"Once Upon a Crime": Young and Older Adult Eyewitnesses' Use of Narrative in Testimony

by

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B.A.H., Queen's University, 1999

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

in the Department of Psychology

We accept this thesis as conforming to the required standard

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ABSTRACT

This thesis examines differences in the manner in which older and young adult witnesses present information about a crime and whether these differences affect assessments of the witnesses' credibility. Older and young adult witnesses' crime recollections were analyzed to determine whether some witnesses organize their testimonies in a more cohesive, narrative-like fashion than others, especially as a function of age. First, an operational definition of the features of narrative was formulated. Two independent raters analyzed the testimonies to assess their narrative features. Inter-rater reliability analyses indicated that the operational definition was reliable. Then, two principal components analyses examined how the narrative features were related to one another. Finally, University students acting as mock jurors assessed the witnesses' credibility. Older adults were more likely than young adults to use several narrative features in recounting the crime they witnessed. Witnesses who used few Sequencing features and Elaborations were perceived as most credible. Implications for future research in aging and narrative are discussed.

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Table of Contents

List of Tables

Page

List of Figures

Page

Acknowledgements

This thesis was funded by a research award from the Sara Spencer Foundation of Victoria B.C. to Meredith Allison.

First and foremost, I thank Janet Bavelas, Elizabeth Brimacombe, and Helena Kadlec for their tremendous help with this thesis. Thank you very much for the time you spent with me and for your superb advice.

I thank John Price for his excellent work on the inter-rater reliability analyses. I thank Trina Holt, Stephanie Sim, Christine Schwartz and Heather Price for their help with transcription and data collection. I also thank my lab-mates Lynn Garrioch and Sandy Jung for their valuable advice.

I would like to thank several family members: Dianne, Sam, Lindsay, John, Heather, and Belinda for their support, both financial and otherwise. Finally, I would like to thank my friends from Victoria, Montreal and Queen's for their encouragement.

Dedication

I would like to dedicate this thesis to my grandparents, Graham, Mary, Robert and Olive, because I like to listen to their stories.

"Once Upon a Crime": Young and Older Adult Eyewitnesses' Use of Narrative in Testimony

An eyewitness to a crime must fulfill two important tasks: remember specific crime details and convey those details in a clear, credible manner. Witnesses' presentation of crime information (*how* the information is stated, not just *what* is stated), can affect jurors' perceptions of them. For example, a witness who is confident, forceful and consistent can be perceived as highly credible (e.g., Ross, Dunning, Toglia, & Ceci, 1990). Young and older adults have different speaking styles, and these differences may affect the way in which police officers, judges, lawyers and jurors perceive them.

While there is a wealth of research on the eyewitness abilities and perceived credibility of children and young adults, there is a dearth of research on older adult witnesses. This is somewhat surprising given that Canada's population is aging, and as the number of older adults increases, the likelihood of a senior viewing a crime or being a victim of a crime will also increase (Yarmey, 1996). Adults aged 65 years and over make up a substantial proportion (18.07%) of the population in Victoria's Capital Region District[1] (CRD, 1996 Census). The presence of so many older adults in our community has several legal ramifications. The legal system may not treat older adults in the same way it treats younger individuals (e.g., Yarmey, 1996). For example, it is possible that the age of the witness could affect whether the police investigate the crime, whether prosecutors decide to try the case, and jurors' assessments of the witness' testimony (Yarmey, 1984). Thus, the increasing presence of older adults in the legal system

[1] The proportion of older adults aged 65 and older is 21.43% in the City of Victoria (CRD, 1996 Census). At the provincial and national levels, older adults in this age group make up only 13.3% and 12.61%, respectively, of the general population (Statistics Canada, Population by Age Group 2001). However, over

warrants attention to both their abilities as witnesses, and to others' perceptions of them.

Research on older adults' eyewitness testimony has only recently begun (e.g., Brimacombe, Quinton, Nance, & Garrioch, 1997). Studies of older adult witnesses have investigated differences between older and younger adults in terms of their memories for perpetrators, crime details, and their perceived credibility in testifying. In general, studies have found that older adults provide less accurate testimonies than young adults (Brimacombe et. al, 1997; List, 1986; Yarmey, 1984; Yarmey & Kent, 1980). In terms of free recall, older adults tend to provide fewer details and they tend to make more errors than younger adults; older adults are more likely to make errors of omission and of commission (e.g., Searcy, Bartlett, & Memon, 1999). That is, older adults may forget to include crime-relevant details, and they may include incorrect details in their testimonies. Older adults are also more suggestible to misinformation than younger adults, possibly because they have more difficulty monitoring the sources of their memories (Cohen & Faulkner, 1989; Lane & Villa, 2000).

The Perceived Credibility of Older Adult Witnesses

Issues of testimony accuracy aside, another important area in eyewitness testimony research is the perceived credibility of witnesses[2]. While it is important to have accurate witness testimony, it is also important that the witness is perceived as credible. That is, the witness must be able to convince jurors of his or her competence as a witness. Research on perceptions of older adult witnesses has not yielded consisted results, as some studies have found that older adult witnesses were viewed positively (e.g., Yarmey,

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the next two decades, the proportion older adults in Canada is projected to increase even more (21.42% in 2026, Statistics Canada, Population Projections for 2026).

1984), while other studies have found them viewed negatively (e.g., Ross et al., 1990).

One reason for this lack of agreement in the literature is that older adults' perceived credibility has been investigated using different methods. Some researchers have assessed attitudes towards older adult witnesses using questionnaires (e.g., Yarmey, 1984). These questionnaires asked participants to identify characteristics of older adult witnesses (e.g., passive-active, honest-dishonest) (Yarmey, 1984). Other researchers have modified these credibility questionnaires to allow for comparisons between young and older adult witnesses (e.g., Ross et al., 1990). In other studies, researchers have departed from the survey methodology and have designed more ecologically valid methods of assessing perceptions of witness credibility. For example, participant-jurors in Ross et al.'s investigation assessed the credibility of a child, young adult and older adult actors playing the part of witnesses in a simulated court trial. More recently, participant-jurors have assessed the credibility of videotaped and transcribed interviews of authentic young and older adult witnesses to a simulated crime (Brimacombe et al., 1997; Garrioch, Brimacombe, Allison, & Jung, 2001). These studies are discussed in more detail below, but they present conflicting results.

Attitudes Towards Older Adult Witnesses: Questionnaire Studies. Yarmey (1984) asked lawyers, police officers, probation officers, members of the general public, and senior citizens to evaluate the general category of older adults as witnesses. These five groups of people were asked to rate older adult witnesses in terms of their perceived activity (passive-active, fast-slow, sharp-dull), potency (strong-weak, large-small, rugged-delicate), understandability (mysterious-understandable, predictable-

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[2] I use the terms "testimony accuracy" to refer to the *actual* accuracy of witnesses (e.g., their cognitive ability, or the proportion of correct statements provided). I use the terms "perceived accuracy" to refer to

unpredictable, simple-complicated), and evaluative worth (good-bad, honest-dishonest, worthless-valuable).

All groups of people generally held positive attitudes towards older adult witnesses (Yarmey, 1984). Senior citizens were the most positive towards the older witnesses; seniors rated the older adult witnesses as potent, active and understandable. Police officers, lawyers and probation officers held similar positive views of older adult witnesses' potency, activity and understandability, but police officers rated the older witnesses as having higher evaluative worth. In contrast to the other four groups, members of the general public rated older witnesses as less potent and less active, but their ratings of understandability and evaluative worth were similar to the police officers' positive evaluations. Overall, the results of this questionnaire study suggest that members of the general public hold positive preconceived notions of the abilities of older adult witnesses.

In another questionnaire study, Ross et al. (1990) asked participant-jurors to rate the average 6, 8, 21, and 74 year-old witness in terms of testimony accuracy, susceptibility to suggestion, honesty, and to rate how much weight the witnesses' testimony should be given. Participant-jurors were also asked if there is an age at which people are too old to provide trustworthy testimony.

In contrast to the Yarmey (1984), Ross et al. (1990) found that the hypothetical older adult witness was viewed more negatively than the younger adult witness. Participants rated the older adult as being less able to render accurate testimony, as more suggestible, and participants felt this witness' testimony should be given less weight. The older adult was viewed positively on one dimension: honesty. The older adult was rated

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participant-jurors' *assessments* of the witnesses' accuracy.

as most honest when compared to a young adult or a child. Thirty-four percent of the sample stated that there was an age of incompetency: 75.3 years of age, while the remaining 66% stated that there was "not an age at which people become too old to be trusted" (Ross et al., p. 15).

In reconciling the findings of Yarmey (1984) and Ross et al. (1990), it must be noted that participants in the Ross et al. study were asked to consider witnesses from a larger age-range (6 years to 74 years). These participants were likely comparing the abilities of older adult witnesses to the abilities of young adults and children. Participants in the Yarmey (1984) study were not asked to compare the abilities of older adults with any other age group. Although the Ross et al. findings are in contrast to the Yarmey (1984) findings, they are in line with other studies on perceptions of older adults' abilities. Other researchers have noted that older adults tend to be perceived as forgetful and unproductive (Lutsky, 1980, as cited in Yarmey, 1996), and they are judged severely for their memory failures (Erber & Rothberg, 1991, as cited in Yarmey, 1996).

Assessments Using a Mock Trial Methodology. Ross et al. (1990) suggested that while participant-jurors may hold negative stereotypes towards older adult witnesses in general, seeing an actual witness testify could challenge or confirm these stereotypes and this, in turn, could affect credibility. Ross et al. showed a set of participant-jurors a videotaped simulated court trial in which the witness was either a child, young adult, or older adult actor. Ross et al. noted that the older adult eyewitness was perceived to be *more* credible than a young adult, but less so than a child.

These findings are in contrast to the Ross et al. (1990) questionnaire data reported above. The authors suggested that the older actor in the video did not behave in a

stereotypic older adult manner; this witness was confident and accurate in his testimony. When behaviour violates the expected, stereotypical behaviour, it is known as a "contrast effect", and when behaviour is in line with the expected stereotypical behaviour, it is known as an "assimilation effect" (Ross et al.). Contrast effects can result in positive evaluations, but assimilation effects often result in negative evaluations (Ross et al.). So even though the participant-jurors in the questionnaire study held a negative view of the hypothetical older adult witness, seeing a competent older adult on video challenged the existing stereotype and resulted in positive evaluations.

Assessments Using Authentic Witnesses. Where Ross et al. (1990) used three actors as their witnesses, Brimacombe et al. (1997) obtained samples of older (n = 23) and young (n = 46) adult participants who had viewed a crime video. The researchers chose to interview a large set of individuals in order to capture a representative sample of older and young adult witnesses. The witnesses were videotaped while responding to questions about their memories for the crime. The results indicated that older adults were significantly less accurate than the younger adults in answering questions during the interview. In another phase of the study, participant-jurors viewed the videotaped interviews and rated the witnesses' accuracy, confidence, competence, and honesty. Older adult witnesses were seen as less credible than the younger adult witnesses on all measures excluding honesty. In the final phase of the study, a new sample of participant-jurors rated the witnesses, but they were only shown transcriptions of the interviews. The age of the witness was manipulated between subjects so that some witnesses rated a transcript believing it was the testimony of an older adult when in reality it was a younger adult's testimony, and vice versa. Regardless of the ostensible age of the witness, the

testimonies of actual older adults were still rated as less credible than the testimonies of young adults, suggesting that the participant-jurors' ratings were not biased by age stereotypes. Brimacombe et al. stated that the older adults' testimony may have been discernibly weaker than the young adults' testimonies.

In a more recent study, Garrioch et al. (2001) examined the perceived credibility of older and young adult witnesses who viewed a crime video and were interviewed by either an older adult interviewer or by a young adult interviewer. While the age of the interviewer did not affect eyewitness testimony accuracy (i.e., their memory performance), the authors found an unexpected relationship between testimony accuracy and perceived credibility. Even though the older adults provided proportionately less accurate information than the young adults, the older and young adults were perceived as equally credible. The authors noted that there were several characteristic differences between the older and young adults' testimonies. The young adult witnesses tended to discuss the crime in a concise, list-like manner and to include detailed descriptions of the crime. In contrast, the older adults were more like storytellers; they not only discussed observable features, but also included subjective impressions of the thief in their testimonies. The authors noted that it was possible that the older adults' use of narrative in their testimonies positively influenced their perceived credibility, off-setting age differences in testimony accuracy.

A New Line of Research: Narrative and Credibility. Thus Garrioch et al. (2001) suggested that there may be a relationship between witness age, the use of narrative in testimony, and the perceived credibility of witnesses. This thesis is a new approach to studying the perceived credibility of witnesses. I examine this issue more closely by first

defining narrative, testing if some testimonies contain more narrative features than others, testing if there are age differences in the use of narrative features, and finally by assessing the relationship between narrative features and perceived credibility. The first step in this process is to decide what "narrative" is.

Narrative

One way to approach narrative is to consider its purpose. According to James Deese (1983), the purpose of narrative, a form of discourse, is to provide an account of an event from a human point of view. Narrative is a way of transmitting meaningful information between two parties: the narrator and the listener. Indeed, Jerome Bruner (1990) noted that stories are "instruments of social negotiation" (p. 55). Narratives are descriptions of events that serve a social purpose.

What kind of information is contained in these meaningful units of discourse? A narrative is a description of events and the relationships between events. Specifically, a narrative is a story that contains plots and characters. A narrative can describe both the external actions of the characters (behaviours) and the characters' internal thoughts, motives, emotions and goals. Bruner (1990) referred to this as the "dual landscape". He noted that stories contain events and actions in the real world and also contain mental events in the consciousness of the protagonist.

A narrative is a biased description of events. The opinion of the narrator invariably seeps into the narrative account. A narrative conveys the attitude of the narrator towards the content and the message of the narrative (Deese, 1983). Bruner (1990) noted the importance of narrative voice and stated that a narrative always involves the taking of a moral stance. Bruner stated that narrative is an appropriate vehicle for folk

or cultural psychology because

> it deals . . . with the stuff of human action and human intentionality. It mediates between the canonical world of culture and the more idiosyncratic world of beliefs, desires, and hopes. It renders the exceptional comprehensible and keeps the uncanny at bay – save as the uncanny is needed as a trope. It reiterates the norms of society without being didactic . . . It can even teach, conserve memory, or alter the past. (p. 52)

A narrative is somebody's story. It is the narrator who decides what to include in a story, what moral will be told and how it will be told; each narrative always has a distinct "*voice*".

One way that the narrator can intrude into the descriptive details in the narrative is to elaborate on details provided. *Elaborations* are statements that move beyond a general description of information in the stimulus, they are "statements that are consistent with the information in the stimulus . . . but [are] not explicitly contained therein" (Gould, Trevithick, Dixon, 1991). A narrator may express his or her opinion on events recounted, and may make inferences about those events.

A narrative can thus contain a lot of complex information, and it is the narrator who determines the narrative's content. A narrator also decides how to organize the account; another important characteristic of narrative is its *sequencing*. Bruner (1990) stated that it is possible that a narrative's "principal property is its inherent sequentiality: a narrative is composed of a unique sequence of events, mental states [and] happenings involving human beings as characters or actors" (p. 43). A narrative is not a grocery list; it contains pieces of information organized in unique and meaningful ways. A narrative

organizes a series of related events in sequence (often temporal) such that the end result is a coherent whole.

Coherent sequences are necessary because the narrator uses narrative to conjure a picture of the events in the listener (Deese, 1978). Another way to keep narrative coherent is through the use of *structure*: a narrative is a story with a clear beginning, middle, and end. Indeed, Deese (1978) stated that "coherent discourse tends toward a strong hierarchy for one simple, functional reason. It places the minimum burden on the memory of both the speaker and the hearer" (p. 319). While constructing narrative, the narrator must consider its purpose and shape the account so that it is easy to tell and is understood by the listener.

Although the narrator has power over the story in that he or she determines the content and organization of the information, there is one external constraint: accuracy (Husbands, 1996). A narrator can re-shape and interpret events of the past but must still consider accuracy. While some narrative forms must focus on accuracy (e.g., historical narratives), Bruner (1990) noted that accuracy is not a necessary component of all narrative. He stated that a narrative can be composed of real or imaginary features and will not lose its meaning. Fictional narratives, or stories, do not need to be confined by accuracy, but non-fictional narratives, as will be explored in this thesis, are somewhat constrained by accuracy.

In sum, narratives exist to convey meaning to others. Researchers have discussed narratives and have noted what elements define them (see Table 1). A narrative is a description of key events and important characters who played a role in those events. A narrator may move beyond description and convey attitudes towards the events and the

Table 1

References to Narrative Features

Feature	References
Elaboration - evaluation - characterizations	Botvin & Sutton-Smith (1977); Deese (1983); Labov (1972, as cited in Botvin & Sutton-Smith (1977); Lee (2001); Snyder & Lindstedt (1995).
Narrative Voice - role of narrator - role of listener	Deese (1978); Deese (1983); Husbands (1996); Mergler et al. (1985); Ochs (1997)
Sequence and Coherence - causal-temporal relationship	Deese (1978); Deese (1983); Juncos-Rabadan (1996); Kemper et al. (1990); Husbands (1996); Mandler (1978); Mandler & Johnson (1977); Ochs (1997); Pennington & Hastie (1988).
Structure	Botvin & Sutton-Smith (1977); Bruner (1990); Deese (1978); Deese (1983); Husbands (1996); Jackson (1996); Juncos-Rabadan (1996); Kemper et al. (1990); Kintsch (as cited in Juncos-Rabadan, 1996); Lee (2001); Mandler & Johnson (1977); Mandler (1978); Ochs (1997); Peterson & McCabe (1983); Small et al. (1999); Synder et al. (1993); Zelinski et al. (1984).

characters. A narrative is also an organized piece of information with a specific structure; it is a story with a beginning, middle, and end. The events in the story are often organized in sequence so that the narrative is coherent and understandable. Thus the narrative belongs to the narrator whose voice seeps into the narrative in the form of opinion, but the narrative also exists for the listener; narratives are meant for an audience.

Moving towards an operational definition of narrative, the following will overview empirical studies of narrative. Developmental researchers have studied narrative in children and in older adults. While many of the studies reported below concentrate on fictional and personal narratives, relevant information concerning the content and organization of narrative in general can be captured in part from these studies.

Empirical Studies of Narrative

Empirical studies of narrative have focused on narrative development in children (Botvin & Sutton-Smith, 1977; Mandler & Johnson, 1977; Peterson & McCabe, 1983; Snyder & Lindstedt, 1995; Snyder, Nathanson, & Saywitz, 1993), adults' fictional (Kemper, Rash, Kynette, & Norman, 1990) and personal narratives (Coupland & Coupland, 1995; Pratt & Robins, 1991), and adults' memory for narratives (Adams, Labouvie-Vief, Hobart, & Dorosz, 1990; Cavanaugh,1983; Gould et al., 1991; Juncos-Rabadan, 1996; Morrow, Altieri, & Leirer, 1992; Pratt, Boyes, Robins, & Manchester, 1989; Small et al., 1999; Zelinski, Light, & Gilewski, 1984). Researchers have elicited narratives from participants in several ways: by presenting participants with a written narrative then asking them to later re-tell it, or by asking participants to create their own narrative. The following section will overview research on narratives in old age.

Kemper et al. (1990) were interested in the structure of narrative in older adults. They found that the use of structure increased with age. These researchers asked participants in their 60s, 70s, and 80s to tell a story that could be told to a child. The authors adapted a method of structural analysis used by Botvin and Sutton-Smith (1977) to analyze the stories. The researchers found that the old-old adults' stories were more complex in general, but were also less cohesive.

Studies on text-based memory for narrative focus on the accuracy of participants' memories. Small et al. (1999) asked older adults to re-write a story that they had earlier read. The authors found that older adults recalled a text-based narrative less well than young-old adults. In addition, old-old and young-old adults both used an underlying story-structure in their story re-telling, but there were some decrements in story structure in the older group of participants. In another study, participants were asked to recall a story based on a picture stimulus (Cavanaugh, 1990). Again, there was an age-decrement in discourse processing; the older adults' narratives were less structured, less cohesive, but much more descriptive than younger adults' narratives. These findings are somewhat in contrast to the Kemper et al. (1990) study described above where the use of structure increased with age. However, one must note that the tasks varied between these studies. In the Kemper et al. study, participants were asked to generate their own stories, so accuracy was not an issue. In the Small et al. and Cavanaugh studies, participants were asked to retell a story, so much of the task centered on remembering the stimulus.

Another area of narrative research concerns adults' personal narratives. Pratt and Robins (1991) used Peterson and McCabe's (1983) methodology to analyze adults' personal narratives. They found that those participants with better vocabulary levels told

better stories. More so than younger or middle-aged adults, older adults told narratives in the classic, or end-at-the-high-point, pattern (as described in Peterson and McCabe). In a second phase of their study, Pratt and Robins asked a new set of participants to rate the stories for narrative quality. Pratt and Robins found that narrative quality was positively related to age; older adults' narratives were rated more highly than the other participants' narratives. The authors suggested that older adults are more specialized for narration than younger adults because of their role as storytellers.

Narrative and Credibility

This last study, which included an examination of narrative quality, brings us to the issue of credibility. Pratt and Robins (1991) found that narratives with more complete and more complex episodes were judged to be of better quality. Bennett and Feldman (1981, as cited in Jackson, 1996) noted that the plausibility of a story is important, and the confidence of the speaker and the structure of the story (the organization of story elements) were also said to impact credibility. The narrator has control over the narrative. As a consequence, the perceived credibility of the narrator can be affected by the information the narrator chooses to include and by the manner in which the narrator chooses to present that information.

The Present Study

The present study sought to examine the relationship between witness age, narrative and perceived credibility. First, an operational definition of narrative was developed. This definition identified those components that are necessary for discourse to be considered a narrative. The next step involved the analysis of eyewitness testimony for narrative features. In an earlier study, older and young adult eyewitnesses' testimonies

were videotaped. A portion of these videotaped testimonies, the witnesses' free recall of the simulated crime, was analyzed for the presence of narrative features. Finally, participant-jurors (undergraduate students) watched the free recall portion of the videotaped testimonies and assessed the witnesses' credibility.

This study attempted to answer the following questions: (1) what is narrative, (2) do older adults present crime facts in a different manner than young adults and (3) does the presence of narrative features in testimony affect credibility? I hypothesized that the older adults would use more narrative features in their testimonies than the young adults. Previous studies of older adults' story-telling abilities indicate that older adults tend to speak in a more narrative-like way than young adults (e.g., Kemper et. al, 1990). In addition, given the studies on narrative and credibility (e.g., Pratt & Robins, 1991), I hypothesized that those testimonies with more narrative features would be perceived as more credible.

Method

The Original Eyewitness Study

The testimonies of 123 participants were collected in an earlier study (Garrioch et al., 2001). In that study, 62 older adults from the Victoria community (mean age = 75.63 years, SD = 8.07) and 61 young adults from the University of Victoria (mean age = 19.68 years, SD = 2.21) viewed a five-minute simulated crime video in which a woman applying for a job stole money from another applicant's wallet.

In the next phase of the study, participants were interviewed on videotape about their memories for the video. The young and old participants were randomly assigned to either a young adult interviewer (n = 62) or an older adult interviewer (n = 61), so the

design of the study was a 2 (age of witness) x 2 (age of interviewer) factorial design. The interviewers first asked participants to recall what happened in the video and then asked direct questions about events in the video.

In the last phase of the study, a new set of participants, participant-jurors, viewed the videotaped interviews (free recall and cued recall) and evaluated the witnesses' credibility. Perceived credibility was measured using five dependent variables: perceived honesty, confidence, competence, accuracy and credibility.

The Re-Assessment of Credibility in the Present Study

In the original eyewitness study, participant-jurors evaluated the credibility of witnesses using the entire interview (free recall plus questioning) and perceived credibility was measured using five dependent variables. In the present study, participant-jurors evaluated the credibility of witnesses using only the free recall portion of the interviews, which was then analyzed for narrative features. It would have been difficult to analyze the cued recall sections for narrative features, as the participants' answers were often quite short (usually one-word answers). The original five perceived credibility measures were again collected in the present study, but nine additional measures were added, for a total of 14 dependent credibility measures (see Appendix A).

Of the original 123 videotaped testimonies, 91 videotaped testimonies were included in this portion of the analysis (21 videos were dropped from analyses because of a lack of participant consent and 11 testimonies were dropped because they were used to formulate the operational definition of narrative). There were 39 videotapes of young adult witnesses and 52 videotapes of older adult witnesses.

One hundred and eighty two first-year university students (43 men, 133 women, 6

did not specify gender, see Table 2 for descriptive statistics) participated in this portion of the study. Each testimony tape ($N = 91$) was viewed by a pair of participant-jurors who independently rated the witness' credibility on 7-point scales. The credibility ratings were then averaged across juror pairs for every dependent variable. Thus, there were 91 scores for every dependent variable.

Defining Narrative

Operational Definition of Narrative. As a starting point, I reviewed what many researchers consider to be the essential features of narrative (see Table 1): elaborations, narrative voice, sequence/coherence, and structure. To help the raters find these features, I gave specific examples (see Figure 1 and Appendix B for the complete operational definition of narrative). For *elaborations* (statements that move beyond the information contained in the stimulus), raters looked for both characterizations and situational elaborations. Raters looked for instances of *narrative voice* (explicit reference to the narrator or audience) by looking for statements denoting the role of the narrator (e.g., through the use of qualifiers and personal pronouns) or the listener (through the use of references to the listener). The *sequence and coherence* of the testimonies was also analyzed. Raters analyzed the testimonies for temporal, logical and spatial ordering, often by looking for connections between phrases and changes in verb tense. Finally, the *structure* of the testimonies was assessed by searching for story beginnings, middle/developments, and endings. I created detailed decision trees to help the raters with the analyses (see Appendix C).

Transcriptions. In order to analyze the testimonies for narrative features, raters worked with transcriptions of the free recall portion of the testimonies. That is, a

Table 2

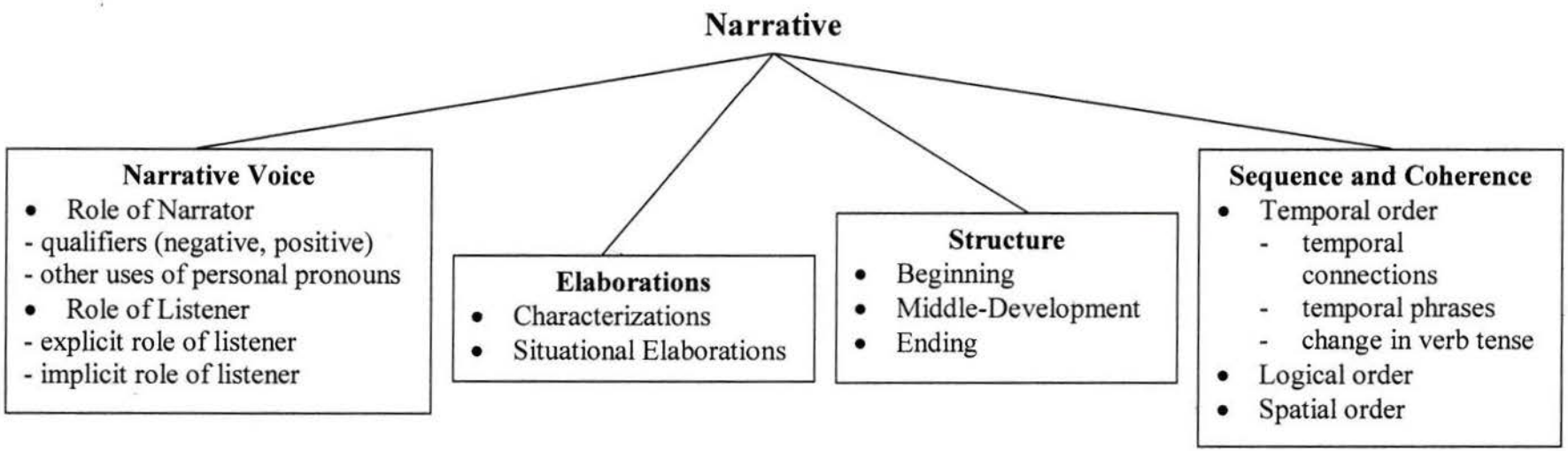
Mean Age in Years and Sample Sizes of Men and Women Participant-Jurors in the Perceived Credibility Portion of the Present Study

Gender	Mean Age in Years (*SD*)	Sample Size
Men	20.44 (*SD* = 3.84)	*n* = 43
Women	19.33 (*SD* = 2.94)	*n* = 133
Not Stated	----------	*n* = 6[a]
$\overline{X}$	19.89 (*SD* = 3.39)	*N* = 182

Note. [a]Six participants did not answer the "Gender" or "Age" questions on the questionnaire.

Figure Caption

Figure 1. The Four Features of Narrative: Narrative Voice, Elaborations, Sequence/Coherence and Structure


Narrative
Narrative Voice
• Role of Narrator
- qualifiers (negative, positive)
- other uses of personal pronouns
• Role of Listener
- explicit role of listener
- implicit role of listener
Elaborations
• Characterizations
• Situational Elaborations
Structure
• Beginning
• Middle-Development
• Ending
Sequence and Coherence
• Temporal order
- temporal connections
- temporal phrases
- change in verb tense
• Logical order
• Spatial order

transcription was made of the witnesses' responses to the question: "I want you to think back to the video you just watched; please describe what you saw, and include as many details as you can recall".

Raters. One hundred and seven transcribed testimonies (54 young adult witnesses, 53 older adult witnesses, see Table 3 for descriptive statistics, and Table 4 for sample sizes used in various analyses) were analyzed for narrative features. I was the primary rater and I analyzed all of the transcripts. However, because the analysis is interpretive, it was essential to show that my analysis was unbiased and replicable, so a second, independent analyst was necessary. In order to test the operational definition of narrative and determine an acceptable level of inter-analyst reliability, a second analyst was given a random subset of transcripts (10%) from all experimental conditions. These 11 transcripts were selected using a random number chart. To give the second rater practice with the operational definition and the transcripts, he also analyzed four practice transcripts (two had been used to formulate the operational definition and two had not).

Reliability of the Operational Definition: Inter-Rater Reliability. Inter-rater reliability was calculated by correlating the two raters' scoring of 11 transcripts (10% of the total data set). Pearson product-moment correlations were calculated for each of the 14 narrative feature variables (Beginning, Middle, Ending, Temporal Connections, Logical Connections, Temporal Phrases, Changes in Verb Tense, Spatial Ordering, Characterizations, Situational Elaborations, Negative Qualifiers, Positive Qualifiers, Other Uses of Personal Pronouns, and Role of Listener). All but one of the correlations yielded significant results (see Table 5 for the coefficients and significance levels). An excellent level of inter-rater reliability was achieved, with 12 of the 14 correlations at

Table 3

Mean Age in Years and Sample Sizes of Men and Women Young and Older Adult Witnesses Used in the Analysis for Narrative Features

	Age of Witness	
	Young Adult	Older Adult
Gender		
Men	19.83 (SD = 1.90; n = 12)	76.79 (SD = 5.24; n = 14)
Women	19.76 (SD = 2.43; n = 42	75.38 (SD = 8.93; n = 39)
$\overline{X}$	19.80 (SD = 2.17; n = 54)	76.09 (SD = 7.09; n = 53)

Table 4

Number of Eyewitness Testimonies and Participant-Jurors Used in Analyses

	N
Eyewitness Testimonies	
Number in Original Eyewitness Study	123
Number used to formulate Operational Definition	11[a]
Number used in Narrative Features Analyses	107[b]
Number used for Inter-Rater Reliability Analyses	11[c]
Number viewed by Participant-Jurors (Perceived Credibility Analyses)	91[d]
Participant-Jurors	
Number who viewed Testimonies (Perceived Credibility Analyses)	182

Note. [a]These testimonies were randomly chosen from the total sample of testimonies (10% of the total data set) and they were excluded from all subsequent analyses.

[b]Five participants did not give consent for the analysis of narrative features.

[c]These testimonies were randomly chosen from the total sample of testimonies (10% of the total data set). They were not the same testimonies used to formulate the operational definition.

[d]Twenty-one participants did not give consent for perceived credibility analyses.

Table 5

Pearson Product-Moment Inter-Rater Correlations and Significance Levels for 14 Narrative Features

Narrative Feature	Correlation Coefficient
Beginning	.879***
Middle	1.00***
Ending	1.00***
Temporal Connections	.997***
Logical Connections	.824**
Temporal Phrases	.808**
Changes in Verb Tense	.998***
Spatial Ordering	.958***
Characterizations	.859**
Situational Elaborations	.720*
Negative Qualifiers	.905***
Positive Qualifiers	.083
Other Uses of Personal Pronouns	.932***
Role of Listener	.828**

Note. $*p < .05$ $**p < .01$ $***p < .001$, two-tailed z test.

.808 or higher, one significant correlation of .720, and one non-significant correlation of .083.

Reliability was not established for Positive Qualifiers. Each rater found only 3 positive qualifiers in the 11 transcripts, so it is likely that there was a restriction of range in the sample, which hindered the possibility of finding a significant correlation (Tabachnick & Fidell, 2001). Because reliability was not established for Positive Qualifiers, they were excluded from all subsequent analyses.

Results

Word Count

Witness Age. A two-tailed independent samples *t*-test with word count as the dependent variable and witness age (old or young) as the independent variable indicated that there was no age difference in word count, $t(105) = 1.432$, $p > .10$. The mean word count for older adults was 392.51 ($SD = 231.91$), while the mean word count for young adults was 334.06 ($SD = 188.56$).

Testimony Accuracy. The relationship between the accuracy of free recall (proportion of correct statements) and word count for 107 witness testimonies was examined through Pearson's *r*. Testimony accuracy was not correlated with word count, $r = -.115$, $p > .10$.

Perceived Credibility. The 14 perceived credibility variables were entered simultaneously into a multiple regression equation, with word count as the dependent variable and the perceived credibility variables as the independent variables. The data met the assumptions of normality, linearity, homoscedasticity of residuals and the absence of multicollinearity and singularity. The predictors as a group significantly

predicted word count, $F(14, 76) = 2.33$, $p < .05$, $R^2 = .300$, adjusted $R^2 = .171$. Two of the perceived credibility variables significantly and uniquely contributed to the prediction of word count. Witnesses who were perceived as consistent in their testimony were more likely to have a *smaller* word count, $t(90) = -2.10$, $p < .05$, standardized $B = -.346$, while witnesses who were perceived as providing a detailed crime description were more likely to a *larger* word count, $t(90) = 3.58$, $p < .01$, standardized $B = .556$.

Narrative Features. The 13 narrative feature variables were entered simultaneously into a multiple regression equation, with word count as the dependent variable and the narrative features as the independent variables. The predictors as a group significantly predicted word count, $F(13, 93) = 129.08$, $p < .001$, $R^2 = .947$, adjusted $R^2 = .940$. Six of the narrative feature variables significantly contributed to the prediction of word count. Witnesses who used more Temporal Connections, $t(106) = 6.55$, $p < .001$, standardized $B = .374$, Logical Connections, $t(106) = 4.00$, $p < .001$, standardized $B = .203$, Temporal Phrases, $t(106) = 3.06$, $p < .01$, standardized $B = .102$, indications of Spatial Order, $t(106) = 3.17$, $p < .01$, standardized $B = .162$, Situational Elaborations, $t(106) = 2.74$, $p < .01$, standardized $B = .130$, and Other Uses of Personal Pronouns, $t(106) = 2.42$, $p < .05$, standardized $B = .090$ were more likely to have larger word counts.

Use of Frequency Measures of Narrative. Although the testimonies differed in word count (i.e., mean = 363.01, median = 329, $SD = 212.19$, range = 1145), the 13 narrative variables used in the following analyses were frequency measures. That is, the narrative features were not rate measures and word count was not taken into account for the following reasons.

I conducted principal components analyses using both the frequency and the rate measures. With the rate measures, there were several complex variables (i.e., variables that loaded on to more than one component), which made interpretation difficult. The PCA using the frequency measures was clearer, as there were no complex variables. Because of the complicated interpretation of the components, I decided to use the frequency measures for the principal components analyses (see next section). To be consistent across analyses with narrative features, all analyses involving narrative used the frequency measures. One advantage of this choice is that weight is given to infrequent, but important, variables. For example, using the rate measures, two Situational Elaborations would be given a lot of weight in a short testimony of 100 words, but they would be "lost" in a long testimony of 800 words (i.e., the value of the rate measure would be very small in a long testimony, see section on Word Count in the Discussion for more on the justification of the use of frequency measures of narrative).

Narrative Features

Principal components analysis (PCA) was performed on 13 narrative feature variables for 107 witness testimonies. The sample size was adequate for PCA as there were more than five cases per variable. Frequency distributions and descriptive statistics indicated that the data were normally or near-normally distributed. Bivariate scatterplots and stem and leaf plots indicated that the assumption of linearity was met and there were no univariate outliers. An examination of Cook's *D* scores indicated that there were no multivariate outliers. The assumptions of multicollinearity and singularity were met, as the eigenvalues were not close to zero and the squared multiple correlations were large. The data were factorable, as the correlation matrices among the 13 features revealed

several correlations in excess of .30. In addition, Kaiser's measure of sampling adequacy was greater than .6, and most of the values in the negative anti-image correlation matrix were small, indicating again that the data were factorable.

Confirmatory Principal Components Analysis. The operational definition of narrative was composed of four a priori constructs: Narrative Voice, Sequence/Coherence, Elaborations and Structure. Therefore, a confirmatory principal components extraction of four components with oblique rotation was performed on 13 narrative features from 107 older and young adult witness testimonies. The oblique rotation was chosen because I wanted to allow the components to be correlated. It was possible that the components would be correlated because they are all subsumed under the "narrative" umbrella.

Four components were extracted. The eigenvalues (percentage of variance extracted) of the four components were 6.24 (47.98%), 1.67 (12.82%), 1.01 (7.76%) and .88 (6.74 %), for each of the four components, respectively. The four components thus cumulatively accounted for 75.31% of the variance. The components were correlated with each other (see Table 6 for component correlations).

Variables with loadings of .45 (20% overlapping variance) or higher were included in the interpretation of a component. Statisticians suggest that a cut-off of at least .32 (10% overlapping variance) should be used (Tabachnick & Fidell, 2001). Using the .45 cut-off, all 13 of the variables loaded on the components, and there were no complex variables. Loadings of variables on components are shown in Table 7. The loadings that are higher than the .45 cut-off are shown in bold. Proposed labels for the

Table 6

Component Correlations Matrix for Confirmatory PCA of Narrative Features

Component	1	2	3	4
Coherence	1.00			
Elaborations	.396	1.00		
Beginning & Confidence	-.341	-.113	1.00	
Middle/Development	.130	.190	-.081	1.00

Table 7

Loadings of Narrative Variables on Components for Confirmatory PCA

	Component 1	Component 2	Component 3	Component 4
Narrative Feature	Coherence	Elaborations	Beginning & Confidence	Middle
Spatial Order	**.833**	-.110	-.200	.115
Temporal Phrases	**.826**	-.062	.047	.067
Temporal Connections	**.753**	.034	-.207	.121
Ending	**.713**	.042	.163	-.180
Changes in Verb Tense	**.613**	.182	-.383	.116
Logical Connections	**.493**	.438	-.210	.137
Personal Pronouns	-.253	**.974**	.139	.017
Characterizations	.207	**.698**	-.057	.206
Situational Elaborations	.209	**.639**	-.403	-.064
Role of Listener	.435	**.525**	.143	-.037
Beginning	-.062	-.130	**-.891**	-.096
Negative Qualifiers	.217	.408	**-.521**	.028
Middle	-.023	.008	.133	**.964**

Note. Loadings higher than the .45 cut-off are in bold.

four components are Coherence, Elaborations, Beginning and Confidence, and Middle/Development.

To summarize, the confirmatory PCA with oblique rotation extracted four components (Coherence, Elaborations, Beginning and Confidence, and Middle/Development) and they cumulatively accounted for 75.31% of the variance.

Exploratory Principal Components Analysis. In order to determine whether fewer than four components could be extracted (i.e., a more parsimonious description of the data), an exploratory principal components extraction with oblique rotation was performed on the 13 narrative features from 107 witness testimonies. Again, the oblique rotation was chosen because I wanted to allow the components to be correlated. In the *confirmatory* PCA, four components were extracted, but the fourth component's eigenvalue was .88. In the *exploratory* PCA, I extracted only those components with eigenvalues greater than 1.00, and three components were extracted. The eigenvalues of the three components were 6.24 (47.98%), 1.67 (12.82%), and 1.01 (7.76%) for each of the three components, respectively. The three components thus cumulatively accounted for 68.57% of the variance. The components were correlated with each other (see Table 8 for component correlations).

With a cut of .45 for inclusion of a variable in the interpretation of a component, 12 of the 13 variables loaded on the components. Again, there were no complex variables, but Negative Qualifiers fell out of the analysis. Loadings of variables on components are shown in Table 9. Loadings higher than the .45 cut-off are shown in bold. Proposed labels for the three components are Coherence, Elaborations and Structure.

Table 8

Component Correlations Matrix for Exploratory PCA of Narrative Features

Component	1	2	3
Coherence	1.00		
Elaborations	.402	1.00	
Structure	-.140	.052	1.00

Table 9

Loadings of Narrative Variables on Components for Exploratory PCA

	Component 1	Component 2	Component 3
Narrative Feature	Coherence	Elaborations	Structure
Spatial Order	**.937**	-.105	-.027
Temporal Connections	**.864**	.039	-.028
Temporal Phrases	**.807**	-.069	.111
Changes in Verb Tense	**.800**	.194	-.153
Logical Connections	**.618**	.445	-.019
Ending	**.554**	.022	.027
Personal Pronouns	-.300	**.968**	.121
Characterizations	.301	**.704**	.124
Situational Elaborations	.346	**.647**	-.290
Role of Listener	.346	**.512**	.107
Middle	.290	.041	**.721**
Beginning	.279	-.098	**-.677**

Note. Loadings higher than the .45 cut-off are in bold.

To summarize, the exploratory PCA with oblique rotation extracted three components: Coherence, Elaborations, and Structure, and they cumulatively accounted for 68.57% of the variance. Negative Qualifiers fell out of this analysis.

Witness Age and Narrative Features

In order to determine whether there were age differences between young and older adults in the use of narrative features, a multivariate analysis of variance was performed on the 13 narrative feature variables as dependent variables with witness age (old or young) as the independent variable for 107 witness testimonies. The data were checked for both age groups to ensure that the assumptions of normality, linearity and homoscedasticity were met. Descriptive statistics, stem and leaf plots and probability plots indicated that the data were normally distributed. The assumptions of multivariate normality, homogeneity of variance-covariance matrices, and the absence of multicollinearity and singularity were all met.

With the use of Wilk's criterion, the combined dependent variables (13 narrative feature variables) were affected by the age of the witness, $F(13, 93) = 4.321$, $p < .001$, $\eta^2 = .377$. The univariate analyses (see Table 10 for means, standard deviations, F values and effect sizes) indicated that older adult witnesses were *less* likely to use Beginnings than were young adult witnesses, but were *more* likely than young adult witnesses to use Middle/Developments, Endings, Situational Elaborations, Characterizations, Other Uses of Personal Pronouns, and References to the Listener.

To summarize, older adults were more likely than young adults to use several narrative features, while young adults were more likely to use Beginnings.

Table 10

Means and Standard Deviations of Narrative Features, and Significance Levels of the F test for Older and Young Adult Witnesses

	Older Adult	Young Adult	$F(1, 105)$	η^2
Narrative Feature	$\overline{X}$ (*SD*)	$\overline{X}$ (*SD*)		
Beginning	**.66 (.68)**	**.94 (.74)**	**4.299***	**.039**
Middle	**1.21 (.45)**	**1.04 (.19)**	**6.458***	**.058**
Ending	**.55 (.50)**	**.26 (.44)**	**9.906****	**.086**
Temporal Connections	28.43 (17.17)	26.35 (14.77)	.453	.004
Logical Connections	6.93 (5.74)	5.39 (4.97)	2.193	.020
Temporal Phrase	2.70 (2.60)	2.43 (2.23)	.339	.003
Changes in Verb Tense	16.13 (10.84)	14.35 (11.11)	.704	.007
Spatial Order	23.53 (12.69)	20.94 (9.74)	1.400	.013
Situational Elaborations	**2.98 (2.71)**	**1.78 (2.36)**	**6.013***	**.054**
Characterizations	**8.34 (6.95)**	**3.69 (3.91)**	**18.296*****	**.148**
Negative Qualifiers	5.96 (4.90)	4.26 (4.58)	3.451	.032
Personal Pronouns	**2.79 (3.42)**	**.50 (1.21)**	**21.572*****	**.170**
Role of Listener	**1.51 (2.12)**	**.82 (1.42)**	**3.993***	**.037**

Note. *p < .05 **p <.01 ***p < .001.

Testimony Accuracy and Narrative

As a first step, the 13 narrative features were correlated with the accuracy of free recall (proportion of correct statements) for 107 witness testimonies (see Table 11 for the bivariate correlations). Six of the narrative feature variables were significantly negatively correlated with testimony accuracy: Middle/Development, Logical Connections, Situational Elaborations, Characterizations, Negative Qualifiers, and Other Uses of Personal Pronouns.

The six narrative feature variables with significant correlations were entered simultaneously into a multiple regression equation, with accuracy of free recall (proportion of correct statements) as the dependent variable and the six narrative features as the independent variables. The data met the assumptions of normality, linearity, homoscedasticity of residuals and the absence of multicollinearity and singularity. The predictors as a group significantly predicted the accuracy of free recall, $F(6, 100) = 17.00$, $p < 001$, $R^2 = .505$, adjusted $R^2 = .475$. Three of the independent variables uniquely and significantly contributed to the prediction of testimony accuracy. The direction of the relationship between the narrative features and testimony accuracy is indicated by the sign of the beta weights in the regression equation. Witnesses who used more Logical Connections were more likely to be accurate in their testimonies, $t(106) = 3.39$, $p < .01$, standardized $B = .402$. Witnesses who used more Characterizations were less likely to be accurate in their testimonies, $t(106) = -5.50$, $p < .001$, standardized $B = -.659$. Witnesses who used other types of Personal Pronouns were also less likely to be accurate in their testimonies, $t(106) = -3.65$, $p < .001$, standardized $B = -.340$.

Table 11

Bivariate Correlations of Free Recall Testimony Accuracy With Each of the 13 Narrative Feature Variables

	Free Recall Testimony Accuracy
Narrative Feature	Pearson's *r*
Beginning	.092
Middle/Development	**-.227***
Ending	-.066
Temporal Connections	.019
Logical Connections	**-.221***
Temporal Phrases	.030
Change in Verb Tense	-.114
Spatial Order	.076
Situational Elaborations	**-.297****
Characterizations	**-.590*****
Negative Qualifiers	**-.220***
Other Uses Personal Pronouns	**-.568*****
Role of Listener	-.155

Note. $*p < .05$ $**p < .01$ $***p < .001$.

To summarize, two narrative features were negatively related to the proportion of correct statements: Characterizations, and Other Uses of Personal Pronouns. Logical Connections were positively related to testimony accuracy.

Perceived Credibility and Narrative

Canonical correlation was performed between the set of 14 credibility variables and the set of 13 narrative variables for 91 witness testimonies. Stem and leaf plots indicated that all of the variables were normally or near-normally distributed, and there were no univariate outliers. A matrix of bivariate scatterplots indicated that the variables were linear and homoscedastic. Finally, an examination of Cook's *D* scores and leverage scores indicated that there were no multivariate outliers. With these assumptions being met, the canonical correlation analysis continued.

With all 13 canonical correlations included, the first canonical correlation was significant, $r_c = .73$, $\chi^2(182) = 222.63$, $p < .05$. Subsequent χ^2 tests were not statistically significant, so it was the first pair of canonical variates that accounted for the significant relationship between the two sets of variables.

Information on the first pair of canonical variates appears in Table 12. Shown in the table are correlations between the variables and the canonical variates (loadings). The within-set variance (percent of variance) accounted for by the first canonical variate ("Credibility") was .076, and its redundancy was .040. The within-set variance accounted for by the second canonical variate ("Narrative") was .131, and its redundancy was .051. The percent of variances and redundancies indicate that the first pair of canonical variates was moderately related.

Table 12

Canonical Loadings for "Credibility" and "Narrative" Sets

Credibility Set		Narrative Set	
	Loading		Loading
Detail	**.465**	Logical Connections	**-.477**
Good View	**.403**	Situational Elaborations	**-.410**
Confidence	**.403**	Temporal Connections	**-.378**
Identification	**.399**	Spatial Order	**-.369**
Good Witness	**.307**	Changes in Verb Tense	**-.367**
Honesty	-.299	Characterizations	**-.352**
Consistency	.225	Temporal Phrases	**-.306**
Police Report	.224	Role of Listener	-.272
Competence	.199	Beginning	-.224
Coherence	.177	Personal Pronouns	-.194
Accuracy	.130	Middle	.182
Useful	.046	Ending	.181
Clear	.029	Negative Qualifiers	.035
Credibility	.008		

Note. Loadings higher than the .3 cut-off are in bold.

With a cutoff loading of .3, the variables in the "Credibility" set that constituted the first canonical variate were perceived Confidence, Ability to Provide a Detailed Crime Description, Good View of the Crime, Correct Identification, and Good Witness in Court. Among the "Narrative" set, Temporal Connections, Logical Connections, Temporal Phrases, Changes in Verb Tense, Spatial Order, Situational Elaborations, and Characterizations were correlated with the first canonical variate.

Based on the loadings and the sign of the loadings, the significant pair of canonical variates indicates that those who were perceived as being able to provide a detailed crime report (.465), those with high perceived confidence (.403), those who were perceived as having a good view of the crime (.403), those who were perceived as being able to make a correct identification (.399), and those who were perceived as being good witnesses in court (.307) were associated with witnesses who used fewer Logical Connections (-.477), fewer Situational Elaborations (-.410), fewer Temporal Connections (-.378), fewer indications of Spatial Order (-.369), fewer Changes in Verb Tense (-.367), fewer Characterizations (-.352), and fewer Temporal Phrases (-.306).

To summarize, five perceived credibility measures were associated with seven narrative features. High perceived credibility scores were associated with fewer narrative features.

Witness Age and Perceived Credibility

A direct logistic regression analysis was performed on age of witness (young or old) as outcome and 14 perceived credibility predictors: confidence, accuracy, honesty, competence, credibility, consistency, detailed crime description, view of crime, coherence, trust in identification, ability as a witness in court, clear and logical account of

crime, usefulness/informativeness of testimony, and a police officer's ability to write a detailed report based on the testimony. Principal axis factoring was used prior to the logistic regression to determine whether there was an absence of multicollinearity. As indicated by the SMCs, there was no multicollinearity among the 14 predictors. Ninety-one testimonies were included in this analysis. As stated in the Method section, 21 testimonies were dropped because of a lack of participant consent and 11 were dropped because they were used to formulate the operational definition.

A test of the full model with all 14 predictors against a constant-only model was statistically reliable, $\chi^2(14, N = 91) = 33.635, p < .01$, indicating that the predictors, as a set, reliably distinguished between young and older adult witnesses. The variance in witness age accounted for was large, with Nagelkerke's $R^2 = .415$. Prediction rate was moderately impressive, with 82.7% of older adults, and 61.5% of young adults correctly predicted, for an overall success rate of 73.6%.

According to the Wald criterion, perceived honesty reliably predicted witness age; older adults were perceived as more honest than young adults, $z = 4.671, p < .05$, Exp(B) = .371, B = -.991. Perceived view of the crime also reliably predicted witness age according to the Wald criterion, as young adults were perceived as having had better views of the crime, $z = 4.530, p < .05$, Exp(B) = 2.646, B = . 973. The perceived ability of a police officer to write a detailed report based on the testimony reliably predicted witness age according to the Wald criterion; participants indicated that a police officer would be better able to write a detailed report based on young adults' testimony, z = 6.295, $p < .05$, Exp(B) = 3.443, B = 1.236.

To summarize, three perceived credibility measures reliably predicted witness age. Older adults were seen as more honest, while young adults were perceived as having had better views of the crime, and young adults' testimonies were perceived as being more useful for a police officer writing a report.

Testimony Accuracy and Credibility

The 14 perceived credibility variables were first correlated with the accuracy of free recall. All of the correlations were non-significant. The 14 perceived credibility variables were then entered simultaneously into a multiple regression equation, with accuracy (proportion of correct statements) as the dependent variable and the perceived credibility variables as the independent variable. The data met the assumptions of normality, linearity, homoscedasticity of residuals and the absence of multicollinearity and singularity. The predictors as a group did not significantly predict testimony accuracy, $F(14, 76) = 1.33, p > .10, R^2 = .196$, adjusted $R^2 = .048$.

To summarize, the perceived credibility of witnesses was not related to the proportion of correct statements in free recall.

Discussion

Narratives are collections of information, and narrators use them to convey experiences to others. Although previous researchers have discussed narratives and their uses, this thesis offers the first reliable operational definition of "narrative". That is, the specific components of "narrative" were determined. Not only was narrative defined, but the definition was also used to analyze 107 testimonies of older and young adult eyewitnesses to see if there were age-related differences in the narrative features of the witnesses' testimonies. Finally, the relationship between the narrative features of the

witnesses' testimonies and the witnesses' perceived credibility was also investigated.

Older adults were more likely than young adults to use several narrative features (e.g., a notice of the main action, references to the listener), but young adults were more likely to use Beginnings (i.e., a notice the testimony had begun, "First of all"). Witnesses who used more Coherence and Elaboration features were seen to be *less* credible than were witnesses who used fewer of these features. In addition, older adults were perceived as less credible than young adults on two credibility measures (i.e., perceived view of crime and perceived usefulness of testimony for a police report), but were seen as more honest. Finally, there was a relationship between some narrative features and the proportion of correct statements, but testimony accuracy and credibility were not related. A more detailed discussion of the results follows.

Witness Age and Narrative Features

In previous studies of aging and narrative, although researchers examined the use of *structure* in the generation and recall of personal stories (e.g., Cavanaugh, 1990; Kemper et al., 1990), they did not attempt a comprehensive analysis of narrative features. Several researchers have analyzed the overall dramatic structure pattern of older adults' personal stories. For example, Pratt and Robins (1991) examined the flow of the story and the location of the main action, like "end at the high point".

This analysis fails to provide sufficient knowledge of the use of other structure features (e.g., Beginnings), and it excludes several important narrative features, like indications of the narrator's role and references to the listener. The narrator's role as storyteller is an important component of narrative, and "Elaborations" (e.g., "he was quite *miffed*"), Other Uses of Personal Pronouns ("*I saw* a woman") and References to the

Listener (e.g., "I think that's all I can tell *you* about it") capture the narrator's ownership of the discourse whereas the analysis of structure patterns does not. In short, the definition of narrative developed in this thesis yields a more comprehensive analysis, and a more detailed description of age differences in the use of narrative in discourse than any previous methods or definitions.

It was hypothesized that the older adult witnesses would use more of each narrative feature because of their roles as storytellers (e.g., Kemper et. al, 1990). This hypothesis was supported for many of the narrative features (see Appendices D and E for sample transcripts of older and young adult witnesses).

Looking at the specific features of older adults' speech compared to the young adults' speech, the older adults were more likely to use Elaborations and Narrative Voice features, but there were no age differences in the use of Sequence/Coherence features. That is, older adults were "inserting" their own experience into the testimony more so than were the young adults, but were not necessarily including more indications of temporal, logical, or spatial order than the young adults. For example, many older adults included personal opinions when describing the job interview scene: "It seemed a little bit awkward that they would both be filling out forms for the same job", while young adults typically did not include personal opinions: "they both filled out forms". Perhaps older adults are perceived as storytellers because of this insertion of personal experience and opinion into their discourse (e.g., Garrioch et al., 2001; Kemper et al., 1990).

The relationship between witness age and the use of Structure features is not as clear. Older adults were more likely to use Middles and Endings, but young adults were more likely to use Beginnings. This finding is somewhat surprising, as young adults are

not usually thought of as storytellers (e.g., Kemper et al., 1990). There is no obvious explanation for the fact that young adults were more likely to clearly state that the testimony had begun (e.g., "First of all"), that older adults were more likely to describe the main action (the crime) and that older adults were more likely to clearly state that the testimony had ended (e.g., "That's the end"). It appears that young adults were more likely to structure their testimonies at the start, and then the use of structure tapered off towards the end. Older adults, in contrast, tended not to structure their testimonies at the start, but tended to use more structure during the main action and towards the end.

Future Research in Age Differences and Narrative

Would age differences in the use of narrative features be found among other aging populations? The older adults who participated in this thesis were active, healthy adults from the Victoria community (i.e., they were non-institutionalized adults who traveled to the University or to Seniors' Centers for testing). It is possible that the discourse of these older adults is qualitatively different from that of institutionalized, and less mobile older adults. For example, is it possible that an individual's inability to use certain narrative features (e.g., Coherence, Characterizations) is indicative of clinical disorders like dementia (Chenery & Murdoch, 1994; Dijkstra et al., 2002; Ehrlich, Obler, & Clark, 1997; Kemper et al., 1990)? A comparison of the use of narrative features between cognitively impaired and healthy older adults could shed light on this question.

Moving on to the young adult participants, these witnesses were university undergraduates who participated for course credit. It may be that the young adult participants approached the eyewitness task in a different manner from the older adults who were not University students. The older adults traveled to the University specifically

for the experiment, and it may have been an unusual and unprecedented event for them. In contrast, most of the young adults routinely participated in psychology experiments, and so the experiment may not have been particularly unique or unprecedented. One way to investigate this issue further would be to collect eyewitness data from young adults who are not University students. Thus one could compare the use of narrative in young adult non-students with young adult students, and with older adults (also non-students). Would these non-students use narrative features in the same way that undergraduate students and older adults do?

The comparison of University students with non-students raises an important limitation of this thesis. In the original eyewitness study, witnesses' education and vocabulary levels were not collected. However, a previous story-telling study noted that participants with higher vocabulary levels told better stories (Juncos-Rabadan, 1996; Kemper et al., 1990; Pratt & Robins, 1991). Thus, it is possible that education and vocabulary levels could affect the types of narrative features used and could also potentially affect perceived credibility. Participant vocabulary and education levels should be collected in future research involving the analysis of narrative in discourse.

While this thesis has shown that there are age differences between young adults and older adults in the use of some narrative features, this thesis cannot explain with certainty *why* these differences exist. It may be that older adults are better educated (both formal and informal education) than the young adults and so their verbal skills are also better. It may also be that when people age, their use of narrative features changes (i.e., aging = change in the use of narrative features, see Kemper et al., 1990). That is, older adults, as parents and as grandparents, may be expert storytellers and so may use more

narrative features (Pratt & Robins, 1991). This raises an important but unanswerable question, will young adults, with education, age and experience with stories, use more narrative features as they age? That is, will the young adults of the present day include more narrative features in their discourse when they are older adults?

One cannot readily answer this question, as it is possible that the differences between young and old in the use of narrative features may be due to inter-generational or cohort differences, not solely due to age (Kemper et al., 1990). Specifically, the older adults of the present day grew up in a time where verbal skills may have been particularly valued. The young adult University students of the present day may not have, and may never have, the verbal skills that older adults have. It is possible that young adults of today communicate in different ways from the young adults of 50 years ago (Kemper et al., 1990). An interesting line of research would be to assess the use of narrative in discourse in adults in a longitudinal study. The use of narrative features could be tracked over the participants' lifetimes, and one could measure whether the use of narrative features actually does change with age.

The First Operational Definition of Narrative

This thesis established a reliable operational definition of narrative. There were two main analyses of the narrative features of the testimonies. The object of the confirmatory and exploratory principal components analyses was to assess the way in which the narrative features related to one another. For example, would Situational Elaborations and Characterizations, both sub-features of Elaborations as outlined in the operational definition, actually relate to one another and load on the same component?

Even though the exploratory PCA accounted for slightly less of the variance (see Narrative Features in Results section), this analysis is preferred over the confirmatory PCA because it is more parsimonious (i.e., it extracted three components instead of four). It is more parsimonious than the operational definition of narrative (i.e., there were three components in the PCA, but there were four components in the operational definition). In the exploratory PCA, the new "Elaborations" component was a combination of the Narrative Voice features and Elaboration features. This combined component made sense as Narrative Voice features (i.e., Other Uses of Personal Pronouns and Role of Listener) are a type of Elaboration; they were not explicitly contained in the stimulus. Thus, the operational definition of narrative could be condensed from four narrative components to three narrative components: "Coherence" (i.e., indications of temporal, logical and spatial order), "Elaborations" (e.g., opinions of the characters and indications of the narrator's role), and "Structure" (i.e., markings of the start and middle of the testimony).

Future Research in Narrative

Although the operational definition of narrative was created by analyzing a subset of data from one eyewitness study, its implications are likely far-reaching. The generalizability of the definition remains to be tested, but it probably can be used to assess many different forms of discourse. There is considerable common ground shared by individuals who recount an event to others, regardless of the nature of the event and the relationship between the speaker and listener. Relating information to others is a key component of our everyday lives. Thus the operational definition of narrative could potentially be used to analyze individuals' telling of a wide array of fictional and non-fictional accounts; in theory it could be used to analyze almost any kind of discourse.

Future studies of narrative in discourse could adjust the operational definition depending on the focus of the study. For example, Situational Elaborations and Characterizations could be combined if one was not interested in distinguishing between the two types of elaborations, but instead, more generally, was interested in the narrator's personal opinion. The breakdown of Elaborations into Characterizations and Situational Elaborations may provide an unnecessary level of detail if one only wanted to assess narrators' general attitudes towards characters and events in the stimulus.

Indeed, the distinction between attitudes towards characters (e.g., "she seemed pretty fidgety") and attitudes towards situations (e.g., "it seemed a little bit awkward that they would both be filling out the same forms") is difficult to discern. If raters were to simply look for attitudes towards either characters or situations, the difficult decision of labeling a statement as either "Characterization" or "Situational Elaboration" could be avoided. However, it must be noted that some research questions may warrant a finer level of analysis. For example, if it is predicted that expert storytellers are more likely to use Characterizations, while average storytellers are more likely to use Situational Elaborations, then one should distinguish between the different types of elaborations.

The operational definition could be expanded or modified for researchers who are interested in finding very specific types of narrative features. For example, raters could look for different kinds of Changes in Verb Tense; raters could look for changes in tense that are used for dramatic emphasis (e.g., "he walked out of the room and now she's snooping in his pocket"), and they could look for changes in tense that occur when the narrator is correcting an earlier statement (e.g., "… so she walked out of the room, no, I forgot something, before she walks out of the room, he comes back").

Researchers could manipulate the operational definition of narrative and use it to help them to answer new research questions. For example, one new research question could address the possibility that the type of verb tense change could impact the perceived credibility of the witness. It is likely that testimonies that include verb tense changes as corrections of earlier statements will be hard to follow and somewhat confusing, so these witnesses may be perceived as less consistent and less clear.

Another avenue for further research is the use of Positive Qualifiers. Witnesses who stated that they were quite confident in their abilities as witnesses (e.g., "I'm very good at remembering this kind of thing") were using Positive Qualifiers, but this feature was not reliable. Indeed, the witnesses rarely punctuated their speech with these confident statements: one witness used two Positive Qualifiers, 10 witnesses used one Positive Qualifier each, and 96 of the 107 witnesses did not use any Positive Qualifiers at all. Reliability likely could not be established for Positive Qualifiers because there were so few of these features in the testimonies.

There is no clear reason why the witnesses used so few Positive Qualifiers. It may be that because the witnesses were undergoing a memory test, they were reluctant to state their answers too strongly, in case they were incorrect. Positive Qualifiers may occur more frequently in other forms of discourse. For example, individuals who tell their own personal stories, and so are not being tested and evaluated for perceived accuracy, may be more apt to qualify their statements in positive ways (e.g., "I remember one funny story really well, this is what happened…").

Perhaps, in the eyewitness realm, witnesses who are motivated to appear very confident in their statements may include more Positive Qualifiers. For example,

witnesses who are coached by lawyers and are instructed to explicitly indicate their confidence in their statements (e.g., "tell me what you're sure of") may be more apt to include these confident statements. Similarly, witnesses who are determined to send the defendant to jail may emphatically qualify their statements so that they are perceived as accurate and confident (e.g., "That man is definitely the one who robbed me"). Clearly, the operational definition of narrative should be further tested with new data sets in order to determine whether all 14 narrative features are found in other forms of discourse.

Further, it is possible that this definition of the essential features of narrative is not exhaustive. For example, there may be features of narrative that are not present in the written word. This definition does not capture the intonation, prosody, gestures, and eye contact of the witnesses. For example, in the Narrative Voice category, there may be other indications of Role of Listener that are not captured in the spoken word (e.g., gestures that refer to the listener). In addition, there may be features of narrative that were not present in the eyewitness testimonies that may appear in other data sets. There is room for expanding the operational definition.

Thus, a fruitful avenue of research would be to analyze new forms of data with the operational definition of narrative to determine whether Positive Qualifiers could become reliable, and whether there are other narrative features that are missing from the current definition.

Perceived Credibility and Narrative Features

The relationship between narrative and credibility was a starting point for this thesis. Specifically, the finding that older adults were less accurate in their testimonies but seen as equally credible (Garrioch et al., 2001) led to the hypothesis that testimonies

with more narrative features would be seen as more credible (e.g., Pratt & Robins, 1991). There was a significant relationship between credibility and narrative features, but not in the predicted direction (see Perceived Credibility and Narrative in the Results section).

For the Sequence and Coherence variables (i.e., Temporal/Logical Connections, Temporal Phrases, Changes in Verb Tense and Spatial Order), the more features, the lower the perceived credibility. It may be that many Changes in Verb Tense, for example, could be confusing and hard to follow, thus negatively impacting credibility. Similarly, it may be that the same confusion arises with many indications of Spatial Order. The participant-jurors did not see the crime and may have had difficulty understanding the Spatial Ordering of people and objects without having seen the crime scene.

A large number of Situational Elaborations and Characterizations was also associated with lower credibility. It is possible that some jurors may have seen these features as extraneous information rather than essential elements of eyewitness testimony. As a consequence, participant-jurors may have judged these witnesses harshly for not "sticking to the task" at hand. It is also possible that witnesses who formed judgments of the characters and events in the video were seen as less credible because they offered "biased" accounts of the crime. For example, a witness who used Characterizations might describe the victim as "a rough looking kind of character", while a witness who did not use Characterizations might describe the victim as "a man who was slightly balding". In fact, witnesses who used more Characterizations were less likely to be accurate in their testimonies, although overall credibility and testimony accuracy were not related.

Age and Credibility

In the original eyewitness study, there were no age differences in perceived credibility (Garrioch et al., 2001), that is, young and old were perceived as equally credible in testifying. In this thesis, the free recall portion of the transcribed interviews was analyzed for narrative features, so participant-jurors assessed witness credibility while viewing only this portion of the testimony. Thus, participant-jurors dealt with only the verbal free recall portion of the videotaped interviews. The perceived credibility analyses indicated that there were significant age differences on three credibility measures. First, older adults were perceived as more honest than young adults. Although this finding runs in contrast to the findings of the original study, it is in line with previous studies of older adults as witnesses. For example, older adult witnesses were seen as more honest in the Brimacombe et al. (1997) study in which jurors rated the testimonies of participants who had witnessed a simulated videotaped crime. Similarly, in Ross et al. (1990), an older adult actor who played the part of a witness in a simulated trial was seen as more honest than the young adult and child actors.

It is important to note that perceived honesty was not related to any of the narrative feature variables. That is, the presence of specific narrative features did not impact perceived honesty. However, there may have been factors other than narrative that affected jurors' assessments of older adults' honesty. One possibility is that jurors held a stereotype of older witnesses as more honest (Ross et al., 1990) and the jurors may have felt that these witnesses had no reason to lie, deceive or mislead. Age stereotypes, rather than the use of narrative, may have driven perceived honesty ratings.

Further, young adults were seen as more credible on two measures: they were

perceived as having had better views of the crime, and jurors stated that police officers would be better able to write a report based on the young adults' testimonies. The age difference for perceived view of the crime may be due to the belief that the young adults had better perceptual abilities and so were better able to see the crime (e.g., Eisner, 1975; Yarmey & Kent, 1980). In addition, it is also possible that this credibility effect was due to age differences in the use of Elaborations, as the use of more Elaborations was related to lower perceived view of crime ratings. Young adults were less likely to discuss their feelings towards and opinions of the characters and events than were older adults. It may be that the older adults elaborate more because they cannot suppress irrelevant/unnecessary material from their reports. As a result, the jurors may have felt that the young adult witnesses viewed the crime video in an unbiased manner and so spent more time observing the crime and less time elaborating and forming opinions of the events.

Young adult witnesses' testimonies were perceived as being of better use to a police officer. This age difference cannot be explained through the witnesses' use of narrative features. The perceived usefulness of testimony for a police report measure was not related to any of the narrative feature variables (nor was it related to testimony accuracy or length of testimony, see the following sections).

The perceived view of the crime and the perceived usefulness for a police report are two new credibility measures that have not been tested empirically prior to this thesis. The Garrioch et al. (2001) study measured witness credibility using five measures (including honesty). Perhaps age differences in credibility would have been found in that study had these two new perceived credibility measures been included in the Garrioch et

al. design. Which measures should be used in future credibility studies involving young and older adult witnesses? It is possible that perceived honesty, perceived view of the crime and perceived usefulness of testimony for a police report measures are the only measures that capture age differences in perceived credibility. Continued scrutiny into the use of credibility measures would help researchers to decide which measures are useful and which are not.

Testimony Accuracy and Narrative

Three narrative features were related to testimony accuracy. Witnesses who used more Logical Connections were more likely to be accurate in their testimonies. There is no known reason why Logical Connections were positively related to testimony accuracy. There were no age differences in the use of these connections, and in fact witnesses who used more logical connections were perceived as less credible by participant-jurors. Participant-jurors' credibility ratings may have been lowered when many Logical Connections were used because they may have been confusing to the listener (e.g., "so she left the room, but he was working, so she had her interview").

Witnesses who used more Characterizations and Other Uses of Personal Pronouns (e.g., "*I saw* a woman in an interview") were less likely to be accurate in their testimonies. It is possible that this relationship was driven by age differences. Older adults were more likely to use Characterizations and Other Uses of Personal Pronouns and they provided proportionately less accurate information in free recall (Garrioch et al., 2001). Thus, in the case of older adults, the use of more Characterizations and Other Uses of Personal Pronouns could be indicators of inaccuracy in testimony.

Word Count

There were no age differences in word count. This is somewhat surprising considering older adults are "storytellers" (e.g., Kemper et al., 1990). One would have expected that the older adults would have said more. Similarly, because Elaborations are additions to the testimony (elements not explicitly contained in the stimulus), and because older adults were more likely to elaborate, one would have thought that they would have had more to say than young adults who were less likely to elaborate.

Word count was not related to testimony accuracy. Witnesses who said more were not necessarily more accurate in their testimonies than those who said less. However, there was an understandable and clear relationship between word count and two perceived credibility measures. Witnesses with fewer words were perceived as being more consistent in their testimonies, and witnesses who said more were perceived as being better able to provide a more detailed crime description.

Justification for Use of Frequency Measures of Narrative Features. As stated in the Results section, frequency measures of narrative (i.e., variables that did not take word count into account) were used throughout the analyses. This decision needs to be further explained, as rate measures (i.e., variables that take word count into account) are commonly used in research. It could be argued that word count is the underlying variable that caused the relationship between many of the narrative feature variables. That is, it was not "narrative" that caused the variables to load on the same component, but rather it was word count that caused the variables to load together. While this argument is plausible, there exist several equally plausible rebuttals.

First, it is true that word count was related to some narrative features; for

Temporal and Logical Connections, Temporal Phrases, Spatial Order, Situational Elaborations, and Other Uses of Personal Pronouns, the higher the word count, the more likely the witness used more of each feature. Some narrative feature variables simply required many words. For example, Situational Elaborations were often composed of a string of words (e.g., "she met a friend on the way there … *it didn't seem to be of any importance*").

Another answer to the criticism of the use of frequency measures is that even though some of the variables were related to word count, one cannot imply causality in the relationship. That is, one cannot know whether a high word count *caused* a high frequency of narrative features, as it is also possible that it was the presence of many narrative features that *caused* a high word count.

Yet another answer to this objection is that if it was word count and word count alone that caused certain narrative features to load together, then all features associated with word count should have loaded on the same component. This was not the case. Situational Elaborations and Other Uses of Personal Pronouns, which were both associated with word count, loaded on the *second* component, while the remaining features related to word count loaded on the *first* component. Thus the first component was composed of four variables related to word count, and two variables (Changes in Verb Tense and Endings) that were not related to word count. Even though the components were allowed to be correlated (i.e., oblique rotation was used), if it was word count that caused variables to relate to one another, then all of the word count-associated variables should have loaded onto the same component.

Finally, several narrative features were not related to word count. As stated,

Changes in Verb Tense and Endings were not related to word count, but Role of Listener, Characterizations and Negative Qualifiers were also not related to word count. Witnesses who said more did not necessarily include these features in their testimonies. All three Structure variables were not related (Beginning, Middle, Ending) to word count. Indeed, Structure should be unrelated to word count as even very short testimonies can still have all three structure variables.

Limitations

Operational Definition. First, reliability was not established for Positive Qualifiers. As stated, this result may have to do with the particular data set used and this feature may actually be an important narrative feature in some forms of discourse. Second, the operational definition was created from a subset of an eyewitness data set. Although the definition was reliable with this particular data set, some features may be less reliable in data sets where they occur infrequently. For example, in the situation where narrators rarely elaborate, Characterizations and Situational Elaborations may not be reliable narrative features. Thus it is difficult to know exactly how the definition will hold when analyzing other forms of discourse. Finally, other forms of discourse should be assessed using the definition in order to discover whether there are new narrative features that are currently missing from the definition.

Witness Vocabulary and Education Levels. As stated, witnesses' education and vocabulary levels were not collected, but these factors may affect the types of narrative features used. In addition, the witnesses' education levels could potentially affect their perceived credibility. Education and vocabulary levels should be collected in future studies in order to further investigate the impact of education and verbal skills on the use

of narrative and perceived credibility.

Undergraduates as Jurors. The fact that undergraduate students assumed the roles of jurors in this thesis may call into question the generalizability of the research findings. Several researchers have noted that undergraduate students may differ from actual jury members in terms of general demographic characteristics (e.g., age, income, education level) and in terms of attitudes towards legal issues (e.g., Aubrey & Ewing, 1989; Konecni, Ebbesen, & Hock, 1996). My decision to include undergraduate students as jurors, rather than recruiting members of the general public to play the part of jurors, was driven in part by practical limitations. The recruitment of potential jury-members would have been a costly and time-consuming endeavor. My decision to use undergraduate students as jurors is also completely in line with the methodologies employed in numerous studies of eyewitness testimony (e.g., Brimacombe et al., 1997; Ross et al., 1990).

However, I recognize that, given access to jury pools and the resources to pay those participants for their time, the best option would have been to gather data from members of the general public so that one could generalize the findings of the thesis more readily. University undergraduates and potential jury-members may differ in their perceptions of witnesses, so an appropriate and interesting follow-up study could address differences in perceptions of credibility between these two groups of people.

Future Research in Narrative, Testimony and Aging

There are several avenues of research in narrative, eyewitness testimony and witness age that are worth pursuing now that a reliable operational definition of narrative has been established. However, the results of this thesis must first be replicated with a

new data set to assess their generalizability. Once the findings have been replicated, it would be interesting to test the operational definition of narrative on other populations. For example, the discourse of other aging populations, witnesses of different education levels, and non-eyewitnesses (e.g., individuals telling personal stories), could be analyzed for narrative features. The generalizability of the definition could then be assessed.

In addition, this thesis offers several suggestions for the legal system. Specifically, there are several implications for coaching real witnesses in court. If a witness' testimony has too many Temporal Connections, Changes in Verb Tense, indications of Spatial Ordering, and Elaborations (which have been linked in this study with several lower credibility ratings), then some witnesses could be coached on creating coherent, non-elaborative and credible narratives. That is, perhaps it is to the prosecutors' and defenders' benefit to coach their witnesses on the way in which crime information is presented. Witnesses could be warned that credible testimonies are those that are simply stated with few Temporal Connections, few Changes in Verb Tense, and few Elaborations. Lawyers may wish to coach their witnesses on *how* to speak in court.

Conclusion

The results of this thesis suggest that this first operational definition of narrative is reliable, and that older adults do act as storytellers. Older adults were more likely than young adults to use several narrative features when describing a witnessed event. In addition, although it was hypothesized that the presence of more narrative features would serve to boost perceived credibility, in fact, the use of some narrative features negatively impacted credibility. Thus the relationship between witness age, narrative and credibility is quite complex. The continued investigation of narrative as an "act of meaning"

(Bruner, 1990) may help to further describe the discourse of storytellers. To paraphrase Pablo Picasso (1965), "There are storytellers who bring their lives to their stories, but there are others who bring their stories to life."

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Appendix A

Perceived Credibility Rating Scale

Perceived Credibility of Eyewitnesses

Your Age: _____
Your Gender: _____

INSTRUCTIONS: *The questions below refer to the witness whose testimony you will watch. Please respond to the questions by circling the number on the scale (1-7) that best describes your answer. Please complete both sides of the page.*

1. Did the witness seem **confident** in testifying?

1----------2----------3----------4----------5----------6----------7
not confident at all *very confident*

2. How **accurate** did the witness' testimony seem to you?

1----------2----------3----------4----------5----------6----------7
not accurate at all *very accurate*

3. How **honest** did the witness' testimony seem to you?

1----------2----------3----------4----------5----------6----------7
not honest at all *very honest*

4. How **competent** did the witness seem to you?

1----------2----------3----------4----------5----------6----------7
not competent at all *very competent*

5. How **credible** did you find the witness' testimony?

1----------2----------3----------4----------5----------6----------7
not credible at all *very credible*

TURN OVER →

6. How **consistent** was this witness in recounting the crime?

1----------2----------3----------4----------5----------6----------7
not consistent at all *very consistent*

7. How **detailed** was the witness' description of the crime?

1----------2----------3----------4----------5----------6----------7
not detailed at all *very detailed*

8. Do you think this witness had a **good view** of the crime?

1----------2----------3----------4----------5----------6----------7
not a good view at all *a very good view*

9. Did the witness' description provide a **coherent picture** of the crime?

1----------2----------3----------4----------5----------6----------7
not coherent at all *very coherent*

10. Would you **trust** this witness' ability to **identify the thief** from a police lineup?

1----------2----------3----------4----------5----------6----------7
no trust at all *full trust*

11. Do you think this witness would make a **good witness** in court?

1----------2----------3----------4----------5----------6----------7
not a good witness at all *very good witness*

Now imagine that you are a police officer investigating the crime the witness described. Answer the next 3 questions from a police officer's perspective.

1. Did the witness recount the events of the crime in a **clear, logical** manner?

1----------2----------3----------4----------5----------6----------7
not clear or logical at all *very clear and logical*

2. In general, how **useful/informative** is this witness' testimony to your understanding of the events (s)he observed?

1----------2----------3----------4----------5----------6----------7
not useful/informative at all *very useful/informative*

3. Could you write a **detailed report** of this incident based on what this witness said?

1----------2----------3----------4----------5----------6----------7
could not write detailed report *could definitely write detailed report*

Appendix B

Operational Definition of Narrative

An Introduction to Narrative

A narrative is like a story, but it is not a story. When most people think of narrative, they think of a person telling a story that they are familiar with. However, the narratives you will be dealing with come from participants who took part in an earlier study in which they watched a simulated theft on video and were asked to recall the events they saw. You will be dealing with the transcriptions of the verbal testimonies. You will not be asked to consider the accuracy or plausibility of the statements you will read. Rather, your job will be to analyze the eyewitness testimonies for narrative features; this set of instructions will help you to find these elements.

Features of narrative

Narratives are a form of discourse and they have several features.

First, narratives are meant to convey meaning. Narratives recount events in meaningful ways so that the listener can understand the content. It is the narrator who decides the content and organization of the account. One way that a narrator can coherently organize information is through the use of **structure**. Often a narration is composed of several related episodes, and the narrator decides the best way to organize the events in a way that is clear and understandable. You will be asked to examine the use of structure in the testimonies.

A second feature of narrative is its use of **sequence**. Much of the information in narratives tends to be organized temporally; a narrative is not like a grocery list (a random listing of items), but rather its contents are organized according to time, space or logic.

Third, narratives are descriptions of events, characters and their emotions, motives and behaviours. One feature of narrative that you will be asked to look for is **elaborations**. Sometimes narrators will not only describe general events and behaviours but will, for example, evaluate the events and characters, or make inferences about the character's goals, thoughts or feelings.

Finally, narratives are marked by statements about the role of the narrator as the storyteller and provider of information and statements about the listener's role as the audience and gatherer of information (called **narrative voice**). You will be asked to note whether the witness makes any qualifying statements about his or her perceptions of, memory for and telling of events in the video. In addition, the witness may refer to his or her perceptual experience while viewing the video. You will also be asked to note whether the witness acknowledges the listener.

NARRATIVE: AN OPERATIONAL DEFINITION

1. Structure

As stated earlier, narratives are like stories in that they have clear beginnings, middles and endings. Narratives are structured; they have specific formats.

I. Start of Narrative: The Beginning

Please note that it is possible to have a marked, introductory and framed beginning. These 3 categories are not mutually exclusive.

i. Marked Beginning: Narratives may have marked beginnings – a notice that the story has started, "First of all" (094). If the beginning is marked, the witness may state that he or she is starting at the beginning, "At first" "At the beginning…". Beginnings that are not marked will likely start with the very first details of the crime video, "a lady went in to an interview" (036), "well there was a girl going in for an interview" (003).

ii. Introductory Beginning: The beginning also serves as an introduction – an introduction to the protagonist and the setting, "a lady came into the office for an interview" (024), "a young, well-dressed, very presentable, apparently confident girl came in for a job interview" (001).

Some narratives will not introduce the setting or context, "I saw this woman walking down the hall" (071), "a lady walks through a hall and meets someone she knows" (065), "a young lady came in" (094). In these examples, we are introduced to a person, but the setting is vague. In the earlier examples, the setting is more detailed – the setting is described as a job interview specifically.

iii. Framed Beginning: The beginning could foreshadow later events, "I observed a crime" (021). In this example, the witness first states that a crime was committed, and then describes the events leading up to the crime. This is an example of a framing statement, which leads the listener to take in the narrative in a certain way. Other examples of framing statements are: "this terrible thing happened" and "I'm going to tell you a story". In these examples, the listener is prepared to hear about the "terrible thing" or is prepared to hear a "story".

II. Center of Narrative: The Middle/Development

The middle part of the narrative contains the action. This part of the narrative should build up to and reveal the plot. The middle/development will either have dramatic stress or it will not have dramatic stress.

i. Middle/Development with Dramatic Stress: There may be stress at dramatic points, and a sense of foreshadowing: "he'd no sooner left the room than the young lady, who was there originally […] took a look around and snipped across to the gentleman's chair […] she fished in there and found his wallet […]" (094), "She looked around rather

furtively and when she made sure that nobody would see her, she reached into the pocket and took what appeared to be either loose money or a small change purse" (003).

ii. Middle/Development without Dramatic Stress: Sometimes the development is not as exciting, and it may blend in with the rest of the description in the narrative, "and when another person being interviewed went in with the interviewer she went into his coat and removed the wallet" (021), "she [...] went into, uh, his coat, and ... took the wallet out, opened it up, and it, it had a, had a bunch of bills in it" (082b), "she seen him put his wallet into his jacket so she went and she uh opened his wallet and took what seemed to be all the money out of it" (024).

III. End of Narrative: The Ending

The ending can be marked, and it also can be a summary ending.

i. Marked Ending: Like the beginning, the ending can be marked or announced. A marked ending should show that the witness has nothing more to say. Sometimes the witness will note that the video ended: (094), "and that was the end of the video" (024), "and that was it" (001), "and that ended the story" (093). The witness could also indicate that his or her testimony is over: "And that's what I saw. I probably left out something, but as near as I could ... if I was telling somebody about it, this is what I would have to say" (003), "I think that's all I can ... tell you about it" (082b).

These same phrases without the marked endings would end with the last action to be reported, like "And she looked around and took out his wallet and took some money. From the man" (071), or "Put the wallet back and quickly left." (021). These endings are not clear indications that the testimony is over.

ii. Summary Ending: There may also be a summary or conclusion. Some witnesses may summarize the events in the video – the interview, the people involved and the crime itself.

NOTES ON SCORING FOR STRUCTURE

1. Underline what you think is the beginning, middle and ending.
2. Note that there are 3 decision trees for the start of narrative. It is possible that you will have a beginning that is marked, is introductory and is framed, so be sure to consider all 3 trees.
3. Once you have made a decision regarding the start, center and end, write that decision above the underlined words.
4. At the end of the transcript, note what decisions you made. For example, if the beginning was marked, write "Marked Beginning: Yes". If there was no marked ending, write "Marked Ending: No".

2. Sequence and Coherence

Narratives exist to convey meaning to others. One way for a narrative to be coherent and understandable is if it is organized in a sequential manner. That is, the items in the narrative are organized temporally, and/or logically, and/or spatially.

I. Connections

One way to determine whether the events are organized temporally or logically is to examine the connections between the events or episodes. You will be asked to note how the participants mark the relationships between words.

i. Temporal Connections: Events can be organized according to time. The participants are recounting events that they saw in the video and those events occurred in a certain, fixed order (i.e., Kathy entered the interview room, met an assistant, then filled out forms etc.).

Some participants will add events together, "a lady walks through a hall and she meets someone she knows ... And, ah, she starts filling out a form. And she's kinda nervous about doing it. And thinking about how she's doing it." (065). There are other connections between words that designate time, such as "and then", "and while", and "during". One participant stated "Well after they chatted [...] the first woman went into the office" (071). Another participant stated, "I saw ... a woman, who ah, went pretending to interview [inaudible]. And a when a, when another person being interviewed went in with the interviewer she went into his coat and removed the wallet" (021).

Some examples of temporal connections are: "and", "then", "and when", "after", "while" "than" and "during". If you see some of these words in conjunction with one another "and then", count it as only 1 temporal connection.

ii. Logical Connections: Events or episodes can also be organized logically/causally. As with the temporal ordering, you can look at the connections between events or between episodes. Events are logically or causally connected when one event causes another to occur. Examples of logical connections are: "she goes in because she's got a job interview" (065), and "when she went back the car had been towed away and her wallet was in the car, so she was giving him this sad story" (003). "Because" and "so" are logical connections between events.

Some examples of logical connections are: "which", "because", "but", "or", and "so".

Note that logical connections do not refer to a narrator's own use of logic. Sometimes a narrator may make logical inferences or assumptions about the events in the video, but you are not looking for inferences or assumptions right now (see Narrative Voice), just look for causal connections between words or phrases.

At times it may be difficult to distinguish between temporal and logical connections. For example, at first glance this statement is a confusing one: "while he was in there, she reached into his jacket, which he had forgotten to take, and ah, grabbed

money from the jacket" (036). The word "while" is used to put the event in a time context, so this word is a temporal connector. However, there is a logical/causal connector too – "she reached into the jacket, which he had forgotten to take, and grabbed the money". For an example like this, note that there are two types of connections – temporal ("while) and logical ("which").

Remember that temporal connections refer to time, and logical connections refer to causation.

II. Temporal phrases

Temporal phrases also mark time but they do not necessarily involve the types of connections described above, "in the meantime" (003) and "in the process of that" (001). Temporal phrases involve several words, and are not composed of only one word.

III. Change in Verb Tense

Another way that time can be marked is by examining the verb tense that is used.

1) **Ignore regular past tense**:

Most of the witnesses speak in the regular past tense: "she walked into the room and spoke with the interviewer". Because this is the common verb tense when retelling something, you'll be asked to ignore verbs in the *regular past* tense.

2) **Note verb tense changes when any other tense is used**:

You will be asked to take note when the witness changes from the regular past tense to any other verb tense. So you should ignore all cases of regular past tense, but just pick out when the verb tense changes to anything else: past perfect, present, future etc. Remember that you only have to state whether a verb tense change occurred; you do not have to note whether the change was to future or past perfect etc.

For example, if you see: regular past tense, regular past tense and then the future tense, you would underline the verb in the future tense. This is the change in verb tense. Similarly, you might see present tense, present tense, then regular past tense. In this case, you would underline the first present tense verb. Because the norm is regular past tense, anything else should be noted right away.

3) **Note only the first time the verb tense changes when there is a string of phrases in the same tense**:

This last example brings up one other important point. When you see lists of verbs of the same tense, that are not in the regular past, you only need to note the first verb tense change in the list. For example, if you see regular past tense, regular past tense, future tense, future tense, future tense, regular past tense, you would only note one change in verb tense.

There may be other switches in tense in a long list, however: regular past tense, regular past tense, future tense, future tense, present tense, regular past tense, future tense. In this example, there are 3 changes in verb tense: the first switch to future, the switch to present, and then the switch back to future.

4) **Watch out for "ing" verbs and "had ___" verbs**:

The most important thing is to think about how the events are organized in time. Is the event occurring in a certain instance, or is it a continuous event? Is there an indication that the events are occurring within the past, present or future?

- are the events occurring at a certain instance *within the past* "she talked" (reg. past), or are they continuous "she was talking"

- are the events occurring at a certain instance *within the present* "she speaks", or are they continuous "she is speaking"

- are there different types of *future tense* "she is going to speak", "she is going to be speaking", "she will speak".

5) **Concrete examples**:

Switches within the Past:

One example of a change in verb tense is "she reached into his jacket which he had forgotten to take" (036) = 1 change in verb tense. The first verb is the regular past tense, so it should be ignored. You can see in the last part of the sentence that there is a change in verb tense.

One rule of thumb is to note whether some of the events are described as having happened before others within the past: "she had finished then she walked out". You may see "he forgot" vs. "he had forgotten". This is a change from past to past perfect. You may also see, "he talked" vs. "he was talking to".

Another helpful hint is to look for events that occur continuously while another event occurs in one moment "he was filling out a form and she went in for an interview" (045). If you see verbs ending in "ing", keep a look out for changes in verb tense, e.g. "was filling", "had been working".

Several switches from present tenses to past tenses:

One other example of changes in verb tense is: "before he goes into the interviewer he takes – he had his wallet and I guess he's looking for maybe his SIN number or something – slips it into his jacket and he goes in" (020) = 4 changes in verb tense. "Goes" is the first instance of regular present tense, "he had his wallet" is not the regular past, "he's looking" is a type of present tense that suggests a continuous action, and "slips" is back to regular present tense.

Similarly, "and she was, you know, kind of looking around all the time just to see if anyone was observing her" = 2 changes in verb tense. "You know" is the present tense, and "she was looking" is not the regular past. "Anyone was observing" is not underlined because it is the same verb tense as "she was looking". There is thus a small list of verbs in the same tense so you only need to underline the first change in tense.

Switch to future tense:

There can also be switches into the future tense: "He said "Yes, I'll be with you, so please just leave" = 2 changes in verb tense. Also, "She will go to California for a holiday … she goes into the place and the person tells her she's gotta wait a week for the interview" = 3 changes in verb tense.

III. Spatial Order

One other type of relationship between events you may come across is spatial. You can examine whether the narrator talks of people or objects as being located in a certain place, or the narrator may talk about people's change of location (but note that you do not need to differentiate between these two types of spatial order).

i. Positioning in space: The witness may describe people or objects as being positioned in a certain place in space, "they were seated at the same table together" (001).

ii. Change in location: The witness may also indicate that people or objects are changing locations, "she was walking towards the room" (024), and "[she] put her purse to one side" (003).

You may find that the use of the word "in" will be quite common, "the first lady who came in" (024), and "she came into the office" (024). Other common words used to establish spatial order are "here", "over there", "up there". For example, "his jacket was hanging […] where he'd placed it when he arrived" (094).

Sometimes the reference to space might be more implied: "he went" (045). In this example, it is implied that "he went out" or "he went in".

Common words designating space are: "in", "out", "at", "here", "there", "where", and "towards".

The presence of these words do not necessarily mean that spatial order is indicated, so be sure to be aware of the meaning of the phrase, "a lady came in in a red sweater" (094). In this example, the first "in" indicates spatial order, but the second one does not.

NOTES ON SCORING FOR SEQUENCE AND COHERENCE

I used two copies of the same transcript to score sequence and coherence: one copy for connections and temporal phrases, and one for spatial order and changes in verb tense.

Temporal and Logical Connections:

1. Start by underlining any connecting word, like "and", and "because". Remember that the operational definition is not exhaustive, so you may find words that are not included in the definition but are logical or temporal connectors.

2. Decide whether the underlined words are temporal (time) or logical (cause/effect) connectors. Write "TC" or "LC" above the temporal and logical connections, respectively.
3. Note any words you have problems with. You can always return to them later (you may come across a word that was left out of the operational definition but appears in several transcripts).
4. At the end of the transcript, total the number of temporal and logical connections.

Temporal Phrases:

1. Go through the transcript and circle all of the temporal phrases, e.g. "in the meantime". Write "temp. phrase" (temporal phrase) above the phrase.
2. At the end of the transcript, total the number of temporal phrases.

Changes in Verb Tense:

1. Note any changes in verb tense. Write "chg. v.t." over the phrase.
2. Total the changes in verb tense at the bottom of the page.

Spatial Order:

1. Go through and underline any indictors of spatial order. Write "SO" above the words.
2. Total the indications of spatial order at the bottom of the page.

3. Elaborations

All of the participants watched a crime video and were then asked to freely recall what they saw. When narrators elaborate on the crime video, they not only describe the actions and dialogue they saw and heard, but they may also move beyond the crime video (stimulus). Narrators may make inferences about the characters' goals, purposes, motivations, feelings, thoughts, morals and may comment on their physical appearance (characterizations) or narrators may express their attitudes towards the situation (evaluations). The narrators may also use imagery (it was like a ...) to describe what they saw. Thus, elaborations are "statements that are consistent with the information in the stimulus . . . but not explicitly contained therein" (Gould, Trevithick, & Dixon, 1991).

I. Characterizations

Characterizations are a type of elaboration. Characterizations are comments that brand, distinguish, describe, represent or portray people in the stimulus as characters. That is to say, characterizations are comments about key players in the stimulus that go beyond a rudimentary reporting of behaviour and physical description. Characterizations can cause the listener to generate an image of the person as a character with emotions, motives, goals, morality, and mental/psychological states. Characterizations can involve inferences about the internal workings of the character. Characterizations can also include opinions regarding the physical appearance of the character (external)

Rather than solely reporting on the characters' behaviours (e.g., "she started filling out a form"), some participants may comment on, for example, the character's emotions or psychological state, "it seemed to disturb him quite a bit" (094). Where the first example is a clear description of actions, in the second example, the participant is making an inference about the character's psychological state from the character's behaviour. These inferences about the characters can be explicitly stated. For example, "she seemed pretty fidgety and nervous" (024), "I thought she was a rather shifty-eyed person" (003), "she was confused, she didn't really know what to do" (024) and "it flustered him quite a bit" (024) are all instances of characterizations; they are comments about the characters' psychological state. In the statements, the character is fidgety, nervous, confused and flustered. Comments on the character's psychological state can be less obvious. For example, "he was quite miffed" (094), "he did a lot of fussing around" (094) are comments on the psychological state. The words "miffed" and "fussing" suggest that the character is upset.

Sometimes the description of the actions can contain references to the character's motivation and goals. For example, "she snipped across to the gentleman's chair" (094), and "she fished in [the pocket]" (094) are examples of characterizations that comment on the character's actions, goals, and motives. Through the use of descriptive words, adverbs, adjectives, verbs and nouns, characters are described. The word "snipped" implies that the character is doing something sneaky or devious (pertains to motivation), and "fished" suggests that she has no clear goal and is generally snooping in the pocket (pertains to a goal).

Another way in which characterizations can be less obvious is when labels are applied to the character. For example, "he had an accent which I kind of think might have been Italian" and "I don't know that guy's name, I'll try 'Barry' though" (094) are also examples of less obvious characterizations. This participant was choosing his own labels for the character, Bruno was "Italian" and was to be called "Barry".

Characterizations can also involve comments on a character's physical appearance that go beyond a general physical description. Some narrators may voice their opinions on a character's looks: "a rather plumpish, young person" (003); "a young, well dressed, very presentable ... girl came in for a job interview (001). In these examples, "plumpish", "well-dressed" and "presentable" are opinions regarding the physical appearance of the characters. If the narrator were to say: "a young person" or "a young person dressed in a business suit", they would <u>not</u> be using characterizations – they would be describing the physical appearance of the characters.

Sometimes the comments on a character's physical appearance may be a more subtle: "[he] looked like a real blue collar worker" (003). In this example, the witness may have been commenting on the man's clothing or physical features. Either way, the witness is expressing his or her attitude towards the man's appearance.

Through the use of certain comments, evaluations, descriptive words and labels, participants can develop characters from the stimulus that are worth telling a story about. Players can become characters in a story who have, for example, feelings, motives and names and are not mere agents of behaviour.

II. Situational Elaborations

Situational Elaborations are another type of elaboration. Situational Elaborations are attitudes that are directed towards the situation, not the character(s). Situational Elaborations can involve narrators' attitudes to anything inanimate, such as furniture, a setting or room, or a general event that does not reflect on any one character.

A situational elaboration could be a comment about a general event: "and they were seated at the same table together. It seemed a little bit awkward that they would both be filling out forms for the same job" (001); "everything seemed to be adequately explained to her" (001); "she met a friend on the way there and that seemed to be, sorry, but it didn't seem to be of any importance" (036). In the first two examples, the witness is expressing an opinion towards an event that occurred – one was an "awkward "moment and the other involved an "adequate" exchange of information. In the last example, the witness states that an event was not of importance – this is another case of a witness giving an opinion on happenings in the crime video.

If these same statements were re-written without the Situational Elaborations, they would be: "and they were seated at the same table together. They were filling out forms for the same job", "everything was explained to her" and "she met a friend on the way there".

NOTES ON SCORING FOR ELABORATIONS

1. First go through the transcript and underline any opinions, inferences, comments descriptive words, labels or attitudes pertaining to the character (e.g. emotions/psychological state, physical appearance, goals, motives, actions, morality or labels).
2. Once you have decided whether the underlined words are actually characterizations, write "C" above them.
3. Go through the transcript again and look for opinions about events, inanimate objects, or settings.
4. Once you have decided whether the underlined words are actually situational elaborations, write "SE" above them.
5. Set aside any problem phrases and come back to them later.
6. Total the number of characterizations and elaborations at the bottom of the page once you have completely finished.

4. Roles of narrator and of listener: "Narrative Voice"

A second feature that may identify narrative in discourse is that narrative is a personal form of discourse. That is, narrative involves both a narrator and a listener, or audience. A narrative may contain certain properties that mark it as a story being told by someone to someone else. In looking for instances of narrative voice, you will be asked to determine whether the narrator has interjected himself/herself into the narrative.

I. Role of the narrator

These statements mark the narrative with information about the narrator's (or witness') role as story-teller, provider of information, and as an eyewitness to a crime. The role of the narrator can be expressed when the witness gives an opinion about his or her own memory for and/or ability to recount events in the story, as well as his or her perceptual experience while viewing the video. These statements do not include personal evaluations of the characters or events (see elaborations).

The most common way that a narrator injects himself/herself into the narrative is through the use of personal pronouns, like "I", "me", or "my". Often the narrator will use personal pronouns when qualifying statements they have just made, although some narrators will use qualifiers without using personal pronouns (see qualifiers). Finally, you may come across personal pronouns that are not qualifiers but still related to the role of the narrator (see other uses of personal pronouns).

You may see the use of personal pronouns when the witness repeats dialogue from the video, e.g. "and then she said 'I didn't bring a resume'". This is not an instance of narrative voice.

i. Qualifiers

When giving descriptive information about the crime, "she was going to come back in ten minutes" (001), witnesses may qualify their statements by demonstrating their confidence in what they have stated, "she was going to come back in ten minutes, I think it was" (001). You may find that witnesses will comment on their perceptions, memory and storytelling abilities.

Negative Qualifier: A participant may comment on his or her perceptions, memory or storytelling abilities in a negative manner. The most common type of qualifier you will probably come across is the negative qualifier. You will know a negative qualifier because of the use of a negation word, like can't or won't.

For example, "she was told to return at 4:30 . . . a couple of days later, I can't really remember" (024). In this statement, the witness conveys a lack of confidence in his or her memory. A negative qualifier is anything that suggests the narrator is not confident in his/her memory, story, or perceptual experience. An example of a negative qualifier pertaining to story-telling is: "I probably left something out, but as near as I could ... if I was telling somebody about it, this is what I would have to say" (003). Examples of negative qualifiers pertaining to perception are: "she spoke to the gentleman about problems she was having with her car which I couldn't hear entirely" (094), "I didn't quite catch what she was talking about" (093), [the tape] "was very scratchy" (093). Other examples of negative qualifiers are: "I don't know how many" (082b), "uh, you know, I don't know that guy's name" (094), "I'm not sure", and "I'm not good at this".

You may come across other negative qualifiers which are not obviously negative. Some qualifiers may not even contain personal pronouns. Here are some examples of more subtle qualifiers, "it seemed she got a ride downtown or wherever the office was" (024), "she kind of had a, kind of, it looked, she had like

a a long nose" (024) and "they seemed to know each other" (024). Often the witnesses will make assumptions, "it seemed". Here is another example of an assumption: "a gentleman came in and he was given the same form, I presume, to fill out" (094). This participant is making an assumption about general events in the video, and the fact that the statement "I presume" was included in suggests that the narrator or witness is the one making the assumption.

Positive Qualifier: The opposite of negative qualifiers are positive qualifiers, where witnesses are very confident in their abilities, "I'm very good at remembering this kind of thing", and "neither of the two people had pens, I remember that" (024).

iii. Other uses of personal pronouns "I", "me" or "my": These are other examples of narrative voice, and they often refer to the witness' experience. Note that these types of pronoun do not include qualifiers.

Some examples of the use of personal pronouns include comments on perceptions of the stimulus: "Ok, I saw this woman walking down the hall" (071), and "I observed a crime" (021). These same statements without the personal pronouns would be: "a woman was walking down the hall" and "a crime occurred". Other uses of personal pronouns could occur though the use of age markers (statements that indicate their age): "in my day", and "she seemed young to me".

NOTES ON SCORING FOR ROLE OF NARRATOR

1. The easiest thing for you to do is to look for qualifiers of statements. The negative qualifiers are generally fairly easy to find: look for negation words. Underline the negative qualifier, and write "NQ" above it.
2. Positive qualifiers will not be as common, but they should also be fairly easy to find: witnesses will say that they are very confident about something. When you find a positive qualifier, write "PQ" above the underlined words.
3. "Other uses of personal pronouns" ARE NOT qualifiers, and usually will refer to the witness' experience (e.g. "I saw", "I did"). When you find one of these features, write "OPP" above it.
4. Write down the total number of positive and negative qualifiers, and the other uses of personal pronouns, at the end of the transcript.

II. Role of listener

These statements mark the narrative with information about the listener's (or interviewer's) role as the gatherer/seeker of information.

i. Explicit Role of Listener: Statements that refer to the listener's role can involve direct reference to the interviewer using second person pronouns like "you" and "your". For example, these two witnesses acknowledge the interviewer: "you know" (024), and "I think that's all I can ... tell you about it" (082b).

ii. Implicit Role of Listener: Sometimes the acknowledgement of the listener can be more subtle, "she met a friend on the way there and that seemed to be, sorry, but it didn't seem to be of any importance" (036). In this last example, the witness apologizes to the interviewer for not continuing to talk about the meeting with the friend.

These same statements without indications of the listener would be: "I think that's all I can tell about it", and "she met a friend on the way there, but it didn't seem to be of any importance".

As with the role of the narrator, repetition of dialogue from the video that contains personal pronouns is not an instance of narrative voice/role of listener.

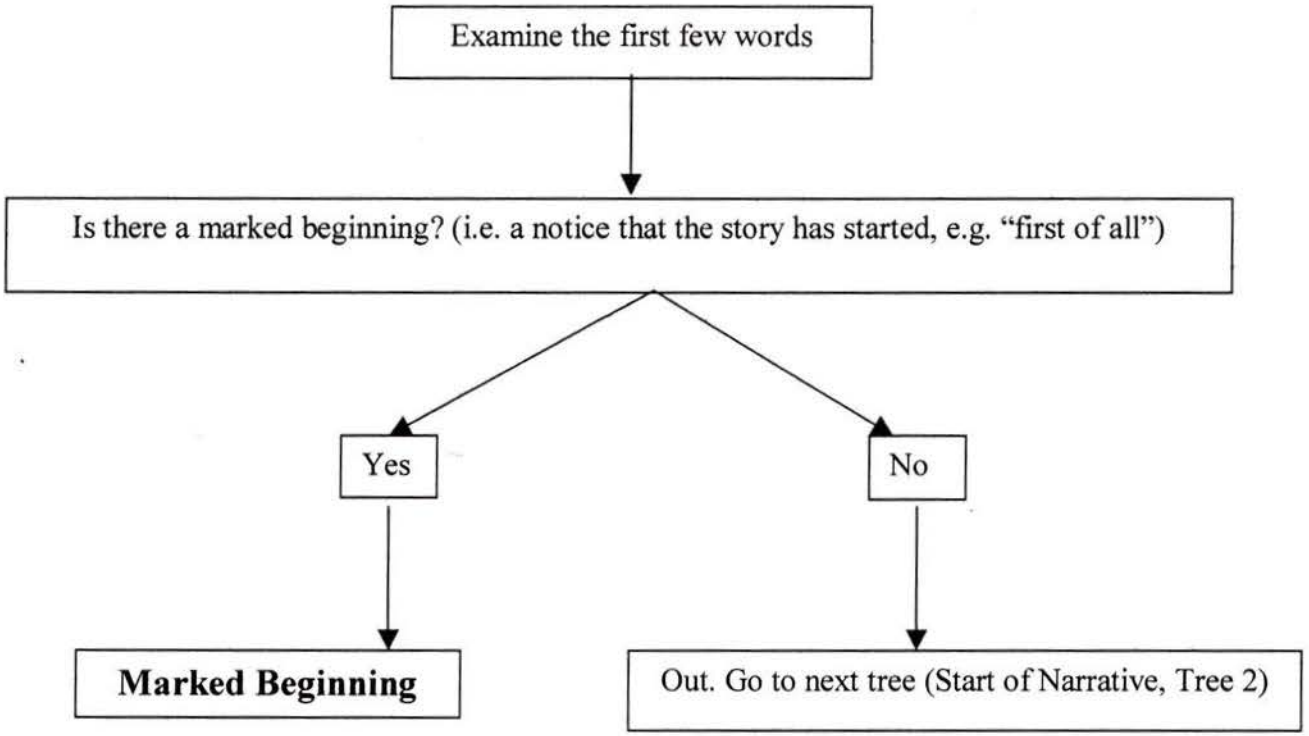
NOTES ON SCORING FOR ROLE OF LISTENER

1. These features likely will not be as common as the role of narrator. The easiest way to approaching the scoring is to first look for the words "you" and "your".
2. You will likely come across *explicit* role of listener more often than the *implicit* role of listener.
3. Note that for scoring purposes, it DOES NOT matter if it is explicit or implicit role of listener. Once you have made your decision, write "RL" (role of listener) above the underlined word.
4. Note any problems and come back to them later.
5. Write down the total number RL's at the end of the transcript.

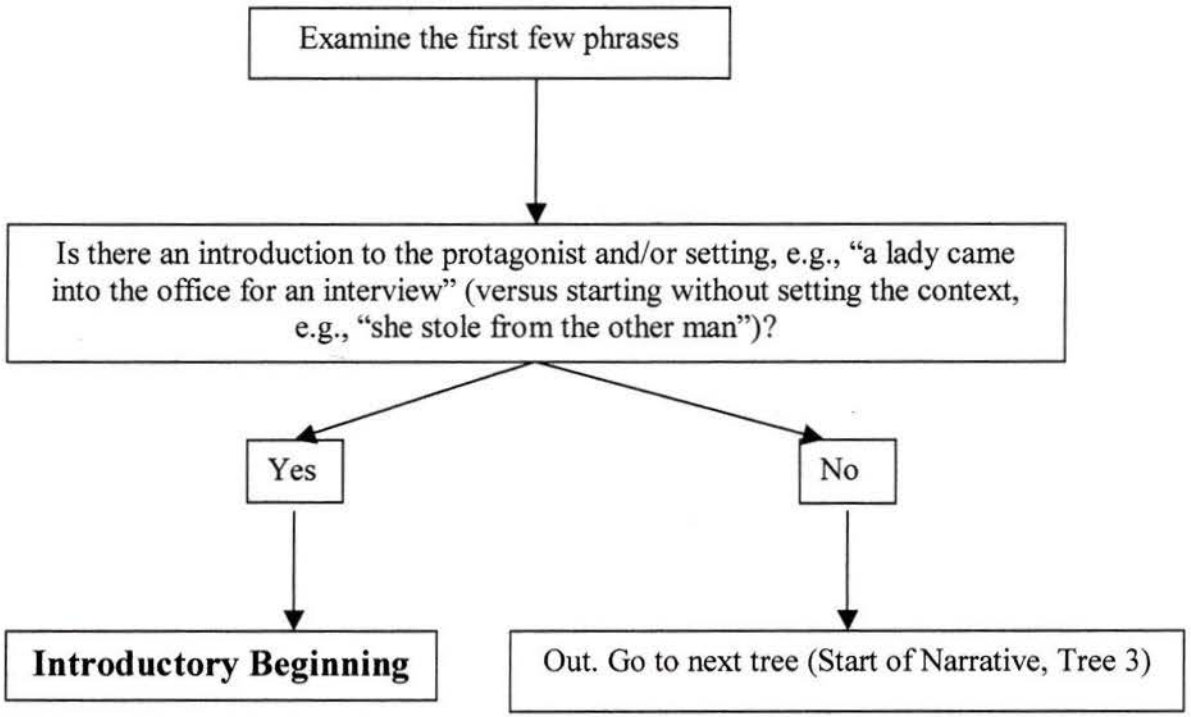
Appendix C

Decision Trees

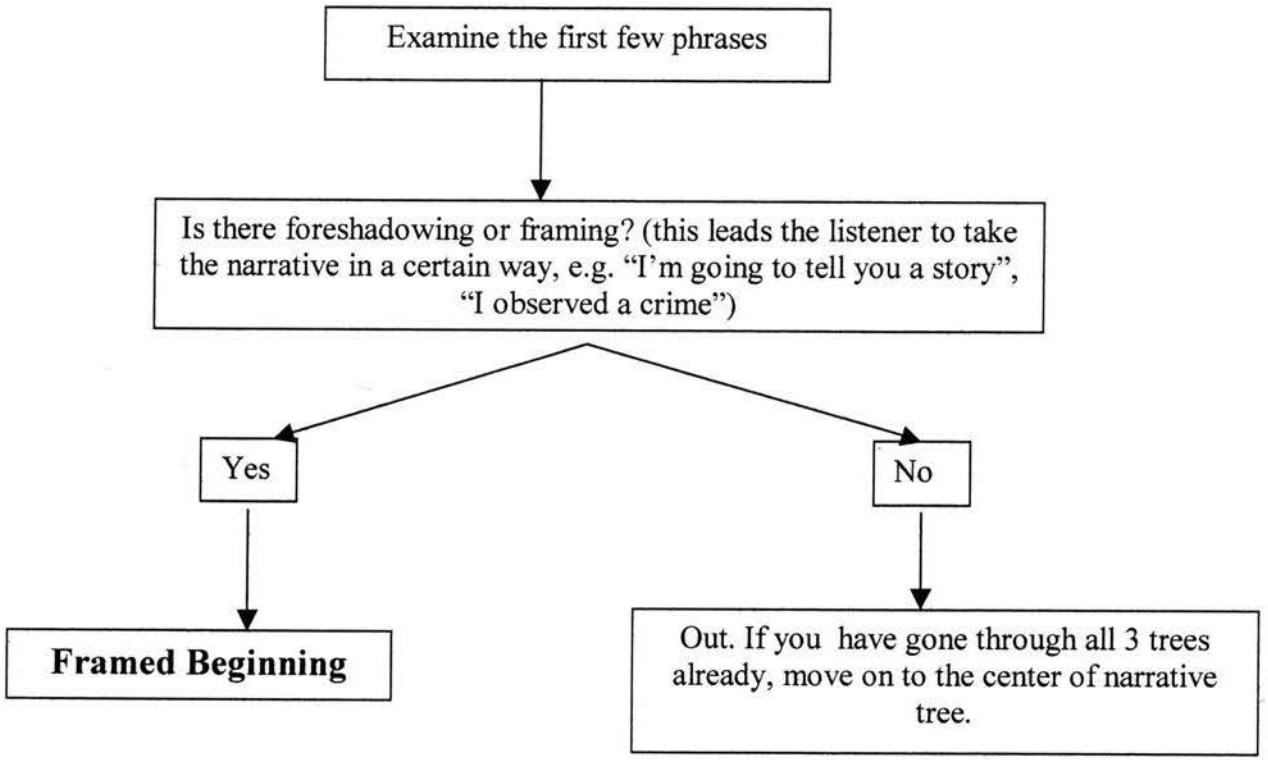
Structure: Start of Narrative, Tree 1 (Marked Beginning)



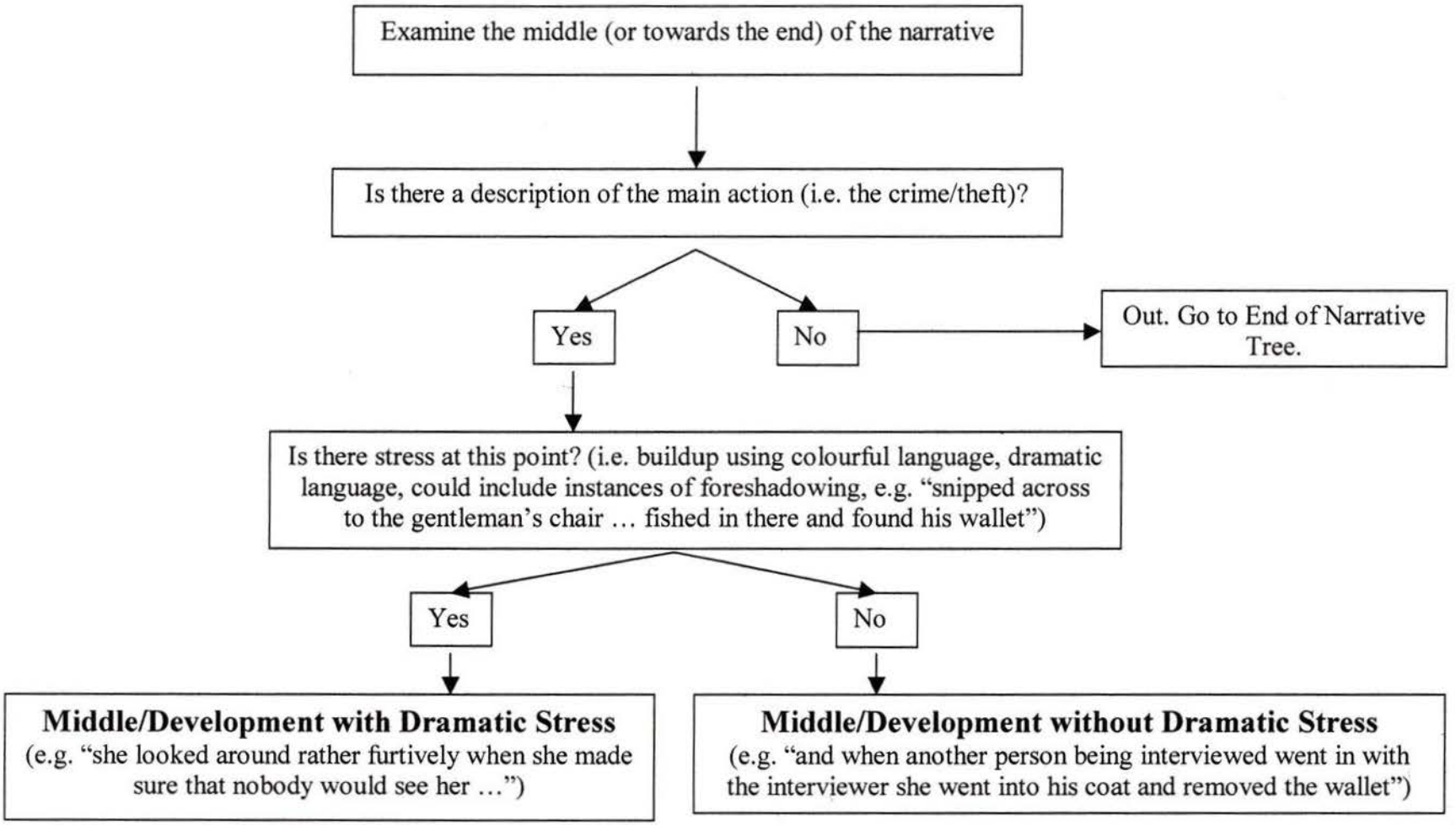
Start of Narrative: Tree 2 (Introductory Beginning)



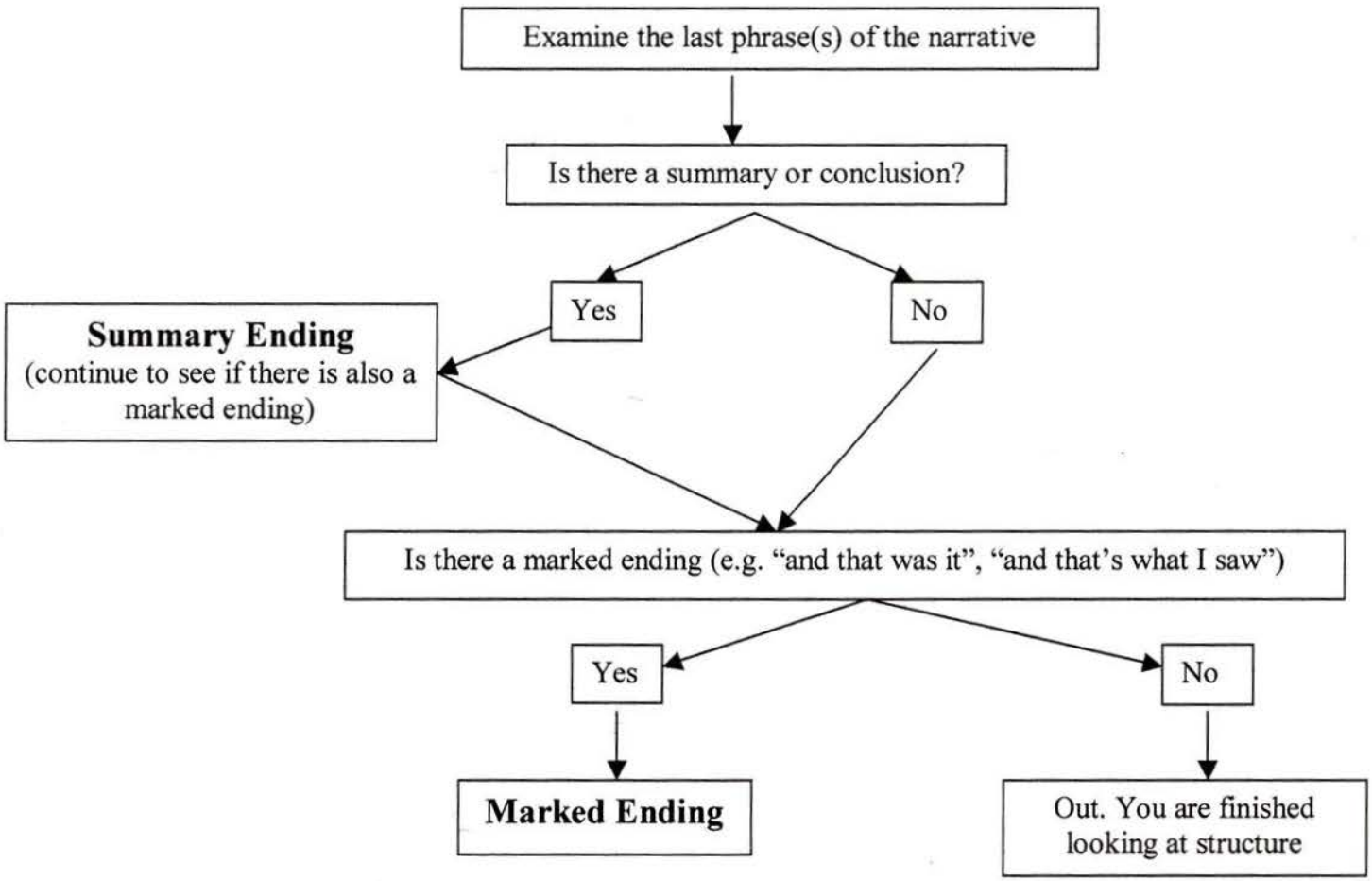
Start of Narrative: Tree 3 (Framed Beginning)



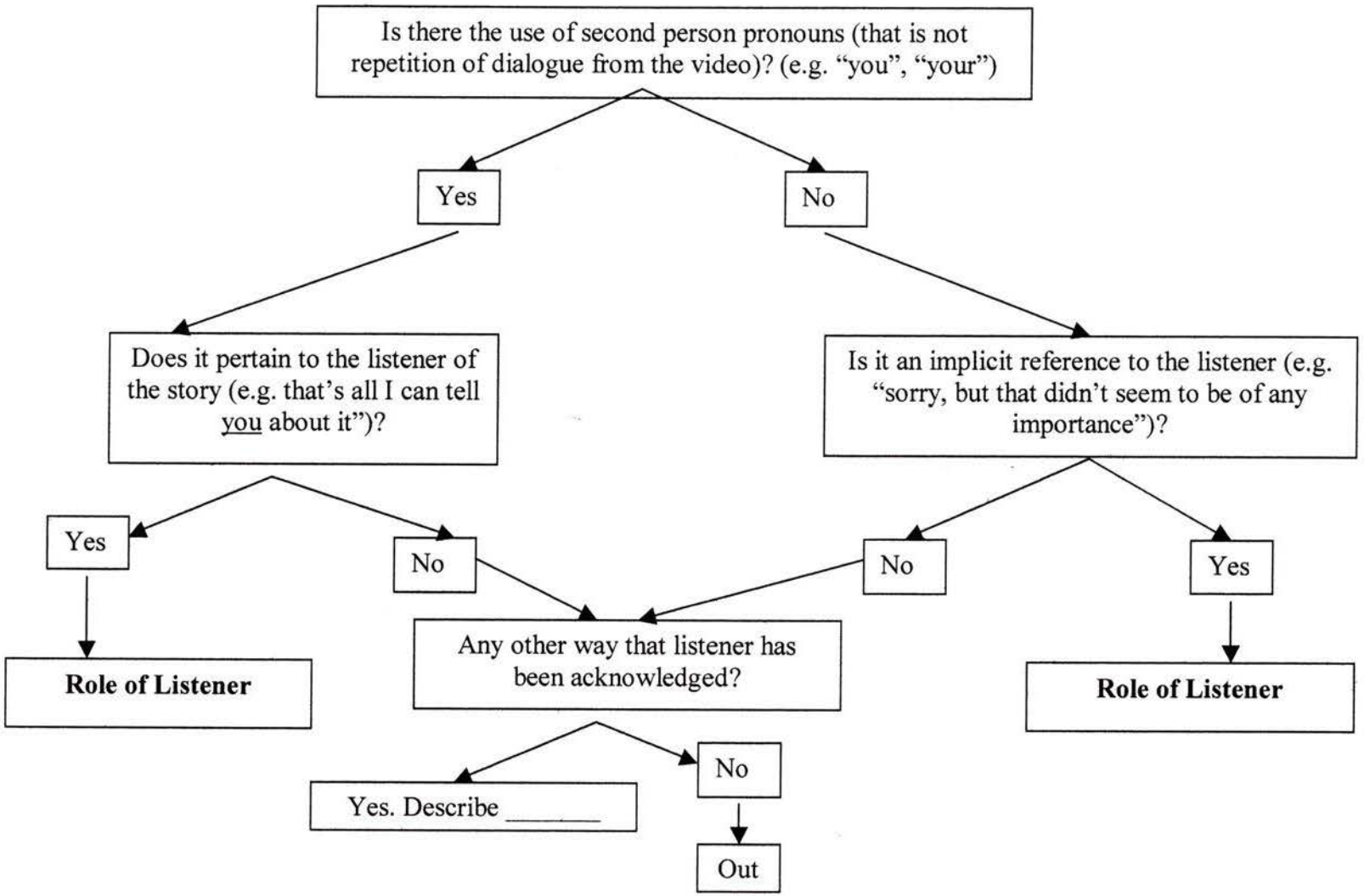
Structure: Center of Narrative

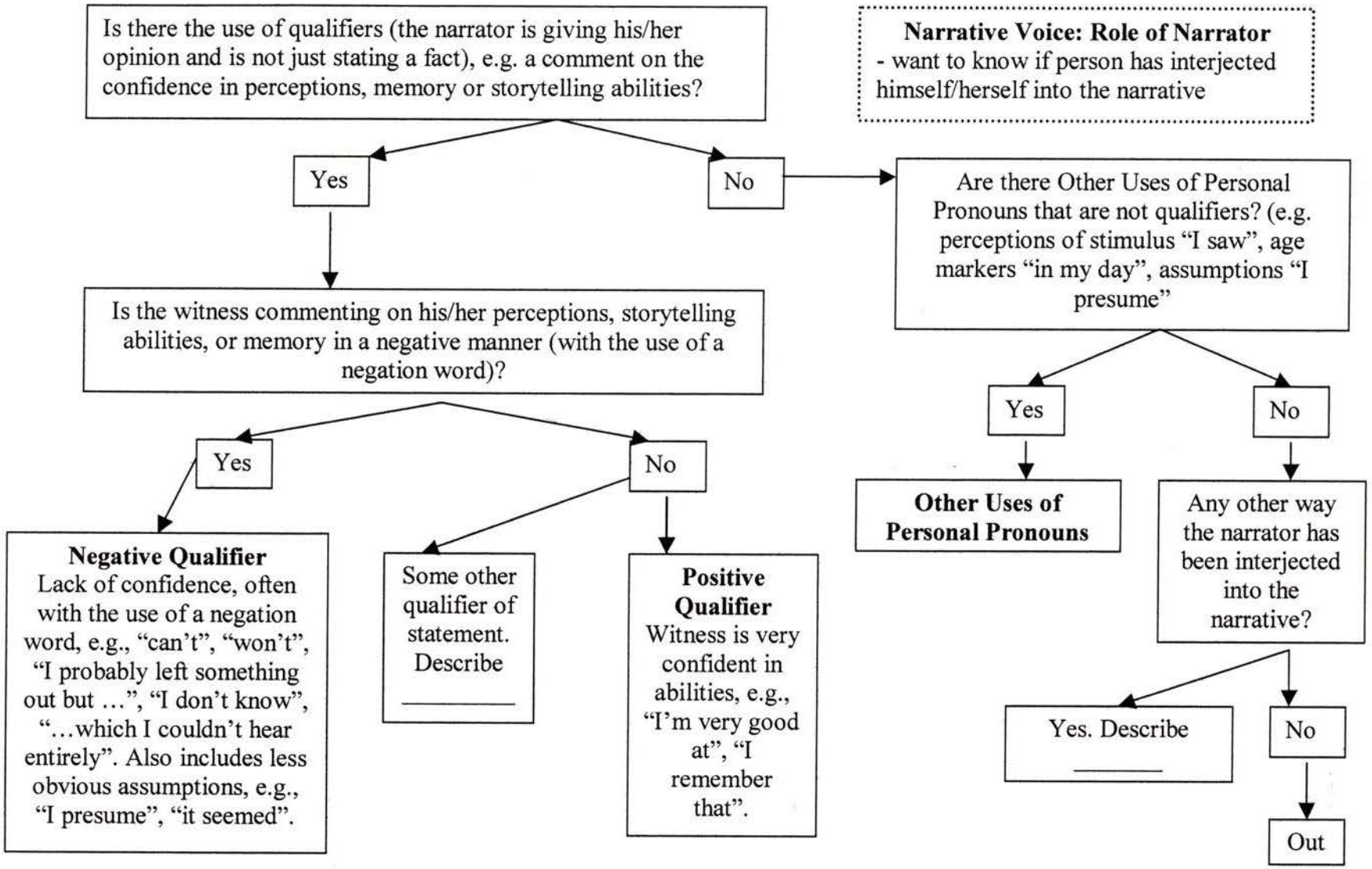


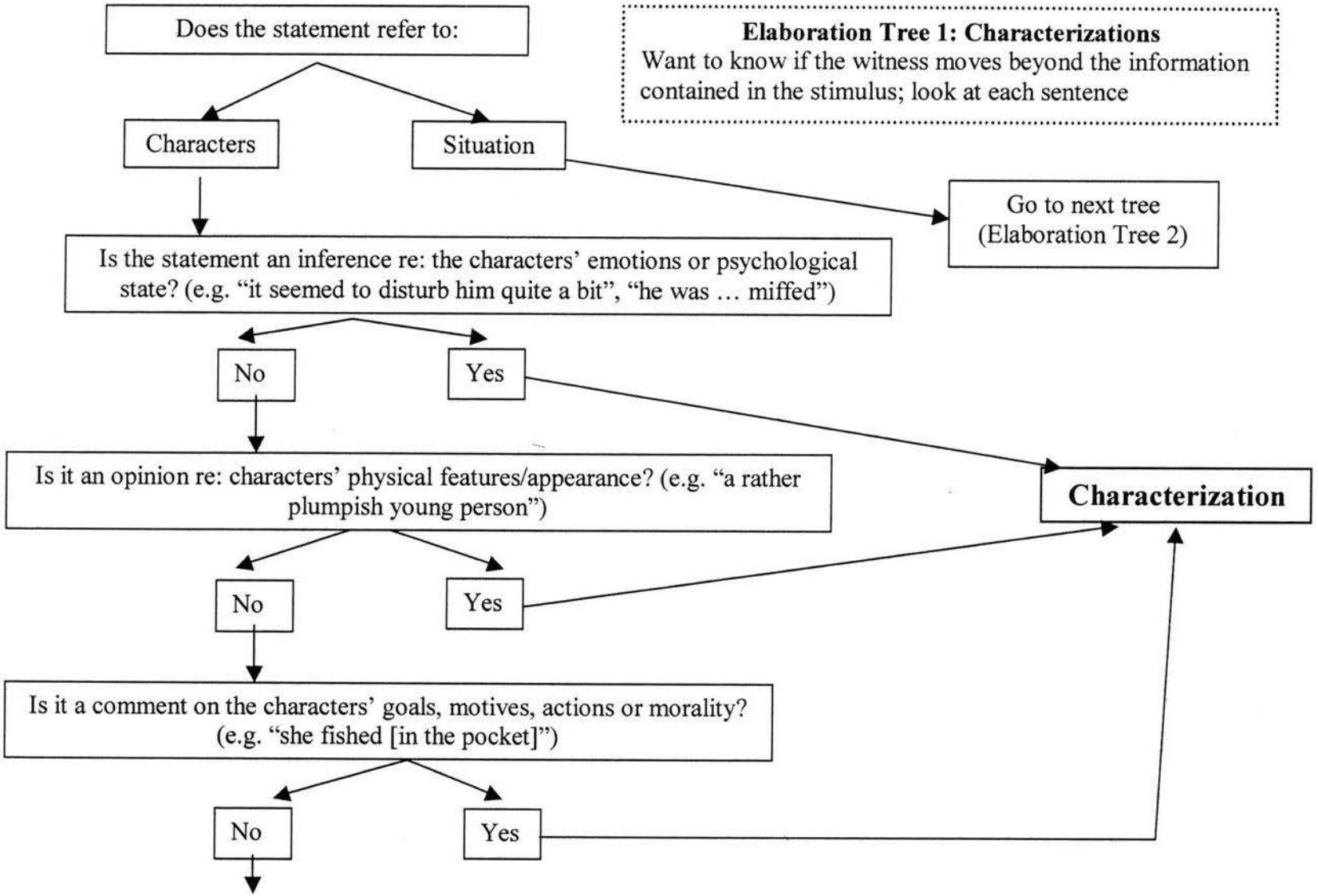
Structure: End of Narrative

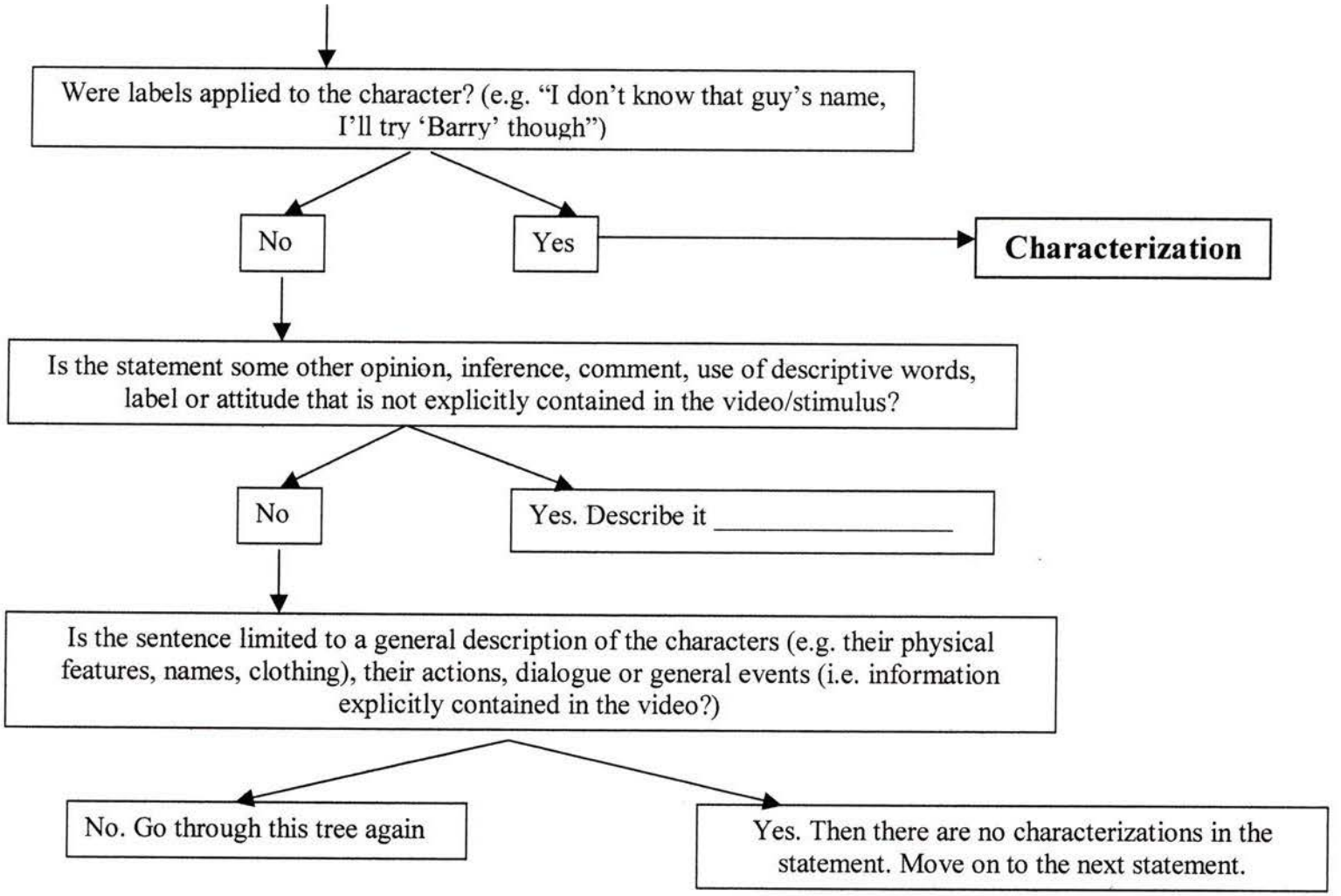


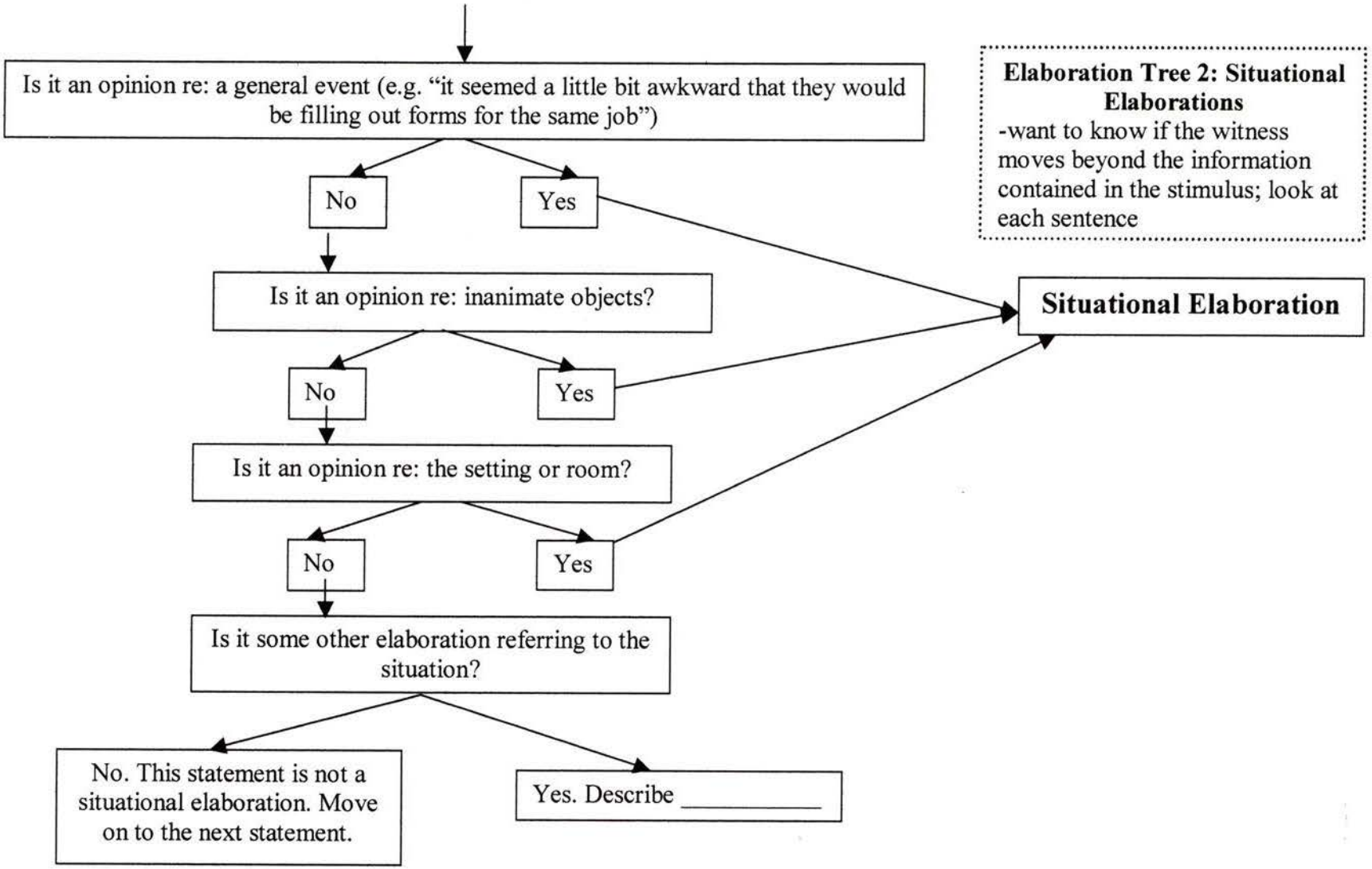
Narrative Voice: Role of Listener



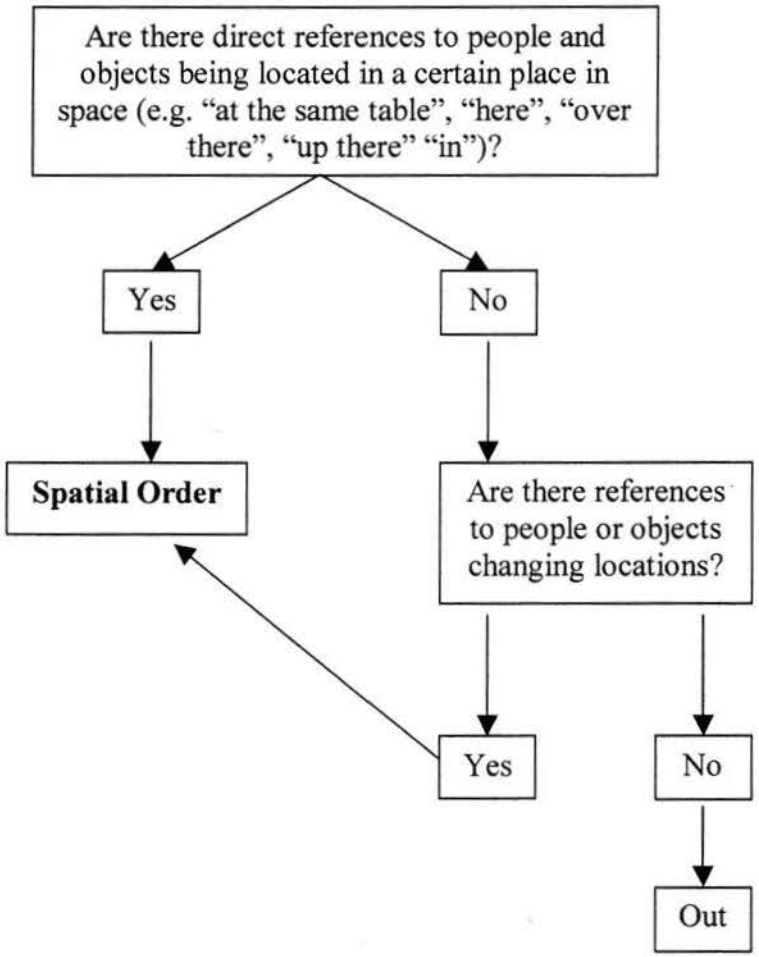

Is there the use of qualifiers (the narrator is giving his/her opinion and is not just stating a fact), e.g. a comment on the confidence in perceptions, memory or storytelling abilities?
Narrative Voice: Role of Narrator
- want to know if person has interjected himself/herself into the narrative
Yes
No
Are there Other Uses of Personal Pronouns that are not qualifiers? (e.g. perceptions of stimulus "I saw", age markers "in my day", assumptions "I presume"
Is the witness commenting on his/her perceptions, storytelling abilities, or memory in a negative manner (with the use of a negation word)?
Yes
No
Yes
No
Negative Qualifier
Lack of confidence, often with the use of a negation word, e.g., "can't", "won't", "I probably left something out but ...", "I don't know", "...which I couldn't hear entirely". Also includes less obvious assumptions, e.g., "I presume", "it seemed".
Some other qualifier of statement. Describe
Positive Qualifier
Witness is very confident in abilities, e.g., "I'm very good at", "I remember that".
Other Uses of Personal Pronouns
Any other way the narrator has been interjected into the narrative?
Yes. Describe
No
Out

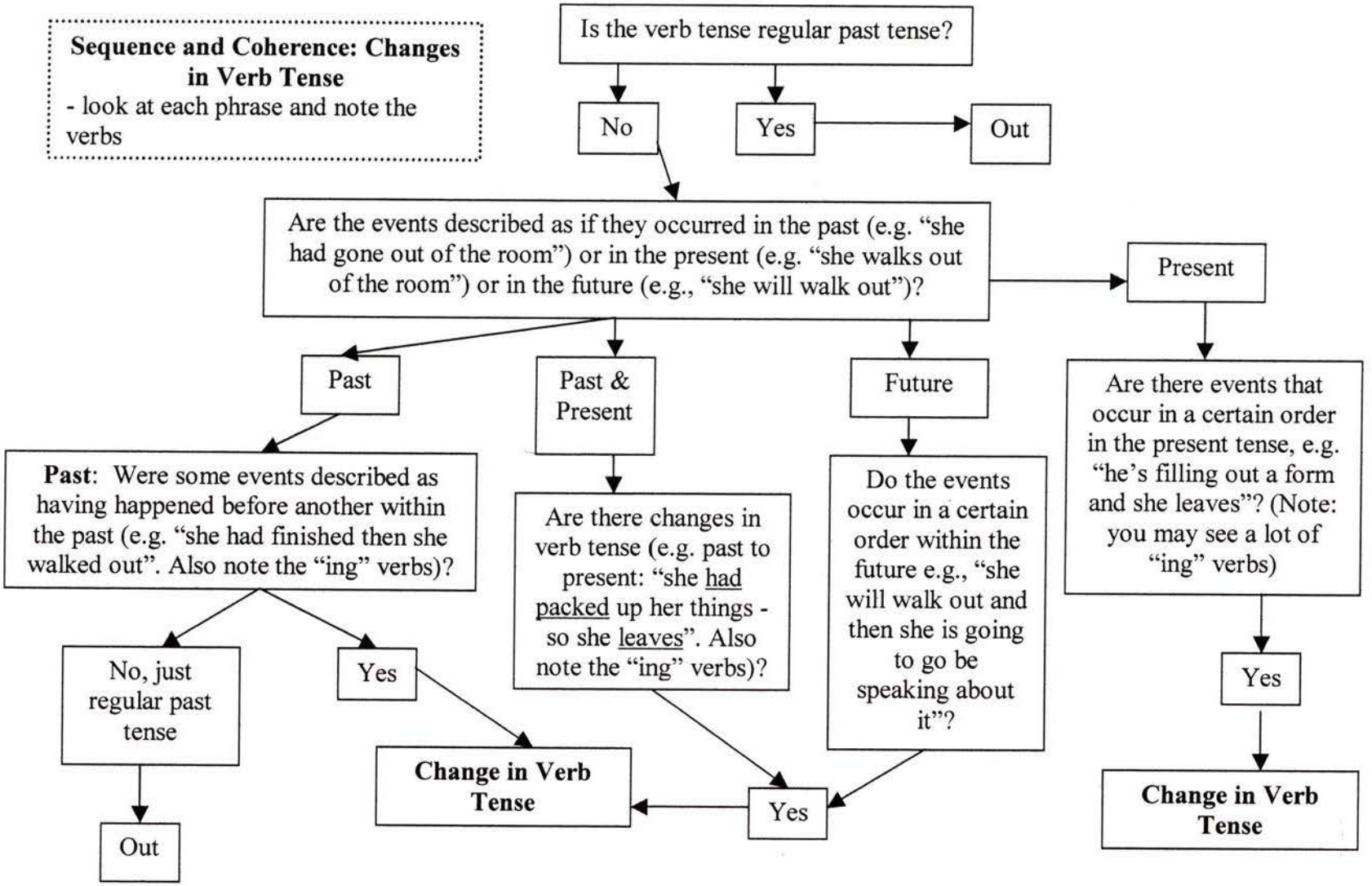

Does the statement refer to:
Elaboration Tree 1: Characterizations
Want to know if the witness moves beyond the information contained in the stimulus; look at each sentence
Characters
Situation
Go to next tree (Elaboration Tree 2)
Is the statement an inference re: the characters' emotions or psychological state? (e.g. "it seemed to disturb him quite a bit", "he was … miffed")
No
Yes
Is it an opinion re: characters' physical features/appearance? (e.g. "a rather plumpish young person")
Characterization
No
Yes
Is it a comment on the characters' goals, motives, actions or morality? (e.g. "she fished [in the pocket]")
No
Yes


Were labels applied to the character? (e.g. "I don't know that guy's name, I'll try 'Barry' though")
No
Yes
Characterization
Is the statement some other opinion, inference, comment, use of descriptive words, label or attitude that is not explicitly contained in the video/stimulus?
No
Yes. Describe it _____
Is the sentence limited to a general description of the characters (e.g. their physical features, names, clothing), their actions, dialogue or general events (i.e. information explicitly contained in the video?)
No. Go through this tree again
Yes. Then there are no characterizations in the statement. Move on to the next statement.

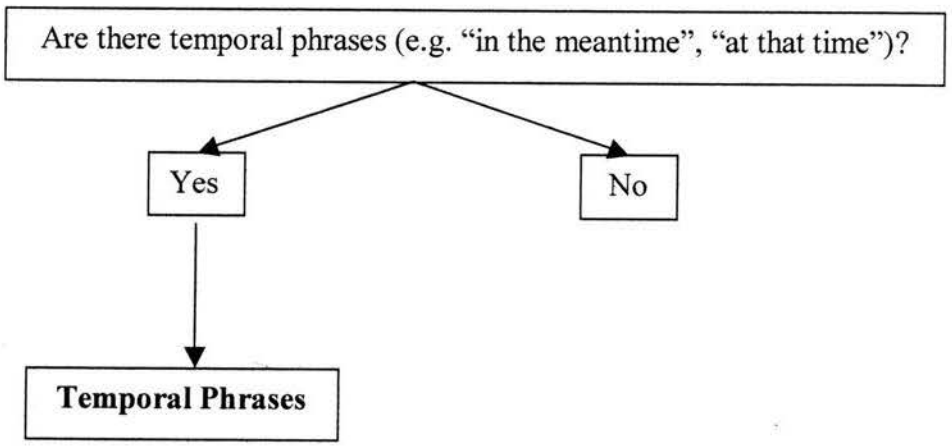

Is it an opinion re: a general event (e.g. "it seemed a little bit awkward that they would be filling out forms for the same job")
No
Yes
Is it an opinion re: inanimate objects?
No
Yes
Is it an opinion re: the setting or room?
No
Yes
Is it some other elaboration referring to the situation?
No. This statement is not a situational elaboration. Move on to the next statement.
Yes. Describe _____
Situational Elaboration
Elaboration Tree 2: Situational Elaborations
-want to know if the witness moves beyond the information contained in the stimulus; look at each sentence

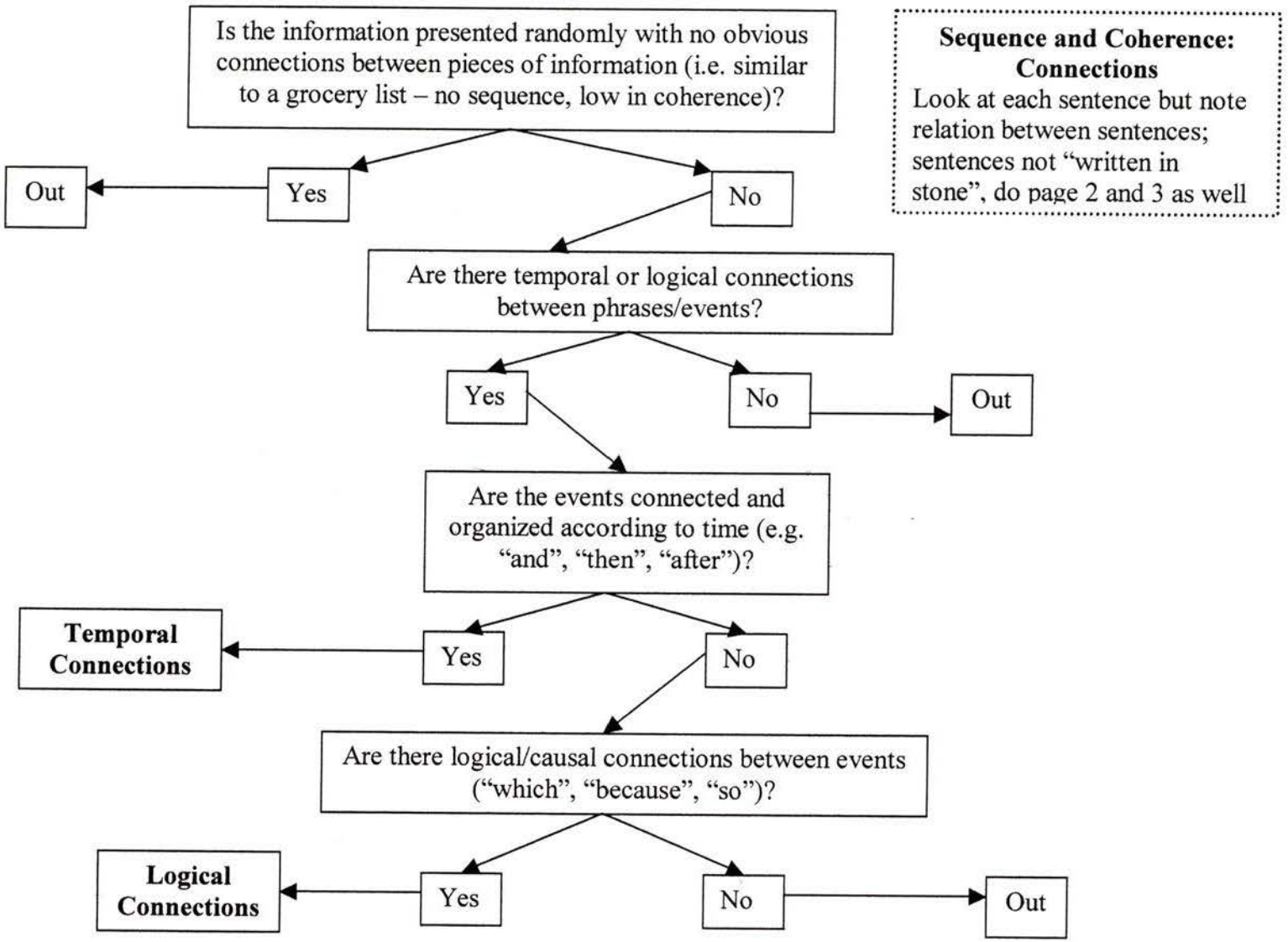
Sequence and Coherence: Spatial Order




Sequence and Coherence: Changes in Verb Tense
- look at each phrase and note the verbs
Is the verb tense regular past tense?
No
Yes
Out
Are the events described as if they occurred in the past (e.g. "she had gone out of the room") or in the present (e.g. "she walks out of the room") or in the future (e.g., "she will walk out")?
Present
Past
Past & Present
Future
Are there events that occur in a certain order in the present tense, e.g. "he's filling out a form and she leaves"? (Note: you may see a lot of "ing" verbs)
Past: Were some events described as having happened before another within the past (e.g. "she had finished then she walked out". Also note the "ing" verbs)?
Are there changes in verb tense (e.g. past to present: "she had packed up her things - so she leaves". Also note the "ing" verbs)?
Do the events occur in a certain order within the future e.g., "she will walk out and then she is going to go be speaking about it"?
No, just regular past tense
Yes
Yes
Change in Verb Tense
Yes
Change in Verb Tense
Out

Sequence and Coherence: Temporal Phrases
- look at each sentence but note the phrases




Is the information presented randomly with no obvious connections between pieces of information (i.e. similar to a grocery list – no sequence, low in coherence)?
Out
Yes
No
Are there temporal or logical connections between phrases/events?
Yes
No
Out
Are the events connected and organized according to time (e.g. "and", "then", "after")?
Temporal Connections
Yes
No
Are there logical/causal connections between events ("which", "because", "so")?
Logical Connections
Yes
No
Out
Sequence and Coherence: Connections
Look at each sentence but note relation between sentences; sentences not "written in stone", do page 2 and 3 as well

Appendix D

Sample Transcript of an Older Adult's Testimony

Witness 117: Older Adult Witness

Ah, minute details like the first girl with the long dark hair came in and she didn't have a pen when she asked her and so she borrowed a pen from the people. And um, she removed her coat, put her handbag down and got busy and answered questions and then had to get her I guess social insurance number or something out of her handbag, so she got that and was copying down the number. And then the um, man came in…um… he was um, quite, I would say dark man, and um… um I noticed that he had his hair parted in the middle why you should notice that I don't know quite the character, short. Um, and um, he also needed a pen. They gave him a pen and he was busy writing his and um, and then they came and took the woman in the other room, um, incidentally I don't think she gave the pen back [laughter]. Um, they took her in the other room and um, a blonde, short, blondish, dark, plumpish woman came through the door and um, she'd evidently come with the short man because she said she was waiting in the car and she just walked across the road to get a cup of coffee and when she came back the car was towed. And um, she didn't know what to do about it. She was just in time to see them towing the car away. So um, would he take care of it and he said well he had to… you know be a little while there uh, he had to finish this and then he had to go and be interviewed a bit, Um, [inaudible] and she said well, would he do it when he was finished and he said yes he'd take of it then. Um, naturally he seemed a bit exasperated [laughter]. Um, and then, the they came, the other dark girl came out of the other room with the interviewer, had blonde, long, fairly long blonde hair, and ah, she um, and she t- said to the man he could

come in. When it was the girl's turn to go in, incidentally, she said well she hadn't finished writing the answers down, finished her filling in her form but the one girl said that didn't matter they'd finish it in the other room. Anyway, she came back out and said uh, uh, the girl said she was ready for the man 'n went in and he didn't, he didn't take his coat he left his coat over the back of the car – uh, the chair, pardon me. Just as the other girl had done. She put her coat on and reached back for her purse, noticed that he'd left his coat open and she felt in, for um, I thought that was a little too slick but they're making a video after-all, she seemed to KNOW where his wallet was which she wouldn't really. And she did it so quickly that she would normally have had to investigate you know. But anyway as she got his wallet out and ah, and took ah, quantity of bills you couldn't see. You couldn't even see the denomination or anything but you just concluded they were bills. Wouldn't want to have to stake my life on that, [inaudible, laughter]. But I don't know anything else that looks that much like bills. And ah, and so she quickly put them in her [inaudible] and quickly hurried out and that was the end of it. We don't see the man coming out and miss it. That's all I can remember.

Appendix E

Sample Transcript of a Young Adult's Testimony

Witness 038: Young Adult Witness

Okay, um, first a woman coming in for a job interview um, in an office down a hallway sat down at a long table um, to fill out – was brought out some forms to fill out um, took her coat and her… gloves off and put them on the table. Um during – she was left alone in the room to fill out the forms she was given, um, during the time she was filling those out another man, a man came in. Brrruno came in and was told the same thing: to fill out some forms and he'd be called in later for an interview so he did the same thing an' pulled out some things out of his bag he was carrying as well why he was filling it out I'm assuming to get a number off a driver's license or something. Um, while he was still filling out his form she was asked to go into the office for an interview, um when she was in the office for the interview his companion I assume girlfriend, whatever came in to say the car was being towed. Um, and that her wallet was in it and that she'd like him to please hurry to come help her after because she didn't know what to do and then she left. So he was in there alone um, the other woman came out from her interview. Um and when she came out he was asked to go in for his interview so um, he collected his things and put them in his bag but put his wallet in the pocket of his coat which was left on the back of his chair. Um, and he went in so that woman who originally went in was left alone um, and she witnessed him putting his wallet in the pocket so, w-after he went into the office she went into his pocket um, took some money out of it, put it into her pocket and left. The office.

VITA

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Graduate Teaching/Research Fellowship, University of Victoria	1999 – 2002
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Senator Frank Carrell Scholarship, Queen's University	1998 – 1999
Senator Frank Carrell Scholarship, Queen's University	1995 – 1996

Publications:

Allison, M., Lindsay, D. S., & Merkel, C. (2001, June). Assessing child witnesses. Paper presented at the biennial meeting of the Society for Applied Research in Memory and Cognition, Kingston, ON.

Garrioch, L. J., Brimacombe, C. A. E., Allison, M., & Jung, S. (2001, June). "She fished in his pocket for his wallet": Older adults' colourful recollections of crime events. Paper presented at the biennial meeting of the Society for Applied Research in Memory and Cognition, Kingston, ON.

Allison, M. L. J., Lindsay, R. C. L., & Ross, D. F. (2000, March). Perceptions of witness credibility: The child and the jurist. Poster session presented at the biennial meeting of the American Psychology-Law Society, New Orleans, LA.

Brimacombe, C. A. E., Jung, S., Garrioch, L. J., & Allison, M. (2000, March). Elderly eyewitnesses: Their crime recollections and perceived credibility. In A. Memon (Chair), Understanding the elderly witness: Current research perspectives. Symposium conducted at the biennial meeting of the American Psychology and Law Society, New Orleans, LA.

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"Once Upon a Crime": Young and Older Adult Eyewitnesses' Use of Narrative in Testimony

Author [redacted]

Meredith Lesley Jane Allison

September 9, 2002