance "I say… ah I go" refers to the player/character and marks the shift to the fictional character's self-reference in the character's speech. There is then an unmarked shift back to the player/character when Tim moves back to declaring his character's actions rather than speaking for the character

The shifts between entities are controlled primarily at a group level. For example, the move into a joke space in Line 188 of sample data causes the participants to joke as a group, and a marked shift out of the real back into the game domain will usually bring the whole group back into the game. The extent of the mark is also dictated at the speaker level, as a

participant who never 'left' the game domain will use a less-prominent mark than a participant who did:

Example 9.6

1. **Phil:** I'll try and ask him who he is
2. **Jacob:** Lord something
3. **Sean:** he says
4. **Phil:** He's probably not gonna tell me
5. **Jacob:** ((Coming back from a phone conversation)). Who'd call their baby Alfred?
6. **Gaz:** who? Who called their baby Alfred?
7. **Jacob:** My sister in law
8. **Gaz:** Oh she had him?
9. **Jacob:** yeah
10. **Phil:** Alfred?
11. **Gaz:** you know what I was asking the other day about that
12. **Phil:** Is it a boy or a girl?
13. **Jacob:** @@ it's a boy
14. **Phil:** Then he can say [quoting book/movie with baby's name mentioned][56]
15. **Jacob:** Ha ha I will have to teach his brother that. Alfred?
16. [Quote removed]
17. **Sam:** Chiropractor
18. **Jacob:** ah
19. **Sam:** Okay so what, ask him
20. **Sean:** He says I I am [... the scribbler
21. **Jacob:** [I'll have to have a whinge about that
22. **Phil:** whoa
23. **Phil:** And we're the graffiti police
24. **Sam:** Silly, wears a pink outfit
25. **Jacob:** where's the Centurion who asked you to write all this?

Session B2, Segment 6

Example 9.6 presents a case in which Jacob interrupts gameplay to discuss his new nephew's name, which he had heard over the phone. This moves the group into the domain of the real world, as they discuss movie and book quotes and the baby's name in general. Sean does not shift his reference of discussion to the real-world domain, so his reference to the fictional character of the Scribbler in Line 20 is unmarked. If he too had shifted into the realm of the real, the shift would need a distinct marking. Sean's reference to the fictional world allows the group to return to the game space without marking.

[56] Removed as the quote is easily identifiable.

Both group's Game Masters shift from fictional to portrayed fictional using a similar "they say" marker, as seen in Sean's use above, perhaps due to the number of characters being portrayed. This is an indication that the Game Master, by virtue of their role within the game, follows slightly different reference rules to their players and use certain spaces and blends differently from the players. A character/rules blend, for example, more often takes the form of a question than the same blend used by players, or is accompanied by cases where the index is indefinite, such as in the example below (indefinite indexes in italic):

Example 9.7

1. **Phil** well if *you* fumble on a creature that's hard to hit *you're* virtually alm- guaranteed [to xxxx when *you* really don't want to
2. **Sean:** [that's right that's what I didn't like about it yeah
3. **Pete:** fumbled
4. **Phil:** that's right the harder the more hard the opponent the more its likely *you* are to fumble
5. **Sean:** I mean you can make it if you want to make it even less [xxx you can make it so that *you* get to add half *your* base attack to it or something so you know *high level fighters* just don't fumble essentially but ah whatever

Session B1, Segment 4

In Example 9.7, Phil and Sean are discussing a potential house rule that reduces the chance of a character breaking or dropping a weapon due to a bad dice role[57]. Phil and Sean are both referring primarily to the character/rules entity in the way usually seen by GMs, as Phil is the GM at the time of play and Sean is the group's usual DM. The indefinite reference forms they use in the discussion refer to any character/rules blend to which the fumble rule they are discussing may apply. Although nothing specific is able to be indexed, the referent entity type is still available. This indicates that a level of world and space-based interpretation is still active when the speaker has no particular entity in mind.

[57] "A fumble" refers to a player rolling a 1 on a twenty sided dice for an attack, skill or save roll and confirming with a second roll that the failure was critcal. To see if the fumble causes a weapon drop, breakage or other detrimental effect, the players roll the dice again and must achieve a certain value.

The data suggests that there are 'rules' to the availability of blends and referrable entities related to the currently active domain and recently referred-to entities. The following diagram summarises the entities that may be referred to together without marking (touching), those that can be blended (overlaps), and those that remain separate unless marked:

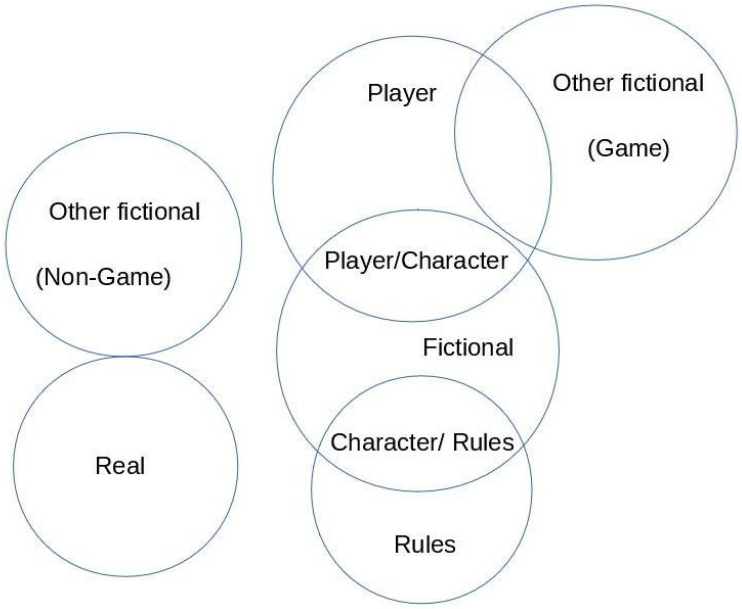


Figure 9.2: Blends and accessible referents. Minor non-diegetic spaces not included

On the left of the image, the (unblended) real and non-game related fictional worlds are together. These may be referred to together, though the non-game fictional world is often marked in the discourse as being a movie. On occasion and particularly in Group 2, quotes from movies mark a shift into the movie's fictional world from the game world if an event in game is similar enough to warrant a cognitive link. This kind of event occurs far more in Group 2 than in Group 1, suggesting that Group 2 does not maintain the game domain as the primary domain of the gathering, although they follow the same shifting rules to return to the game and to shift within the domain as Group 1. The shift to non-game fictional worlds from game worlds, marked by the quotes, are then linked to real references, until the distinct mark is used to bring it back to the game world:

Example 9.8 (Extra lines omitted)

1. **Mike**: [you... um you eventually find a pie vendor for lunch and um
2. **Susan**: num num num!
3. ((pause))
4. **Susan**: Ah ee. You call that a pie. They're really yummy
5. **Eleanor**: They look very nice
6. **Susan**: @@@@ Anyway. Is it cut me own throat dibbler
7. **Mike**: Um, kinda similar
8. **Eleanor**: You sure they're pies?
9. **Mike**: <sings ((try the priest[58]))> Oh that's the sound of the world out there <Sings>
10. **Alan**: Whose cut me own throat ((partial loss due to data segment cut))
11. **Alan**: Dibler's cousin stab me own- stabbed that guys leg
12. **Susan**: Stab that dude Chris
13. **Mike**: ((sings softly))
14. **Alan**: What?
15. **Mike**: Nobody else?
16. **Alan**: Sorry I totally missed what you said
17. **Mike & Susan**: <Sing> It's man devouring man my dear and who are we to deny it in here </Sing>
18. **Mike**: <sing> It's priest, try a little priest, is it any good sir, it's too good, at least </sing> and she's holding a pie <sing> Then again they don't commit sins of the flesh, so it's pretty fresh </sing>
19. **Tim**: Sweeny
20. **Mike**: Sweeny Todd
21. **Alan**: I haven't actually seen it
22. **[27 line discussion of movie going experiences omitted]**
23. **Susan**: @@@@@ Pretty much
24. **Alan**: Okay, um, I'm guessing there is markets around?
25. **Mike**: There is people selling everything
26. **Alan**: Alright, um
27. **Susan**: Pan galactic garsel- gargle blasters?
28. **Mike**: That was so disappointing
29. **Susan**: @@@ Why?
30. **Mike**: 1806
31. **Susan**: Oh yeah 1806
32. **Mike**: I took her to the best cocktail bars in the city not a single bartender knew what a pan galactic gargle blaster was
33. **[9 lines about cocktails omitted]**
34. **Alan**: She'd be like... I don't know how to make it but I'll try
35. **Mike**: Of course...So yes, you are wandering around Parshay getting jostled by people left right and centre eating pies

Session D1, Segments 10 & 11

In the example above, Group 2 is quoting and referring to elements from various books, movies and stage plays, each with their own fictional world. The pie vendor in the game's fictional world (Parshay) triggers Susan to ask if the vendor is a similar character to Cut-me-own-throat Dibbler from Terry Pratchett's *Discworld* series (Pratchett, 1983/2008). Mike

[58] Song from the movie *Sweeny Todd* (Burton, 2007). The stage version is picked up later in the conversation (omitted).

returns the focus to the fictional world of the game by latching on to the similarity to help the description. He does not maintain that focus for long as the connection between the suspect contents of Dibbler's sausages (a staple of the Discworld fictional world), Eleanor's suggestion that the Parshay pie vendor may not be selling pies and a similar suspect pastry in the Sweeny Todd movie and play causes him to shift to the world of that movie, marked by his singing a song from the film. This leads to the participants discussing their real/past experiences of seeing the movie (or of their family seeing the movie), a comparison to the stage play, and more singing. By Line 23, the Group has shifted active domain completely to the real/past world and the world of the film, meaning that Alan needs to make a distinct domain shift mark in Line 24 to return the group to the game ("Okay, um"). Susan does not return to the game domain as would normally occur after such marking, instead referring to a drink available in the fictional world of *Hitchhiker's Guide to the Galaxy* (Adams, 1979/1995). Susan's continued use of outside domain reference draws the group back into the real/past, as Mike begins a story of a trip he and Susan took to the 1806 Cocktail Bar in Melbourne. Mike himself returns the domain back to that of the game in Line 35 ("so yes").

Similar uses of movie quotes are seen in Group 1, although they are much less disruptive to the game and usually treated as a non-diegetic interjection and do not cause a shift in domain:

Example 9.9

1. **Phil:** [Can I use my linguistics skill?
2. **Pete:** Gaz changes the writing to wipe off
3. **Phil:** Oh listen to me argue [@@@
4. **Sean:** [Some of the phrases are immense with words nearly three feet high while others are written in tiny spidery script
5. **Pete:** The Juwes are the men who will not be blamed
6. **Jacob:** Romans go home [@@
7. **Sean:** [The medium varies as well sometimes dark ink sometimes
8. **Gaz:** Romanos?
9. **Sean:** sometimes blood
10. **Jacob:** Eunt
11. **Sean:** [sometimes carved into the stone
12. **Jacob:** [Do it a hundred times by morning or I'll cut your balls off
13. **Sean:** Shut the hell up @@ each way

Session B2, Segment 5

In the example, Pete, Gaz and Jacob make links between the writing on the walls of the fictional shrine to writing found in the real world (Line 5, a reference to the Goulston Street graffito (Evans & Skinner, 2002)) and in movies (Lines 6, 8, 10 and 12, from Monty Python's The Life of Brian (Jones, 1979)). In both cases the participants create a fictional/real (of film)/joke blend that is non-diegetic. The only acknowledgement of the move to non-game worlds is Sean's call for Jacob and Gaz to shut up, which is done midway through his description (read from a sourcebook) of the writing on the fictional world. Group 1 seems to use non-diegetic spaces more often than Group 2 to avoid disruption to the game.

The non-diegetic rules space, the only such space included in the diagram shown in Figure 9.2 above, operates in a way that is contrary to the way other spaces work but that, unlike other non-diegetic spaces, has its own usage rules. The rules space is nearly always blended with the fictional space (see below), and thus the character entity. While other blends can appear with any of its component spaces, the character/rules blend is rarely seen with the fictional entity, especially referring to the same fictional entity, and where it is, it is usually linked to a non-player character. The blended entity is actually more linked to the player and player/character entities in terms of how it is used by the participants. Group 2 is more flexible with their use of their rules blends, but the separation of rules and fictional world narrative remains.

9.4 Non-diegetic Blends and Reference management

The reference rules outlined above hold true for both groups. Where the references are used to indicate changes to a world or entity, a participant may only shift to referring to a restricted set of referents. Where no change is intended, the rule is far less rigid, and a shift is

possible to a world that would otherwise be inaccessible through what I have called a non-diegetic blend (see Section 8.2.2.2 above). In Group 1, and in the discussed segment of data particularly, the most prevalent non-diegetic space is the joke space. In the case of this segment, the joke space is applied to the fictional conversation with the opponent the group is encountering (Lines 45 through 60 of Appendix 1), the player entity (Line 95 and Lines 164 through 171), and to the player/character blend entity (Lines 95 to 96, and Lines 185 through 191).

The joke fictional blend, diagrammed below, is used when the participants feel that something within the pre-determined plot is uninteresting, and to provide commentary without directly affecting the narrative or the fictional world. In Line 45 of the sample file, for example, Phil seems to be addressing the NPC directly as his character, asking for a copy of a riddle-poem he had created to indicate the next stage of the party's journey. As this is a joke blend, however, the character is not addressing the NPC, and thus is not having an effect on the narrative. He is instead indicating his lack of interest in hearing the poem.

Joke blends with participants are usually commentaries on perceived inability to play the game well, and are most often aimed at Gaz. These blends allow the group to move to real reference and to engage in solidarity banter without directly disrupting the game, and so without disrupting the world accessibility they have built up. Joke/real blends require much less direct shift marking than simple real reference, as the joke moves the reference use out of the discourse somewhat.

When a joke is added to an active space, it is often indicated by an expletive, laughter, or a direct address of the target of the joke, where they are present. Direct address by name is otherwise limited to calls for rolls by the GM, or for gaining attention where multiple

conversation strings are active. Even in complex blended jokes, the jokes use address forms of the player, both targeting the speaker, by referring by way of the player's character:

Example 9.10

91. Phil: plan b being, try and hack him, and if that doesn't work [plan c run away
92. Gaz: [Plan C ok
93. Sean: whee
94. Gaz: I vote, because dyslexia, vote for C
95. Phil: well you know what Gaz if you ran away we probably wouldn't even notice you were gone [@@@
96. Pete: [he never runs away that's the problem
97. Jacob: so did we cast a scroll on Sam before we came down as you said we [[were going to
98. Phil: [[yeah Sam and Gaz
99. Sean: yeah Sam and Gaz

Session B2, Segment 17

More complex joke blends may have shifting targets, particularly the player/character/joke blend. Sometimes this blend is used to insult a player by way of his character, and at times the blend may be a joke at the character's, expense. These complex blends can change the balance between elements in the blend. This often results in the player taking a more dominant role in the blend (see below for a discussion on balance in blends). In the example above, the joke blend in terms of reference begins in Line 95, although the joke itself begins in the preceding line, in which Gaz aims the joke at the plan to run away. Phil re-targets the joke onto Gaz, a regular occurrence in the group, by directly addressing him by name. The remaining references in the joke space are to Gaz's character within a player character blend, with the balance of the blend leaning far more toward Gaz himself and his inability to make affective characters than is usual for a player/character blend (see below). In Line 97, Jacob returns the reference to the play-character blend without a pause and with only a slight marking ("so") to indicate the return to a diegetic space.

While the blended Gaz still uses his character as an avatar for insulting him, jokes can be aimed at the player themselves using game functions to keep the joke within the active domain. Although no example is given in this segment, the use of non-diegetic spaces in a

blend allows for a kind of blend, or a different manifestation of a blend, to occur that would not appear otherwise:

Example 9.11

231. Jacob: we saw him pick it up. Pete, it put me proud of brooch
232. Pete: They didn't heal either. Perception check oh
233. Sean: @@@
234. Phil: Pete just rolled a plus twenty petulance check
235. Pete: Yes
236. Jacob: Ah successfully
237. Phil: That's a [natural hit
238. Jacob: [He made it
239. Sean: he's always got [[max ranks
240. Phil: [[It's a natural hit
241. Gaz: That's a natural ten
242. Sean: He's always got max ranks
243. Pete: Alright it's a natural ten max mats
244. Sean: skill focus
245. Gaz: He cows it by three or feats
246. Sean: @
247. Gaz: Minor petulance. Major pestilence petulance, Two handed petulance

Session 2, Segment 17

In this example, the group is collectively referring to a joke/player/rules blend. The player-rules blend does not appear outside this blend. In this case, Pete is the target of the joke, and is being discussed as having rule-like traits. In particular, the joke implies that Pete was able to apply skill values and specialised feats in petulance.

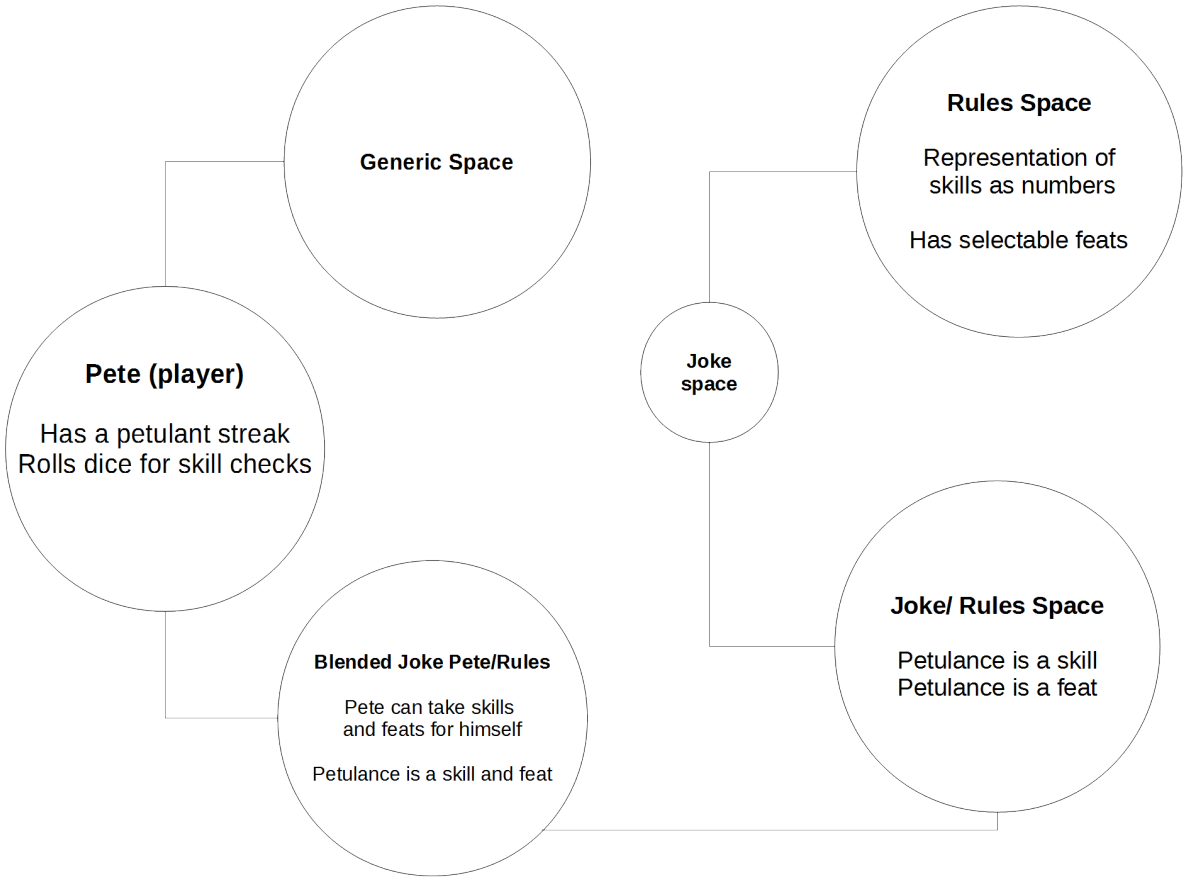


Figure 9.3 Blend diagram for joke rules/Pete. Only pertinent information is shown

This blend is unusual in that it includes two non-diegetic spaces. The rules are non-diegetic, not because they have no effect on the entity they are blended with, indeed, the rules govern what the fictional entities can do, but rather because they exist outside the fictional narrative. Blending the joke space allows the rules to be applied outside the domain to which they would normally apply, as well as allowing the participants to talk about Pete without affecting the game, but also without moving out of the game domain by applying game-based attributes to him.

Time displaced blends are an interesting case in terms of their effect on the base world of the blend. Past spaces are diegetic in relation to the narratives old about the past, while future and hypothetical spaces are non-diegetic until affirmed as part of the target world.

Lines 112 through 116 in the sample segment show a series of future and hypothetical blends with the fictional world:

Example 9.12

109. Pete: He's invisible isn't he?
110. Gaz: oh okay
111. Sean: Ah yeah he is
112. Phil: yeah the glitter dust will stay on him even if he tries to go [invisible
113. Jacob: [but he'll dimension door
114. Phil: well he might, then we can go clean everything else out
115. Jacob: and then he'll come back and we'll have to do it again
116. Gaz: yeah yeah yeah
117. Sam: okay Sean I cast glitter dust on him
118. Pete: well you don't know where he is yet

Session B2, Segment 17

In this case, the participants discuss what their opponent is likely to do, and their plans as a result. This discussion does not cause the opponent to perform those actions, nor does this planning represent any actual action from the players or characters. In terms of a conceptual blend, these time shifts function much the same as a joke blend, applying only the property of non-diegetic and time adjusted to the blend itself (overleaf).

The non-diegetic blend presented in the diagram below takes the mage as a fictional entity in its entirety into the blend. The entity then has the hypothetical and non-diegetic properties applied to it, signifying that anything this particular mage is said to perform for the time being is not to be treated as performative. As with other minor blends, the generic space is not necessary, as the primary entity being blended is the only entity that contributes to it.

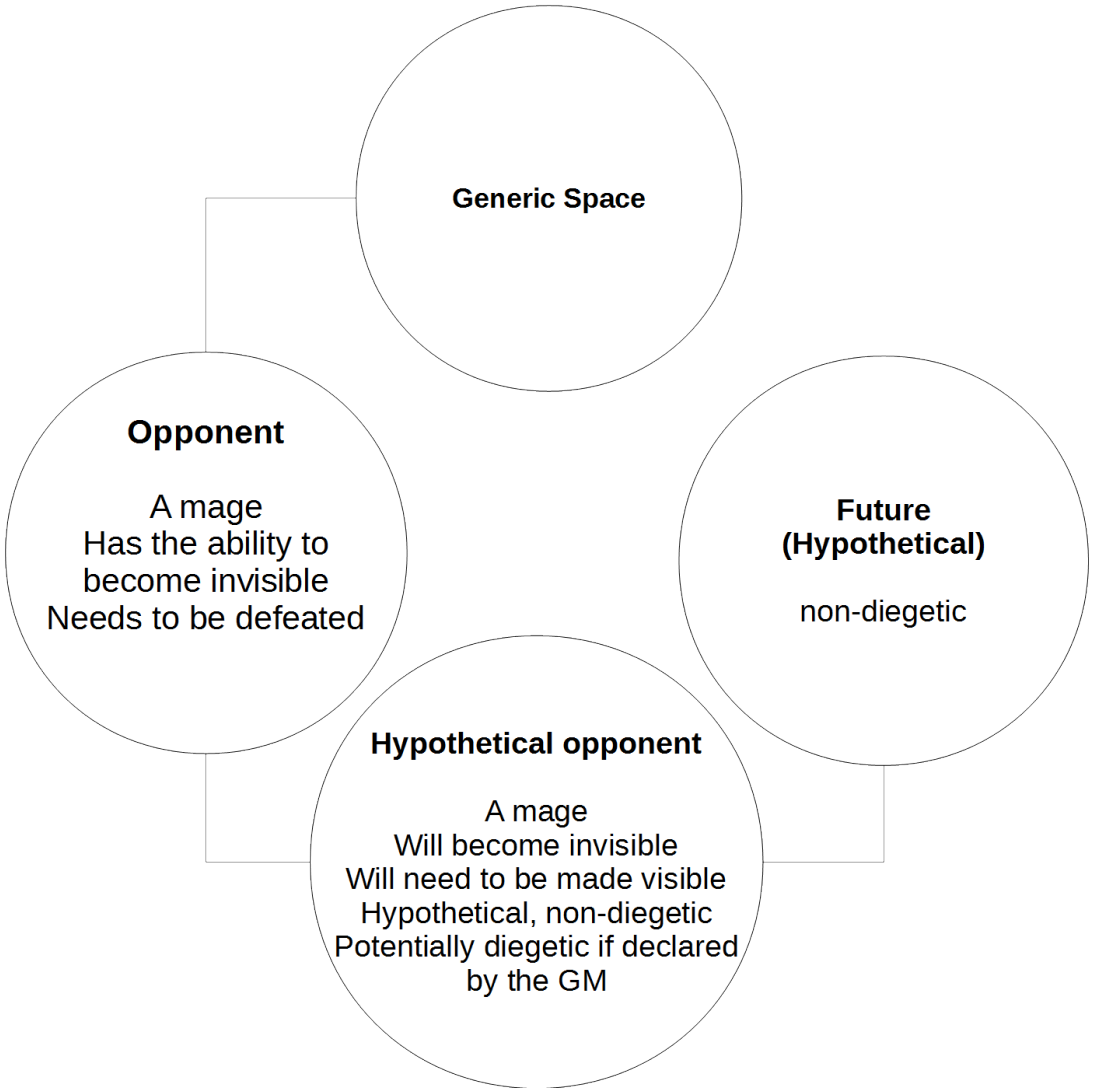


Figure 9.4 Blend future/fictional for planning an encounter with an opponent

Complex future and hypothetical blends within the game domain are used primarily for strategy and contemplating potential moves. Cases where the entity is a fictional hypothetical blend remain in the non-diegetic realm, as control is limited to the dungeon master. Hypothetical player/character blends, however, may be retroactively unblended and made diegetic when a player declares that they agree with the planned event:

Example 9.13

Sam: so, I can dismiss it?
Sean: you can dismiss it? Alright do that
Pete: there you go Gaz
Sean: you dismiss the spell and you see a enormous white dragon @@@
Session B4, Segment 11[59]

In the example above, Sam puts forward a non-diegetic version of his player/character self who may be able to dismiss an illusion spell that they encountered. Sean's use of "alright, do that" causes the entity to become retroactively diegetic and therefore dismiss the spell.

The past space, as mentioned, is diegetic in its narrative but not beyond that. The space itself and its resulting associated entity have no effect on the actual world of the past. However, they are able to change the understanding of the past world and events of those being told about them. The example below shows a use of a past/character/player blend by Group 1:

Example 9.14

1. **Jake:** [Yeah let's completely leave the party at the other end of the area and die [[somewhere that way we don't know where he is
2. **Sean:** [[that's right
3. **Pete:** that's two giants chased down
4. **Gaz:** actually, we left he died
5. **Sam:** that's more like it
6. **Phil:** it was a room with like sixteen ogres in it or something
7. **Sam:** no it was the two giants cause he got glitter dust

Session B1, Segment 14

In the example above, the Group is recounting an event in a past game in which Gaz had his assassin character attack a group of giants without the help of the rest of the party. As with many past narratives, the Gaz/character/past blend is referred to in the third person rather than addressed, even by Gaz himself. Lines 6 and 7 above demonstrate how this space can be diegetic even though the events themselves cannot be changed, as Sam is adjusting Phil's understanding of the narrative using the blended entity.

[59] Although Session B4 is not used in the analysis, this is the most explicit example of the blend discussed.

In most, if not all, cases of minor and non-diegetic spaces, the blend is an iteration of the primary entity with one or more properties applied. In blends of major spaces and worlds, a distinct lean toward one of the blended entities, worlds or spaces is seen.

9.5 Balance between blended entities

No blend of two spaces or entities is evenly balanced between both, as suggested by the surrounding discourse in the data. The blend will contain more elements of a given entity than the other, and this is often situation and even group dependent. The use of a player/character blend, for example, is more weighted toward the player when initiative and turn order is called, as the player is determining the order of action of their character and thus when they themselves get to take a turn in the game space. When dictating character actions, however, the balance shifts toward the character, as the actions described are connected to the fictional world, with the participant simply explaining those actions or perhaps rolling for their success:

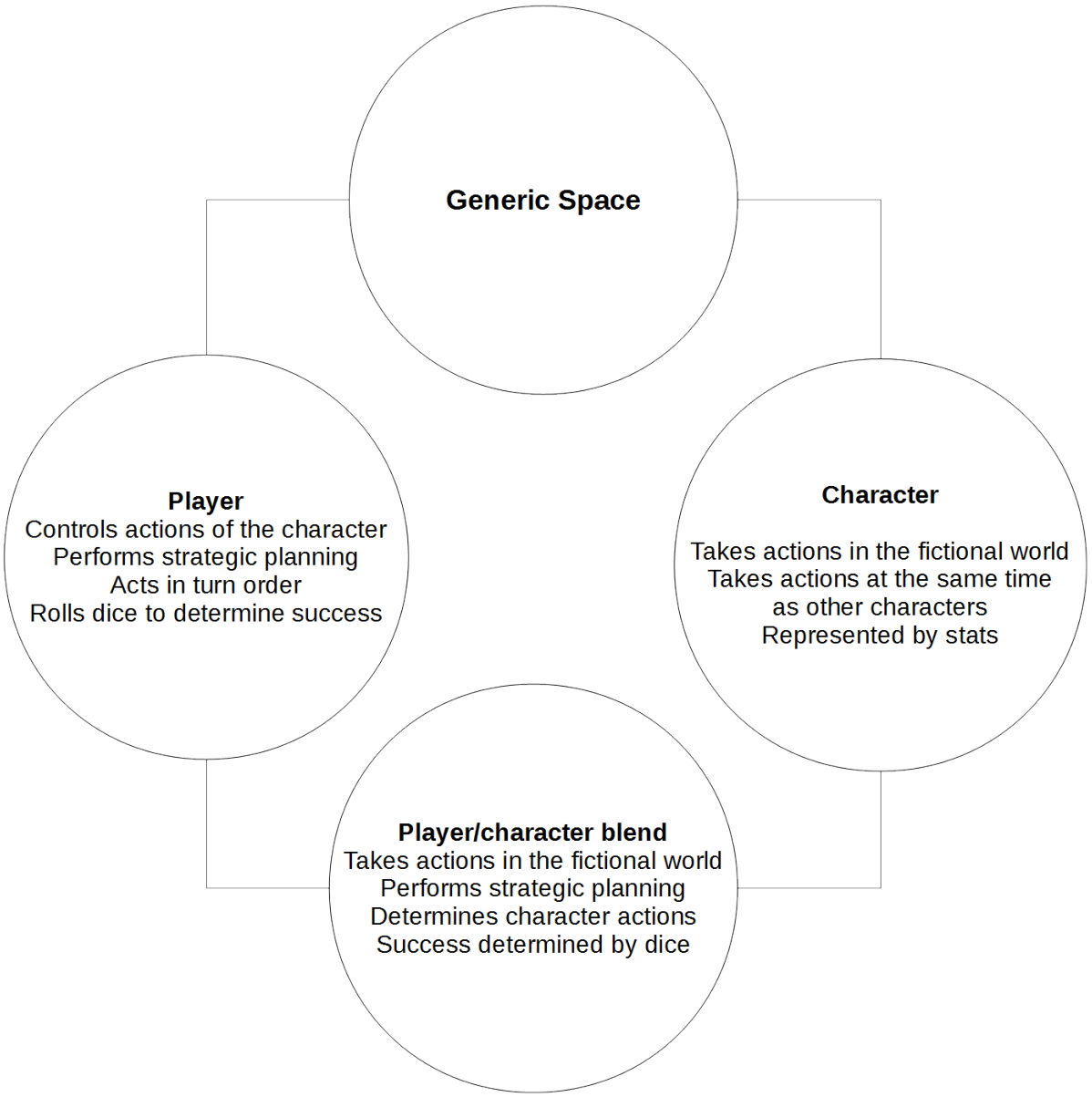


Figure 9.5 Player-leaning Player/character blend. The player contributes action timing, control, strategy and success determination to the blend. The character contributes the taking of actions in the fictional world.

The first blend (Figure 9.5 above) shows a player-leaning blend used for declaring turn order. The order itself is a play-space concept, as in the game world the actions of characters in battle take place near-simultaneously. An example of this use is provided below.

Example 9.15

206. Sean: Sam has initiative as he spent a hero point
207. Sam: cast glitter dust on him
208. Sean: glitter dust, what's your save?

Session B2, Segment 17

Sean's use of *Sam* in Line 206 is an example of this player balanced player/character blend. The player contributes the roll that determined turn order, the action taken in that order and the strategy and so forth that is involved in being in a certain place in the order. The character contributes presence in the fictional world, their various attributes that made them able to be in a certain place in the order (attributes that are also part of the rules space) and the actions taken. Although this blend is weighted toward the player entity, it is still based in the fictional world.

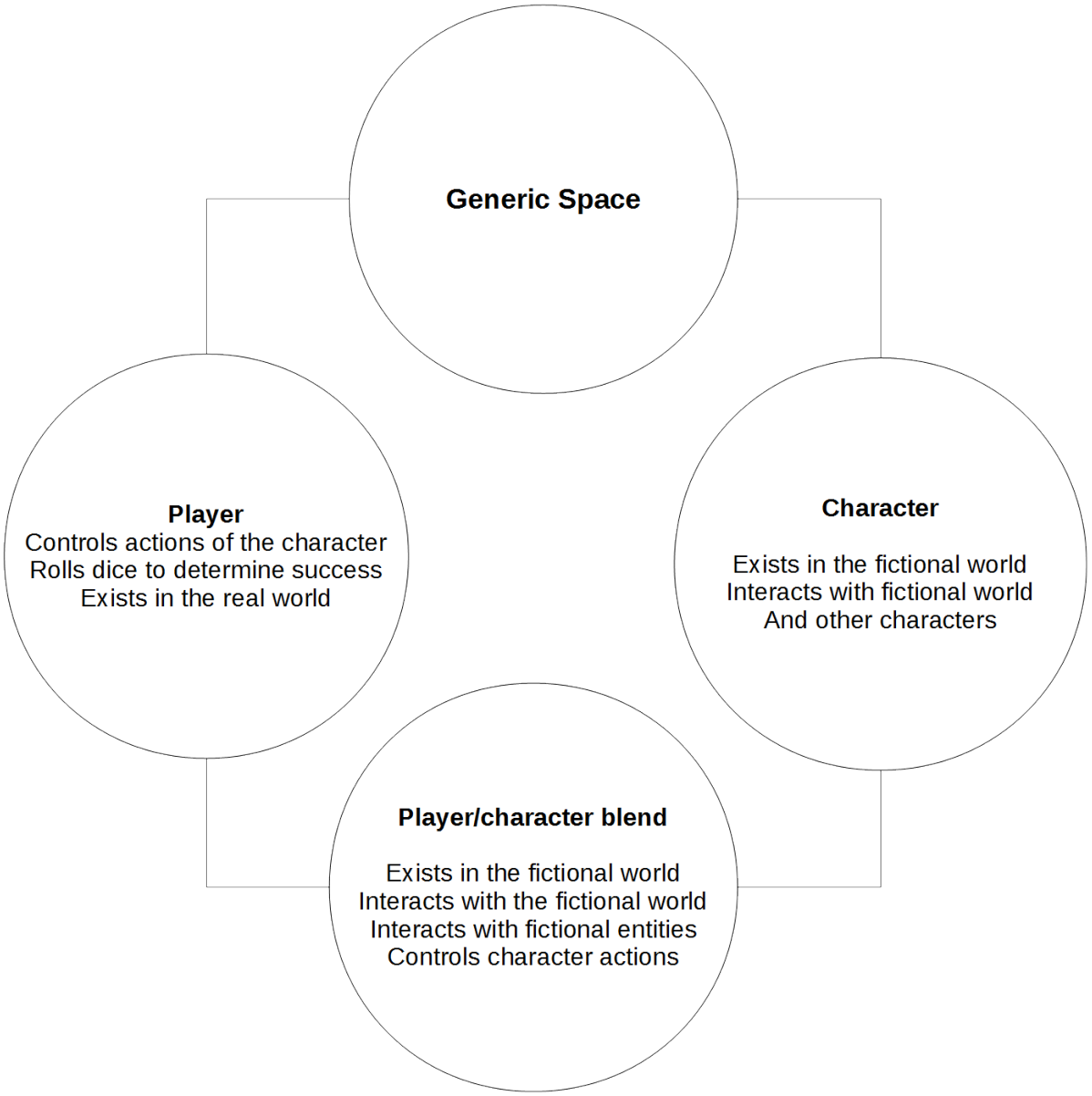


Figure 9.6 Character leaning player/character blend. The player contributes control and determination of success. The character contributes existence and interaction with the fictional world.

In contrast, the most common player/character blend is presented in the second diagram (Figure 9.6). This blend is weighted toward the character, with the player only contributing control over the character to the blend proper:

Example 9.16
Alan: [I go down to the Inn to see if there is anything for brekkie fast
Mike: Ah there is ((clears throat)) um it is sausages bread and butter
Session D1, Segment 9

Example 9.16 above shows an instance of a character-weighted player/character blend. In this case, Alan is simply stating what his character is doing, and has no involvement in the reference or the activity beyond this declaration.

Referring expressions with generic indexes are usually player/character blends and balance differently depending on the group that is using the term. In Group 1, indefinite forms balance to the player and are discussed in terms of abilities based on rule decisions. Group 2's indefinites are more character balanced, and are framed in terms of character action, even when they relate to game mechanics:

Example 9.17
210. Phil: does he get a save for glitter dust?
211. Sam: he does, he gets a save for the blindness
212. Sean: you can't avoid the glitter dust
Session B2, Segment 17

In Line 212 of Example 9.17 above, Sean uses an indefinite *you* to explain that, in the rules, the spell glitter dust is unavoidable. This is a rule weighted use, as avoidance is based on rules-based rolls (saves) and the limits of the spell set by the rules. Contrast this with a use by Group 2:

Example 9.18
Tim: You may take multiple consecutive evaluate manoeuvres for a maximum bonus of three
Mike: Yep. So now each combat round effectively being three seconds, it's for every three second you sit there and sum up your opponent, you get a bonus
Session D2, Segment 10

Each use of the second person pronoun in the example above is indefinite. In the first instance, Tim is reading off a page that explains a rule, and the blend takes a similar form to the one seen in Group 1's example above. Mike then reframes the rule sheet to be more about the actions the character takes in the fictional world, particularly the among of time they sum up their potential opponent. The rule can apply to any character, and so the manoeuvre can be performed by any particular fictional entity in that world.

The type of reference used for an entity does not seem to affect the balance in a blend. The use of a player name over an indexical term is not a predictor of a more player-balanced blend. The balance is instead more likely predicted by group, as mentioned above, or by the in-game situation. Non-diegetic blends are always balanced toward the primary entity.

9.6 Reflexives across worlds

The use of reflexives in the data highlights the importance of the domain links between entities. A reflexive can be used between entities in different worlds, a use that have been deemed impossible by scholars of fictional language (Fludernik, 1993; Zribi - Hertz, 1989). However, a cross world use of reflexives is possible in roleplaying as long as those entities are within the same domain or conceptual blend:

Example 9.19

149. Gaz: [actually I didn't take my country one [[either
150. Sam: [[I'll use a hero point to put myself first in the order
151. Gaz: I couldn't find the ah- [xxx
Session B2, Segment 17

In Line 150, Sam uses a reflexive (myself) for the player/character entity to refer back to an antecedent player entity. A hero point is given to a player to be spent on rerolls, changes in turn order, to preventing character death, while the turn order is a player/character function with leanings toward the player. In this case, the reflexive is able to use a different entity as an antecedent as the entity of the antecedent is the same as one of the entities within the reflexive blend. Group 2 follows the same pattern of reflexive use:

Example 9.20

Mike: you can spend fatigue points, to buff yourself temporarily

Session D2, Segment 12

Here, Mike is using generic indexes to explain rules. The reflexive is a player/character reference and the antecedent is player. The use of reflexives follows the same rules as other shifting references in that both the reflexive and antecedent must have a part-blend in common. Almost all cases of cross-space reflexives are player/character references to player antecedents[60]. Reflexive joke uses do not follow the normal pattern of joking, as they do not allow freedom to switch domains. Instead, joke reflexives are more restrictive. In the following example, three uses of reflexive refer to various iterations of Pete:

Example 9.21

Pete: alright I'll, standard action spell on myself
Jacob: oh
Sean: heh?
Jacob: He's always doing it on himself isn't he? You selfish fuckwit
Phil: what spell'd you cast?
Pete: I'm not saying yet @@@ dispel evil
Gaz: dispel
Jacob: you are evil and you are dispelling yourself

Session B2, Segment 8

In the first instance, Pete is using both reflexive and antecedent to refer to the player/character entity. Both of Jacob's uses of reflexives are to joke player/character entities with an insult targeted at Pete himself. Joke reflexives always refer within the joke space.

9.7 Reference failures

For the most part, participants in the data have no trouble interpreting the intended referents of any given expression. There is only one occasion in the data where the intended target entity is misinterpreted, presented below:

[60] A single instance of character rules reflexive to player is found in Group 1's data when discussing how characters were made.

Example 9.22

1. **Bill:** any any [other crates or boxes in here or just?
2. **Gaz:** [Hey who's good at drawing things
3. **Phil:** No Bill
4. **Bill:** bugger
5. **Sean:** no
6. **Jacob:** actually I think
7. **Bill:** thought I'd ask never mind
8. **Jacob:** I think I could draw something
9. **Phil:** I think it's good for you to ask
10. **Gaz:** What do you use [what skills do you use to draw
11. **Bill:** [keep going forward
12. **Phil:** cause otherwise I have to tell you when
13. **Sean:** oh you're talking in game
14. **Gaz:** yeah oh yeah
15. **Phil:** I'm not gonna waste time telling you to search and search and then [xxx time
16. **Bill:** [nah nah that's alright so we go forward
17. **Sean:** drawing would be like... craft... [painting

Session B1, Segment 10

In the example above, Sean misinterprets Gaz's use of *who's* as a request for a real person, rather than the character or possibly character/rules he intended to ask for. There could be several reasons for this confusion, but it seems to be a misinterpretation of the active domain. Gaz uses the marker *hey* to try and draw attention, when this kind of interjection is usually used to signal a major shift in cognitive domain. The question is also not related to the current conversation, which is a description of the room that the party had found themselves in. It is not until Line 10, where Gaz shifts to distinctly game-related jargon, that his intent becomes clear.

The ease that participants have in interpreting referents despite the complexity of the interpretation process and the number of potential reference available shows that the suggested means of interpretation works, and that this type of multiple-world reference interpretation comes naturally to speakers. In the conclusion of this thesis, I discuss the implication of this and the other findings of this thesis, as well as further research both planned and possible. I will also discuss possible uses of the model outside roleplaying.

Chapter 10 Conclusion

10.1 Summary

In this thesis, I have explored the intricacies of reference in contexts where multiple worlds and domains are present in the discourse. Using 24 hours of natural language data from two groups of roleplay gamers, I examined the use of expressions used to refer to persons to better understand the use and interpretation of cases where terms usually used to refer to real or present people are used to refer to fictional characters. The reference use in roleplaying goes against what is typically covered in reference theories, and so a new theory was needed to account for the ability of players to not only use real reference for fictional entities, but to switch between entities a given term can reference within the same discourse event.

In order to create this model, existing theories were tested against the data (Chapters 5 and 6). These included Bühler's deixis (Bühler, 1934), Rauh's deictic types (Rauh, 1983), mental spaces (Fauconnier, 1981), conceptual blending (Fauconnier & Turner, 1998) and cognitive domains (Sweetser & Fauconnier, 1996). In most cases, the theories tested were found to account for part of the reference found in the data, such as the difference between reference to objects in the immediate context and reference to imagined entities, but not all.

To combat these shortcomings, I combined elements from several theories, making minor adjustments where needed, to create a model for reference interpretation (Chapters 7 through 9). This model presents interpretation as a process taking the referring expression from output (the term itself), through the indexical context and cognitive domain to its sense, then moving to the index of a term before using the active world and mode of pointing to determine the final referent. The investigation also includes rules for blended entities, the role of various spaces within a conceptual blend and, to a limited extent, markings of shifts in active world and domain.

This thesis was inspired by my own experiences as a gamer and by encountering similar reference uses in other contexts, such as audio commentaries on movie DVDs. There was little to no literature available on the language of gamers in general, and next to nothing on table top players at all. There was also little on the kind of reference use that I was seeing in the games I was playing. It was my intent that, by writing this thesis, I would fill a gap in the literature on reference that covers multiple world reference and encourage research into similar uses of language.

10.2 Key Findings

During the course of this thesis, several key findings were made. These findings were related to the research questions described in the introduction to varying degrees. Three key findings are listed and discussed below.

10.2.1 Proper names are context dependent

What I consider one of the central findings of this work is that proper names are context dependent. Although others have made similar claims (Pelczar & Rainsbury, 1998; Rami, 2014), the context dependence they suggest is related to multiple bearers of the same name, rather than a referring expression with a single index having several potential referents.

In this way, proper names were found to be more akin to deictic expressions than more rigid definite descriptions (Chapter 4). Much like the deictic terms in the data, proper names have a relatively fixed index, but a referent that is dependent on the active world and domain of the utterance to be interpreted. Definite descriptions, on the other hand, rarely have their index and reference in different worlds, with the entity being described (indexed) also the entity being referenced.

This finding goes against long held theories of rigid designation (Kripke, 1981). As proper names were considered the quintessential rigid reference form, it perhaps brings the

possibility of reference in general being, if not entirely non-rigid, at least slightly flexible. Further research would be required, but there is the possibility that, to some extent, natural kind terms may have an element of non-rigidity in their defining properties across various worlds.

10.2.2 Something more is needed to find the referent of an expression

The majority of theories of reference discussed in this thesis were found to pertain primarily to interpreting the index of a term. The origo of a deictic term, for example, will provide the speaker and addressee, current place and time of an utterance, but will not find its referent if that referent is not also within the origo. Instead, the origo will only find the index of a term, the element in the context a term points to, but not the linked entities that are its target.

To find the referent, interlocutors require a knowledge of the active world or mental space of an utterance and the cognitive domain that the activity they are performing falls into. The cognitive domain will provide the interlocutors with the worlds and spaces that are available for reference by a specific term, and the rules that govern those references. The active world or space, whether blended or unblended, house the entity that may be referred to by a term.

As mentioned, the domain is determined by the activity being performed at the time of the utterance. However, a given situation may have several possible domains that can be used. There is likely to be a default domain for the situation, in the case of roleplaying, the domain of the game. Where another domain is invoked, such as the world outside the game or a different and unconnected fictional world, a distinct marker of shift must be used. Although these markers were not specifically investigated as part of the research, the data suggests they play an important role in the interpretation of cross world reference and should and will be investigated further in future.

The active world, on the other hand, seems to be interpreted through a combination of discourse context and an interpretation of speaker intent. For the analysis itself, entities were largely identified based on surrounding lexical cues and certain features present in the audio recordings (see Chapter 3) alongside my own intuition from my experiences as a roleplay gamer. The interlocutors do not have the benefit of having the full utterance and its surrounding discourse before them to be referred to when deciding a referent, and so the intended active world seems to play a major part in their own interpretation and use of reference. In all, this suggests that the link between a referring expression and its referent are almost entirely derived from the context of the utterance, the intent of the speaker and the activity in which the utterance is performed, rather than from the semantic content of the expression itself.

10.2.3 Active world shifts are easily followed by interlocutors

Although the reference use in the data collected for this study is complex when presented as a model and when studied to discover its constituent parts, from the point of view of the people using these forms the process seems remarkably simple. In the 24 hours of data collected, there is only one instance of misinterpretation of the intended referent and confusion of the intended active world or domain. This suggests that, although this is an instance of reference use that is far from the norm, there is an ability innate in language that allows the use and interpretation of reference across multiple worlds.

This finding in particular is an important contribution to our understanding of reference. The apparent ease of interpretation and its implication that this kind of complex world and space shifting is a natural part of language use suggests that reference is a distinctly pragmatic process, as advocated by Bach (1987) and others, rather than a largely semantic one. This largely unexplored aspect of reference has several implications to the field, discussed below.

10.3 Implications and Applications

The results presented in this thesis have made a contribution to the field of referential semantics and pragmatics by exploring an element of reference that has thus far been relatively untouched by researchers in the field. The findings, therefore, have significant implications for the field in that they highlight an element of reference that had not previously been considered, but is a key part of the way reference works. The findings suggest that reference is not related to the world external to the speaker, but rather relates to the internal, mental worlds that interlocutors create around their conversations and the activities to which those conversations pertain.

The findings contradict some of the long-held understandings of reference. Rigid designation theory, for example, is found to be unsustainable as an explanation for the use of proper names in multiple-world contexts. Bühler's deixis does not provide enough distinction between reference to memory and reference to the imagination, and indexical views of proper names account for a very different kind of context dependence. The link between referring expression and referent was found to be less direct than the semantics of these expressions would suggest. Although the index of a term does indeed follow from the sense of the term itself combined with the elements of the world the sense pertains to, the referent requires a more complex set of interpretative factors in its determination. These factors include the situational context, the cognitive domain, activity being performed, knowledge of fellow interlocutors and intuitions of speaker intent.

There are implications to the findings of this study that go beyond reference. They also highlight the role mental representations as contexts play in the overall construction of meaning. This is a particular issue for formal semantics. I will not go into great detail in this instance, but the key point to be taken from this study in terms of meaning is that what Sag (1981) calls the "Kaplan Context" needs expansion beyond agent, addressee, time, place and

world to include, or indeed combine with, the model discussed in this study. Further research would need to be undertaken to determine the best way to incorporate the new model into Sag's formal semantic framework. Including the new model in some way, perhaps as far as the phantasma/occulus step, will allow meaning elements such as context, intent, idexical contexts and activity to be included in the formal meaning of statements, and to help establish truth conditions in an opaque context.

The model produced out of this research has applications outside of the reference use of table top role-players. The model can be applied successfully to other multiple world contexts, such as the language use of actors and audio commentaries for films, video games and their players, and to personal oral narratives, as well as other instances where the referent of a term will not match its index. The matrix of worlds within the domain of movies and their commentaries, for example, can be as complex as those of roleplaying games. When listening to the audio commentaries that are included with many DVD movies, the audience must determine if the reference used within the commentary refer to the actor themselves as they are speaking, occurrences on-set, their lives outside the movies, the characters and events on screen or the characters separate to themselves. The process of interpreting referents in these worlds would be much the same as reference in roleplaying games.

The model created for this study has the potential for use in many aspects of reference research, but also in the wider field of semantics and pragmatics. The interpretation model, although designed for referring expressions, can be used to track inference and illocution based on speech context. It may also be used to interpret metaphorical uses of language and differing meaning within different contexts. Meaning in poetry or song lyrics, for example, require constant shifts in contextual understanding, including personal context and author intent, to understand the overall meaning.

While the model has several applications as it stands, there are also limitations to this research that must be addressed to bring the model to its final, comprehensive form.

10.4 Limitations

Due to the nature of the research, there were several topics that were not done justice in this thesis. The most prominent of these is the lack of discussion of non-person reference forms. As discussed in the introduction, reference to time and space were deliberately excluded from the discussion of reference in this study. The reference to space in the data did not have as many shifts and mismatched indexes and referents as were found in person forms. The fact that both recorded groups were playing through stories set in wholly fantastic worlds meant that the place-based proper names were restricted to their own worlds. There are games set in the real world, and for future investigation into space reference across worlds such games would be an excellent source of data. Deictic reference to space is also difficult to study without visual cues for interpretation, especially relative position terms as any researcher would need to see the participants to determine if referents were positioned relative to the speaker, to miniature figures, or were not within the visible space. Eye gaze when referring to imagined entities would also present an interesting avenue of research. There is also more likely to be gesture in uses of space terms in roleplaying, especially with miniatures, than with reference to person.

Time reference in roleplaying has a distinct set of complexities of its own. Time flows differently in the game to the real world. Time may also flow differently in different space blends and in the same world during different activities related to the game. I felt it best to leave an investigation into time until after the foundational model was created to provide a framework for the discussion. Research into temporal reference in roleplaying is planned for the near future.

Some of the intentional omissions form the study were later found to be an important element to the investigation. Prosody in reference use, for example, was left out of the transcription and analysis due to time constraints and a desire to focus on the lexical function of reference, intended only to help with coding. It was not until much later in the investigation that certain prosodic elements were found to be a key part of referent interpretation, particularly the emphasis placed on names while joking and the particular prosodic markers that accompany demonstrative reference. While this does not ultimately alter the assessed worlds and spaces used for the model in the data, prosodic cues are likely to be important factors in determining the active world or space, perhaps becoming their own step in the determination process.

Discourse marking of domain shift was also a late- discovered but integral part of shifting world reference. These markings were not directly investigated as the initial intent of the investigation was to investigate the shifts between individual worlds. It was later found that the domain itself was a shiftable element of the discourse context, and that marking was related to that shift. A more thorough investigation of discourse markers, and as a result, more focus on the role of cognitive domain in multiple world contexts, may reveal that domain has an equal role in determining referents to active world. Focusing on determining of prosodic features may indicate subtler discourse markers between worlds may further refine the model of the interpretation process, and perhaps reveal a different relationship between the available worlds within a given domain than was extrapolated in this study.

10.5 Further research

The findings of this investigation, the resulting model and the elements of reference that were not able to be included all provide fascinating avenues for future research. Researchers who focus on personal narratives or literature may find use for the model, investigating the available worlds in those spheres and the way speakers manipulate and

create those worlds in the course of telling their stories. It would also be interesting to test the model against roleplaying and narratives in languages other than English.

Future research could also expand the investigation to types of reference not covered in this thesis, namely time and space, and expand on other reference types such as anaphora or definite descriptions, both of which were only touched on in the investigation. The use of statistical analysis would be an important expansion of the analysis alongside the inclusion of other reference types. Further investigation into the opaque contexts of non-real reference would also be a useful avenue of enquiry. In all, it is hoped that the model created for this thesis will encourage further research into the pragmatic aspects of reference.

During the analysis of the data, its potential for research beyond reference became apparent. Performatives, for example, are worthy of investigating. In roleplaying, it seems that some forms which would normally be considered declarative or constative are behaving as a performative ("I walk to the door"), in that the statement is causing the speaker's character to perform an action. Discourse markers of shifts in domain, world or performative function also require more research than was possible within the confines of this thesis. Cognitive domains themselves would benefit from further research, as the research presented in this thesis suggests that they are maintained and created based on more than just the situational context or activity, but can also change based on the topic of conversation.

Roleplaying data also presents a number of possibilities for sociological and sociolinguistic research. Roleplaying groups offer an excellent opportunity to investigate social hierarchies, group dynamics and shared social worlds. The interactions among players are part of not only the social negotiation of their group, but also their creation and maintenance of the social structures of their characters. The creation of shared narratives and

collaborative fictional worlds may be of interest to narratologists, as too may an investigation of the influence of the real world on how those worlds are created.

Overall, this thesis could never have done anything but scratch the surface of multiple world reference use. It is hoped that, rather than be the final word on reference research, this thesis serves to encourage research into the complex language use of roleplaying and related activities, and to help show that there is more to our everyday use of reference than we may have suspected.

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Appendix 1: Data Sample

1. **Jacob:** I bought four scrolls, oh, do you want to cast them now?
2. **Sean:** (((obscured by [sneeze))
3. **Phil:** [xxx down here on Sam, and maybe, Gaz
4. **Jacob:** Gaz, why Gaz?
5. **Phil:** he's got the highest perception, if Sam fails to see him Gaz can go he's over there!
6. **Pete:** and then go and grapple him Gaz, we can just cast all our spells on you
7. **Phil:** keep tripping him over
8. **Sean:** @@@@
9. **Sam:** Yeah, keep tripping him over
10. **Phil:** alright
11. **Sean:** alright
12. **Phil:** Sounds like a plan
13. **Sean:** alright pretty soon he turns up
14. **Sam:** yep
15. **Sean:** so, you dealt with the soldiers?
16. **Phil:** course we did
17. **Sam:** hah, yes, we have dealt with the soldiers
18. **Phil:** all good
19. **Sean:** no, that's a bluff straight away ((mumble))
20. **Sam:** yep
21. **Gaz:** okay
22. **Phil:** he better believe this xxx we were there so it's not much of a threat
23. **Sam:** hero point
24. **Jacob:** reroll it?
25. **Sam:** yeah reroll it
26. **Jacob:** what'd you roll?
27. **Sam:** six
28. **Jacob:** yeah that's probably a good use of a hero point at this stage
29. **Sam:** yep
30. **Jacob:** does that mean if he rolls below ten its
31. **Sean:** yep
32. **Jacob:** yeah well that's good
33. **Phil:** so if he rolls a one its eleven
34. **Sam:** oh eighteen plus... thirty one
35. **Sean:** hmm
36. **Jacob:** roll another <u>one</u> that'd be really good
37. **Sean:** ((mumbling)) @
38. **Jacob:** could be borderline then
39. **Sam:** yep
40. **Sean:** he says, good... you wanted to know about the forge
41. **Sam:** pardon?

42. **Sean:** he says I made... a little poem @@
43. **Jacob:** Oh crap
44. **Phil:** have you got a copy for us
45. **Sam:** can we have the short version?
46. **Pete:** its written on the back of this map
47. **Jacob:** I hope the poem's something, like here lies the forge it's in this city
48. **Sam:** @@ There was a man from Nantucket
49. **Sean:** ((mumbling)) for next time, cause we won't get that far now. [Um he says if magic bright you desire, to a rune forge must you retire @
50. **Jacob:** [Did you stop the recording?
51. **Sam:** oh god
52. **Jacob:** you spent a long time on that did you?
53. **Sean:** @ that's [right
54. **Phil:** [a limerick
55. **Sean:** it's a limerick
56. **Jacob:** there was an old man from Nantucket
57. **Sean:** for only there does [xxx receive its due and proper start
58. **Gaz:** [I found a small beaver and
59. **Jacob:** @
60. **Sean:** on eastern shore of steaming mirror at end of day when dusk is near when seven faces silent wait encircled guards at runeforge gate. Each stone the grace of seven lords one part of key each ruler hordes. If offered spells and proper prayer, take seven keys and climb the stair
61. **Sam:** oh god
62. **Phil:** so we need to get the key from every single runelord
63. **Sean:** on frozen [mountain, sin awaits, with
64. **Pete:** [xxx class xxx
65. **Sam:** you've got xxx the skill yeah
66. **Sean:** his regal voice, the yearning gates keys turn twice in septhedron, a culted runeforge waits within. And now you've come to the forge, upon rare lore your mind can gorge. And when you sloth the mortal way, in runeforge long your work shall stay
67. **Pete:** dead, as undead
68. **Sean:** brilliant isn't it @@@
69. **Sam:** <AM> fricken nuts man <AM>
70. **Jacob:** great
71. **Phil:** the Eastern shore and steaming mirrored have to be
72. **Pete:** a lake or something, or a shore of it
73. **Sean:** well that's pro=bably enough information that you're certain if you went back
74. **Sam:** to the library
75. **Sean:** and have a look you could probably equate that to [somewhere near Magnamar
76. **Jacob:** [alright all we have to do now
77. **Gaz:** is kill him

78. **Jacob:** is kill this fucken
79. **Sean:** [@@@@
80. **Phil:** [We better clean this dungeon out cause the people of Sandpoint are gonna be mincemeat otherwise
81. **Sam:** right
82. **Sean:** considering you told this guy that there's no soldiers left up there @
83. **Sam:** Yeah so I think we'd better kill him in here
84. **Jacob:** and is he invisible at the moment?
85. **Sean:** yeah
86. **Phil:** alright... go
87. **Jacob:** and while he's waffling [and that shit
88. **Phil:** [lets enact plan a
89. **Sam:** which was what?
90. **Phil:** plan b being, try and hack him, and if that doesn't work [plan c run away
91. **Gaz:** [Plan C ok
92. **Sean:** whee
93. **Gaz:** I vote, because dyslexia, vote for C
94. **Phil:** well you know what Gaz if you ran away we probably wouldn't even notice you were gone [@@@
95. **Pete:** [he never runs away that's the problem
96. **Jacob:** so did we cast a scroll on Sam before we came down as you said we [[were going to
97. **Phil:** [[yeah Sam and Gaz
98. **Sean:** yeah Sam and Gaz
99. **Jacob:** and Gaz?
100. **Phil:** yes because Gaz has got good high perception
101. **Jacob:** he can see then, he can see him
102. **Phil:** he can still hide even though he's invisible
103. **Jacob:** but he's not hiding is he?
104. **Sean:** um, no no
105. **Jacob:** Sam, cast dancing lights on him and we'll hack the fuck out of the bastard
106. **Phil:** no cause
107. **Gaz:** spells did he find, darkvision?
108. **Pete:** He's invisible isn't he?
109. **Gaz:** oh okay
110. **Sean:** Ah yeah he is
111. **Phil:** yeah the glitter dust will stay on him even if he tries to go [invisible
112. **Jacob:** [but he'll dimension door
113. **Phil:** well he might, then we can go clean everything else out
114. **Jacob:** and then he'll come back and we'll have to do it again
115. **Gaz:** yeah yeah yeah
116. **Sam:** okay Sean I cast glitter dust on him
117. **Pete:** well you don't know where he is yet
118. **Gaz:** yeh let's [get closer, let's wander around

119. **Jacob:** [yeah he's had the scroll, he can see invisible
120. **Phil:** and he's talking to us he's gonna be close by
121. **Sean:** yeah... Yeah you can see him sort of lurking down one of the side corridors
122. **Sam:** yep, glitter dust
123. **Phil:** yeah
124. **Sean:** alright, [ah
125. **Gaz:** [at the same time I move... dah dah dah dah dah ((moving mini?))
126. **Sean:** I='ll let you have a=... no not that much it's not like he particularly trusts you... um... yeah initiative, he knows you're there, you know he's there
127. **Sam:** alright I cast glitter dust
128. **Jacob:** no roll initiative
129. **Sam:** ah
130. **Sean:** yes Sam
131. **Sam:** oh fucking cunt
132. **Jacob:** what'd you roll?
133. **Sam:** ah thirteen
134. **Pete:** it's better than me
135. **Sean:** thirteen Sam
136. **Pete:** ten
137. **Sean:** ten Pete
138. **Gaz:** thirteen for me
139. **Sean:** thirteen for Gaz
140. **Jacob:** how many hero points you got Sam?
141. **Sam:** four
142. **Gaz:** ohho I've got none
143. **Pete:** @
144. **Jacob:** want to use one? another one?
145. **Sam:** to reroll?
146. **Jacob:** yeah
147. **Sam:** [Sean?
148. **Gaz:** [actually I didn't take my country one [[either
149. **Sam:** [[I'll use a hero point to put myself first in the order
150. **Gaz:** I couldn't find the ah- [xxx
151. **Sam:** [or reroll
152. **Jacob:**[[or redo it
153. **Sean:** [[xxx no use can just seize it if you've got a hero point
154. **Sam:** seize initiative with a hero point
155. **Jacob:** alright
156. **Sam:** that'll be three
157. **Jacob:** alright, I've gotta roll then
158. **Sam:** alright
159. **Jacob:** oh three hehe ten
160. **Sean:** ten for Jacob... um just missing Phil
161. **Pete:** xxx? oh

162. **Jacob:** it's alright he'll be back soon
163. **Gaz:** I'm gonna, I'll do it for him... twenty seven! Awesome all you fuckwits
164. **Jacob:** stick it in
165. **Gaz:** sorry I was just dirty xxx
166. **Jacob:** stick it in your eye
167. **Phil:** who you doing? xxx me?
168. **Gaz:** yeah
169. **Phil:** that wasn't very nice Gaz
170. **Jacob:** he isn't a nice [person
171. **Sam:** [in your thirties for <u>years</u>
172. **Phil:** initiative with the guy?
173. **Jacob:** yep
174. **Gaz:** I did roll nineteen for ya
175. **Phil:** is he gonna fight back?
176. **Sean:** well either way ((mumble))
177. **Jacob:** we can't [xxx for ya
178. **Gaz:** [I rolled a nineteen for ya
179. **Sean:** He reacts as soon as Sam starts casting
180. ((pause))
181. **Phil:** but he must be surprised
182. **Gaz:** yeah, I was when the fuckin xxx
183. **Sam:** better than [[xxx
184. **Gaz:** [[I tried to fuck him a new arsehole
185. **Sean:** tapestries as opposed to parties of armed adventurers are less likely [to attack
186. **Gaz:** [friendly, who had just removed twen- <u>thirty thousand</u> soldiers for him
187. **Sean:** and monks aren't dangerous at all @@
188. **Gaz:** it showed we were friendly
189. **Sean:** @@@@@
190. **Phil:** we don't even have a scratch on us
191. **Sean:** that's right!
192. **Sam:** we didn't say we killed them, we didn't say we killed them we just said we got rid of them
193. ((pause))
194. **Gaz:** yeah
195. ((Pause))
196. **Sam:** we just robbed [church
197. **Gaz:** [well technically we never [[got rid of them
198. **Sam:** [[we created them, oh yes we did we got rid of them we forgot about them
199. ((pause))
200. **Sean:** ah what'd you get Phil?
201. **Phil:** seven
202. **Sean:** seven
203. **Sam:** @@ loser
204. **Jacob:** @ Pete

205. **Sean:** Sam has initiative as he spent a hero point
206. **Sam:** cast glitter dust on him
207. **Sean:** glitter dust, what's your save?
208. **Sam:** ah save is
209. **Phil:** does he get a save for glitter dust?
210. **Sam:** he does, he gets a save for the blindness
211. **Sean:** you can't avoid the glitter dust
212. **Sam:** you can't avoid the- no. Just a second... nineteen
213. ((dice roll))
214. **Sean:** yep that'll do it
215. **Sam:** but he's still now outlined
216. **Sean:** oh yeah you can certainly see him
217. **Gaz:** where is he blee blip?
218. **Sean:** um where are you guys?
219. **Sam:** I'd assume we'd be back, near the back in line here or out there
220. **Phil:** Where was he?
221. **Sean:** you were looking at the tapestry are you or the...
222. **Sam:** We near the tape[stry?
223. **Phil:** [we're in a big room are we?
224. **Sean:** yeah we'll say you're in a big room it's a bit easier
225. **Gaz:** yep
226. **Sam:** Something like that. I would have probably would have been close to the front
227. **Gaz:** oh, yeah... I see we've positioned ourselves to an area that was-
228. **Pete:** so we're relatively close to him
229. **Sam:** yes
230. **Gaz:** yeah
231. ((pause))
232. **Jacob:** has everyone seen Sherlock Holmes?
233. all: yep
234. **Sam:** yeah, it's really good
235. **Jacob:** ah
236. **Pete:** it's one of ours... one of villages
237. **Phil:** [The only criticism I have of that movie is just once, his logic should have failed him
238. **Sam:** [regardless it was still pretty good
239. **Pete:** yeah
240. **Phil:** would have been funny. It's an opportunity missed
241. **Pete:** yeah [specially c-
242. **Phil:** [it's about when a guy plans a fight sequence out in his head
243. **Pete:** yeah there's no way [[you can do that
244. **Phil:** [[I was waiting for it one time where he goes hup hup hup and it doesn't work
245. **Pete:** yeah
246. ((pause))
247. **Gaz:** awesome

248. **Sean:** he says hmm, bother
249. **Gaz:** he says that after Sam
250. **Sean:** he does
251. ((pause))
252. **Sam:** so whose turn's next was [it him?
253. **Pete:** [you glitter dusted him?
254. **Phil:** glitter dusted him in
255. **Pete:** so who's next? Him?
256. **Phil:** yep
257. **Sean:** yep... he retaliates with confloosen bloing, gets all of [you
258. **Pete:** [stifle spell
259. **Sean:** ha?
260. **Pete:** stifle spell
261. **Sean:** is that, that's reaction?
262. **Pete:** immediate action
263. **Sean:** ch chchchchch=
264. **Sam:** fuck!
265. **Sean:** can you do that if you still flat footed
266. **Pete:** I dunno
267. **Sean:** yeah, I don't know either actually @@
268. **Pete:** immediate action
269. **Gaz:** so he won initiative Sam just got the shot off
270. **Sam:** No I... he won initiative but I... won, cause, I basically spent a hero point
271. **Jacob:** He spent a hero point
272. **Gaz:** oh okay
273. **Sean:** Sam used a hero point
274. **Sam:** I used a hero point so I go one in front of him
275. **Sean:** yep so Sam just beats everybody with a hero point
276. **Phil:** I think he was ((end file))

Appendix 2: XML Coded Sample for Analysis

Coded for Reference Form

Susan: <Personal_Pronoun>I'll </Personal_Pronoun>get that!

Tim: <Person_Deixis>Ø</Person_Deixis> Enter! **<definite_descripion>Good sir</definite_description>**!

Mike: It's **<definite_descripion>a very tired slightly sweaty slightly dirty looking <definite_descripion>one of <definite_descripion>the ah working girls</definite_description></definite_description></definite_description>**. **<indefinite>Who</indefinite>** has lugged two pallets up the stairs

Susan: Oh **<Person_Deixis>Ø</Person_Deixis>** thank **<Person_Deixis>you</Person_Deixis>**, here **<Person_Deixis>Ø</Person_Deixis>** let **<Personal_Pronoun>me </Personal_Pronoun>**take those

Mike: <Personal_Pronoun>She </Personal_Pronoun>passes **<Person_Deixis>you</Person_Deixis>** one and **<Person_Deixis>Ø</Person_Deixis>** starts- drags the other one in straw pallets are heavy... And **<Person_Deixis>Ø</Person_Deixis>** puts them on the floor, um gah **<Person_Deixis>Ø</Person_Deixis>** says **<Personal_Pronoun>I'll</Personal_Pronoun>**[be back in-

Susan: [**<Person_Deixis>You</Person_Deixis>** gonna make **<Personal_Pronoun>me</Personal_Pronoun>**make a strength check cause **<Personal_Pronoun>I'm </Personal_Pronoun>**on strength eight

Mike: Sure

Alan: Is **<indefinite>anyone</indefinite>** [strong at all

Mike: [Actually what's **<Person_Deixis>your</Person_Deixis>**- just **<Person_Deixis>your</Person_Deixis>** carrying capacity. What's **<Person_Deixis>your</Person_Deixis>** max?

Susan: Ah **<Personal_Pronoun>my </Personal_Pronoun>**carrying capacity knacks [is

Eleanor: [**<PERSONAL_PRONOUN>I </PERSONAL_PRONOUN>**dunno **<definite_descripion>man</definite_description>**, probably

Susan: um basic lift is thirteen

Mike: Yeah **<Person_Deixis>you</Person_Deixis>** can lift [that

Eleanor: [**<PERSONAL_PRONOUN>I </PERSONAL_PRONOUN>**mean **<Person_Deixis>he's</Person_Deixis>** a twelve

Susan: Okay fair enough

Coded for Entity

Susan: <context_alius>I'll</context_alius> get that!

Tim: Enter! Good sir!

Mike: <context_cogitatio>It's</context_cogitatio> <context_cogitatio>a very tired slightly sweaty slightly dirty looking one of the ah working girls</context_cogitatio>. <context_cogitatio>Who has lugged two pallets up the stairs</context_cogitatio>

Susan: Oh thank **<context_cogitatio>you</context_cogitatio>**, here let **<context_alius>me</context_alius>** take those

Mike: **<context_cogitatio>She</context_cogitatio>** passes **<context_cogitatio>you</context_cogitatio>** one and starts- drags the other one **<context_cogitatio>in</context_cogitatio>** straw pallets are heavy... And puts them **<context_cogitatio>on the floor</context_cogitatio>**, um gah says **<context_alius>I'll</context_alius>** [be back in-

Susan: [**<context_tabula>You</context_tabula>** gonna make **<context_tabula>me</context_tabula>** make a strength check cause **<context_ludus>I'm</context_ludus>** on strength eight

Mike: Sure

Alan: Is **<context_ludus><context_cogitatio>anyone</context_cogitatio></context_ludus>** [strong at all

Mike: [Actually what's **<context_ludus>your</context_ludus>**- just **<context_ludus>your</context_ludus>** carrying capacity. What's **<context_ludus>your</context_ludus>** max?

Susan: Ah **<context_ludus>my</context_ludus>** carrying capacity knacks [is

Eleanor: [**<context_verum>I</context_verum>** dunno man, probably

Susan: um basic lift is thirteen

Mike: Yeah **<context_cogitatio>you</context_cogitatio>** can lift [that

Eleanor: [**<context_verum>I</context_verum>** mean **<context_ludus>he's</context_ludus>** a twelve

Susan: Okay fair enough

Appendix 3: External Test Samples

Group 1 Test

Pete: nah round after the first you can use a move action to redirect weapon

Gaz: oh that's Jacob!

Phil: no that's the monster

Gaz: that's the monster. Once again.

Jacob: What does he look like by the way?

Gaz: he looks like some dude now stop playing with your ball

Sean: yeah... human

Jacob: he looks human?

Sean: yeah

Phil: @@@ pretty accurate, you've gotta give me that

Sean: At three caster levels [((mumble))

Gaz: [was it there?

Phil: yeah, doesn't matter it was where we started. How'd we go at hitting me from off the map

Sean: ((mumbling)) [blah blah blah

Gaz: [which one are you?

Phil: I'm the one with the sword pointing above his head

Pete: each round there are from [your turn

Gaz: [off the map

Pete: it strikes the opponent you designate starting with one attack in the round the spell is cast and continuing each round [thereafter, on your turn

Phil: [@@@@@

Sean: yep, okay

Gaz: thank you Phillip

Pete: so it's not like you can tell it to hit it on his turn

Sean: no, no that's right so it can't you can't do anything special with the sword you can just keep smacking Sam with it

Sam: yep

Gaz: oi, so you got four days off [now

Pete: [you get one save don't you not every [[round?

Sean: [[y=eah I don’t think so it’s just an attack roll

Phil: I got Monday

Sam: No, it's not saving throw

Gaz: four day weekend. [You people you people

Phil: [But what I was trying to say Gaz, what were you doing this weekend when I was working Friday Saturday Sunday

Gaz: I worked Sunday morning

Sean: oosh smacks you with his spiritual, something @

Pete: You haven’t got spell resistance Sam?

Sam: No, I don’t

Sean: What are you at?

Sam: twenty [two

Phil: [I got- I work an average of forty-two hours a week

Sean: ((mumble))

Gaz: that’s because you don’t [do-

Jacob: [so do I

Phil: hey?

Jacob: so do I

Sean: He doe=s

Phil: Oh I wasn’t criticising you I was criticising Gaz

Sean: eight damage to you

Sam: yep no worries

Phil: He goes

Sean: [Only casts on you cause xxx kills you @

Phil: He says oh you get a four day weekend every weekend well considering I work two of them, that’s probably rarely happened

Sam: Sean, unless I get disintegrate

Group 2 Test

Alan: Last Airbender? Avatar last Airbender no?

Mike: Watch it

Susan: [I haven't watched it in ages

Tim: [We do this to you

Mike: It's from my favourite episode, the tales of Basing Sai

Alan: I love the Heiro one of that

Mike: Yes

Alan: It's so, no!

Mike: Susan and me are just looking at each other on the verge of tears

Susan: Yeah

Alan: And I'm xxx

Susan: That's why he's so nice

Alan: I love Heiro

Susan: He's trying to help people... Anyway... Sads over sads over, @@ anyway at the end of this epic which just happens to be a romantic tragedy, Eirra is in tears. And um, you know sobbing in the front row and she just stands up to applaud etcetera excreta

Mike: How much has she had to drink at this point

Susan: Oh she'd had a flagon or two

Mike: Isn't that enough?

Susan: Yeah. More than enough in fact... yeah pretty much.. no no no she's she's standing up crying applauding the um poet. <teary>That was so wonderful<teary> she says in Heiran @. To the man

Mike: Well <x>you have<x> white hair so you know, not quite unexpected

Susan: That is true... but I do have an accent

Mike: hmm hmm

Susan: Does he comment?

Mike: Um, the crowd is a little loud for him to pick it up

Susan: Okay fair enough @@@ Alright then, all of two point five seconds later Eirra's eyes are dry, she's smiling and looking for the next adventure, come on Fred!

Eleanor: @@@

Susan: @@@

Eleanor: Very surprised

Mike: Are you guys planning on staying up the entire night

Susan: No she'll go- she will probably trot off to bed, I dunno, nyaish. Probably an hour or an hour and a half before midnight

Mike: Okay, cause it is already a couple of hours after sundown

Susan: Mmm, okay, in that case, you know, we'll probably trawl a little bit more and then go to bed

Eleanor: See if we can find [xxx

Alan: [tra la la la la

Susan: Pretty much

Mike: Alrighty

((long pause))

Susan: Actually I'm going to see if anybody I know is like.. like you know some of the people I might have gotten in trouble with in past years

Mike: It's a big city

Susan: It's a big city? Fair enough

Alan: ((western accent)) It's a big city darlin'

Appendix 4: Participant Documents

Invitation to participate

Note: Changes in the focus of the project were made after data was collected. Changes to the focus were communicated to the group through their Game Masters and participants were given the opportunity to withdraw. None of the participants withdrew. The comparison element was removed from the project as permission could not be obtained from the relevant stakeholders for the use of audio commentaries.

Roleplayers Required for Research

Roleplaying groups are required for a linguistics study investigating the in-character/out of character change and linguistic indicators of that change, comparing roleplayers to actors in an audio commentary. The research involves recordings of typical roleplaying sessions of multiple groups. This may be audio onle, or an audio-visual recording, depending on the participants' willingness. All names and identifying remarks will be changed to protect your privacy. You will be asked to fill in a short questionnaire of your gaming background and demographic information.

Participants must be over 18 years.

You will be provided with a summary of your group's analysis results, and a copy of the thesis can be provided on request after submission and acceptance. The researcher will be present for the beginning and end of the recording, but will not participate or interrupt your game; they will leave the room where possible.

Research is toward a PhD in Linguistics through Monash University. The primary research is Catherine Cook, under the supervision of Dr Simon Musgrave and Dr Alice Gaby.

If you are interested in participating, please return this form through [Game Master]:

Number of Players: ___ Males: ___ Females: ___

Game being played: _____

Campaign length so far: _____

Pre-written module: _____

I am willing to be: Audio taped ( ) Videotaped ( ) Have only the table/miniatures videod ( )

No videotaping will be done unless all participants agree to it

Thank you for your help,

Catherine

Questionnaire

Name: _____

Email: (for research-related contact only) _____ or specify only through nominated contact (nominated by group)

Any nicknames not derived directly from your own name: _____

Gender: _____

Game played & GM: _____

Character's name/s: _____

Race/class: _____

Do you use miniatures or other character representations, including whiteboard marking? Y/N

If so, describe you miniature/ marker: _____

Age: _____

Years of gaming experience: _____

Education level: _____

Occupation: _____

State and Country of primary language learning (between 3 and 12 years old):

_____

Any acting experience? (Y/N) If so, specify film/ theatre/ television/ drama class

Explanatory Statement

Title: Linguistic Expression of Multi-Entity Shift: A Comparative Study

This information sheet is for you to keep.

My name is Catherine Cook and I am conducting a research project with Dr Simon Musgrave a lecturer in the Department of Languages and Linguistics towards a PhD at Monash University. This means that I will be writing a thesis which is equivalent to a 300 page book.

Why was this particular group chosen as participants?
Groups were chosen to participate on a volunteer basis. Roleplayers were chosen in particular because of the constant in and out of character changing. I have tried to include groups with age and gender equivalence to the Lord of the Rings cast.

The aim/purpose of the research

The aim of this study is to investigate the use of multiple roles and mental worlds, and how that use manifests in language.
I am conducting this research to find out if roleplayers actively playing the characters use language and role differently than actors in an audio-commentary context.

Possible benefits

This study will help to better understand the in- and out- of character change and the context and methods with which it is used. It may, therefore, also benefit the acting profession and the gaming industry by providing more detailed information on the character vs self mindset. There is also significance to role changes in everyday life.

What does the research involve?

The study involves recording of one or more gaming sessions, either audio-only, video of the table/ miniatures (with as little participant images as possible) or full-table video recording, depending on your group's willingness as a whole. **((non-present groups)) Recordings will be conducted by a member of your own group with a recording device placed in a place that will not obstruct your game in any way. **((present groups)) Recordings will be conducted by myself using a recording device placed where it will not obstruct your session in any way. I will not participate or interrupt your game in any way. Where possible I will leave the recording device with you and return at intervals to check on or remove the device.

There will also be a short questionnaire to determine relevant background information, including demographic and experience related questions. You may refuse to answer any of these questions.

If, due to unforseen circumstances, I may require additional data, recordings or to cancel a recording, I will contact you via e-mail or through a representative of your group as soon as I find out.

Your initial recording will require you to identify yourself vocally, visually and/or with your token/miniature if applicable. This will only be used by me for identification purposes. Instructions will be provided.

How much time will the research take?
The duration of the recording aspects of the research will be as short as possible. I will require approximately 30 hours of data spread over multiple groups. The amount of data collected from your group will depend on permissions, accessibility and the types of groups involved.

Inconvenience/discomfort

Research will be conducted via observation only. I will be recording only your typical gaming sessions and not asking you to perform any tasks out of the ordinary. The first three minutes of the recording will be deleted to avoid any recording taint and to allow you time to get comfortable with the recording process. During video recording, if you become uncomfortable with being on camera you may say so and move out of view. The questionnaire you have been asked to complete should take no more than five minutes of your time before the game itself begins.

Can I withdraw from the research?

Being in this study is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may only withdraw during the recording process or within 1 year of recording to allow for further data to be arranged. You may also withdraw upon sight of the transcription- however this may take several years to arrive. A copy of the transcription will be provided for you to check and you may chose to remove any utterances you do not wish to be openly published, however they may be required for any quantative analysis taken.

Confidentiality

To protect your privacy, a new name will be assigned to you, but not your character. This name will have the same gender, ethnicity, and basic syllable and nicknaming structure as your own to allow for transcription. E.g. the name Samuel can become Daniel, allowing for Sam/Dan, Sammy/ Danny. This also applies to surnames if mentioned. Any nicknames not derived from your own name (Sam/ Jonesy) will be used as spoken, as they are less likely to be easily identified.
Any identifying information on you consent form or questionnaire will only be accessible to myself.
Any mention of home addresses, specific places of work or non-participant family will be omitted or replaced with coded markers- eg [Bob's home], [Bob's sister] or [Bob's work]. Suburbs only ("down in Berwick", non-name identifiers ("my mum") or non-specific workplaces ("At Domino's") will not be omitted.
All recording will be accessible only to the researcher. The initial tapes will be wiped upon file transfer. The digital files will be password protected and kept on a portable harddrive belonging to myself during transcription, and burnt to DVD and stored locked up on campus afterwards. Transcriptions will be password protected digitally and any hard copies will be destroyed upon completion of the project.

Snippets of recordings may be used in presentations relating to the project, but these will be chosen to have no identifying material or will have identifying material removed.

Storage of data
Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Results
If you would like to be informed of the aggregate research finding, please contact Catherine [redacted] . You may request a copy of the Thesis upon completion. If you requested it on your questionnaire, a summary of findings from your group will be provided.

If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:	If you have a complaint concerning the manner in which this research is being conducted, please contact:
Dr Simon Musgrave Linguistics Program Building 11 Room W409 Monash University VIC 3800 Tel: +61 3 9905 8234 Fax: +61 3 9905 5437 Email: Simon.Musgrave@adm.monash.edu.au	Executive Officer, Human Research Ethics Monash University Human Research Ethics Committee (MUHREC) Building 3e Room 111 Research Office Monash University VIC 3800 Project Number: CF09/3570 - 2009001929 Tel: +61 3 9905 2052 Fax: +61 3 9905 3831 Email: muhrec@adm.monash.edu.au IMORTANT: For projects in non-English speaking countries, a local person who is also fluent in English must be nominated to receive complaints and pass them onto SCERH. Please replace above section (in blue) with the details of that person.

Thank you.

Catherine Cook

Appendix 5: Macros for Coding

```
Sub RealWorldTag()
'
' RealWorldTag Macro
    AddDel "<occ_real>", "</occ_real>"
End Sub


 Private Sub AddDel(B$, a$)
    Dim strSel$
    strSel$ = WordBasic.[Selection$]()
    If WordBasic.[Right$](strSel$, 1) = " " Then
        strSel$ = WordBasic.[Left$](strSel$, Len(strSel$) - 1)
    End If
    strSel$ = B$ + strSel$ + a$
    WordBasic.Insert strSel$
End Sub
Sub TableWorldTag()
'
' TableWorldTag Macro
    AddDel "<occ_table>", "</occ_table>"
End Sub
Sub FictionalWorldTag()
'
' FictionalWorldTag Macro
    AddDel "<occ_fiction>", "</occ_fiction>"
End Sub
Sub PlayerTag()
'
' PlayerTag Macro
```

```
    AddDel "<ref_play>", "</ref_play>"
End Sub
Sub SelfTag()
'
' SelfTag Macro
    AddDel "<ref_self>", "</ref_self>"
End Sub
Sub CharacterTag()
'
' CharacterTag Macro
    AddDel "<ref_Char>", "</ref_Char>"
End Sub
Sub PersonDeixisTag()
'
' PersonDeixisTag Macro
    AddDel "<Person_Deixis>", "</Person_Deixis>"
End Sub
Sub SpaceDeixisTag()
'
' SpaceDeixisTag Macro
    AddDel "<Space_Deixis>", "</Space_Deixis>"
End Sub
Sub ProperNameTag()
'
' ProperNameTag Macro
    AddDel "<Proper_Name>", "</Proper_Name>"
End Sub
Sub DefinateDescriptionTag()
'
' DefiniteDescriptionTag Macro
    AddDel "<definite_descripion>", "</definite_description>"
```

```
End Sub
Sub DemonstrativeTag()
'
' DemonstrativeTag Macro
    AddDel "<demonstrative>", "</demonstrative>"
End Sub
Sub CardinalDirectionTag()
'
' CardinalDirectionTag Macro
    AddDel "<cardinal>", "</cardinal>"
End Sub
Sub RelativeDirectionTag()
'
' RelativeTag Macro
    AddDel "<relative>", "</relative>"
End Sub
Sub TableRefTag()
'
' TableRefTag Macro
    AddDel "<ref_table>", "</ref_table>"
End Sub
Sub FictionalRefTag()
'
' FictionalRefTag Macro
    AddDel "<ref_fiction>", "</ref_fiction>"
End Sub
Sub RealRefTag()
'
' RealRefTag Macro
    AddDel "<ref_real>", "</ref_real>"
End Sub
```

```
Sub OtherTag()
'
' New Tag
Dim MyInput As String
   MyInput = InputBox("Enter Tag in <YourTag>(one word only, include <>) Format", "")
   AddDel MyInput, MyInput
   Selection.MoveLeft Unit:=wdWord, Count:=3
   Application.Run ("EndTag")

End Sub

Sub EndTag()
'
'Put a slash at the end of a query tag
   Selection.MoveRight Unit:=wdCharacter, Count:=1
   Selection.TypeText Text:="/"
   Selection.EndKey Unit:=wdLine
End Sub
```

Appendix 6: Participant Information

Group 1

NOTE: Group 1's character names are lister here as written, however the group does not use these name in-game and, as I was advised by their GM, they are likely joke names. As this group played 2 games, both characters are listed separated by a slash (/)

Sean

Gender: Male

Role: Game Master/ Ranger

Age at recording: 36

Occupation: Research scientist

Highest education achieved: PhD (Science)

Gaming experience: 26 years

Phil

No demographic information was disclosed.

Gaz

Gender: Male

Role: (no answer)

Age at recording: 42

Occupation: Network admin

Highest education achieved: (no answer)

Gaming experience: 24 years

Jacob

Gender: Male

Role: "Lars Compstomper" Human fighter / Rogue

Age at recording: 37

Occupation: Purchasing officer

Highest education achieved: Year 10

Gaming experience: 20 years

Sam

Gender: Male

Role: Human Sorcerer “Tauni”

Age at recording: 39

Occupation: Accountant

Highest education achieved: University degree

Gaming experience: 23 years

Pete

Gender: Male

Role: Half-Orc Rogue “Chuck”/ Paladin

Age at recording: 49

Occupation: Accountant

Highest education achieved: Masters (MBA)

Gaming experience: 15 years

Bill

Gender: Male

Role: Half-Elven Alchemist “Kah-Boo-Mah”

Age at recording: 40

Occupation: Engineer

Highest education achieved: PhD (Engineering)

Gaming experience: Approx. 30 years

Note: Grew up in NSW

Group 2

Mike

Gender: Male

Role: Game Master

Age at recording: 23

Occupation: Student

Highest education achieved: University

Gaming experience: 8 years

Susan

Gender: Female

Role: Eirra Lindgren the Human Windchaser

Age at recording: 21

Occupation: Student

Highest education achieved: "3rd 2nd year of Uni"

Gaming experience: 2 years

Note: Has theatre experience

Eleanor

Gender: Female

Role: Fred the Moonkin (Spider shapeshifter)

Age at recording: 18

Occupation: Student

Highest education achieved: First year university

Gaming experience: New to gaming

Alan

Gender: Male

Role: Tennant the Human Manaweaver

Age at recording: 22

Occupation: Call centre worker

Highest education achieved: "Some university"

Gaming experience: 1.5 years

Note: Has theatre experience

Tim

Gender: Male

Role: Varric the Dwarf

Age at recording: 19

Occupation: Student

Highest education achieved: University

Gaming experience: New to gaming

Edward

Gender: Male

Role: Rex the Rai'kur

Age at recording: 24

Occupation: Lighting engineer

Highest education achieved: "University"

Gaming experience: Beginner