

Structural Analysis of Stories

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Simple Story Narratives

Analysis of story structure can only occur when the basic protocol to be analyzed is indeed a story. For the purposes of the present analysis, a story narrative is defined as a verbal protocol meeting the following criteria:

- 1) Specifiable events (or events and states) are described as connected by temporal, enabling or causal relations;
- 2) At least one of the events described in this manner is the overt action of an animate character or animated object;
- 3) This overt action is described as occurring within an identifiable context, i.e., a location identifiable by spatially and temporally invariant features.

This definition gives credit to three features of stories which seem basic. First, it acknowledges that stories are time-factored, i.e., they are descriptive of states and events that are temporally sequenced. Those temporally related states or events may also be described as connected by enabling or causal relations, suggesting factors beyond the temporal one alone, but the minimal connection among states or events is temporal. Second, this definition acknowledges that stories involve the actions of figures to which we can attribute some degree of purposeful behavioral coordination. Humans, animals, animated objects, and mythic figures are a basic ingredient of stories. Third, this definition specifies that the actions of a story are localizable in a particular physical and temporal context. That is, the context for action must be represented as a coherent, spatially and temporally concrete scene. When these definitional criteria are met anywhere in a protocol, the story analysis may proceed. On the other hand, when the protocol describes only temporally static imagery, relations among physical objects, or abstractions about character actions, the story analysis described here is inapplicable.

Unstoried, temporally static imagery may take two forms. The first is static inanimate imagery, such as a tableau. For example:

It was warm and sunny and the leaves were beginning to show the yellow of fall.

The second is static imagery involving inactive animate characters. For example:

There was a dog sitting on the back porch, looking tired and sad.

The preceding forms of static imagery do not constitute story narratives, and neither does the mere description of temporal relations among physical states or events. For example:

At first it was raining hard but then the sun began to glow from behind the clouds.

In contrast, when the temporal relations involve even the simplest sequence of temporally related events, the story analysis may be applied, as in this example:

I picked up the cup and put it in the kitchen cupboard.

Note, however, that abstract generalizations about the same actions would not be identified as a story narrative. For example:

I often pick up cups and put them in kitchen cupboards.

For most purposes in which story productions are to be studied, the narrator's description of his/her own mental processes while producing the story will also not suffice as a story. For example:

I was thinking about how to make this interesting.

I wonder what others will think of this story when they read it.

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1. BASIC UNITS OF ANALYSIS

When a protocol has been identified as a story narrative, analysis begins by segmenting the protocol into useful units of analysis. What is useful, of course, depends upon the objectives of the analysis. Some analyses have divided story narratives into episodes, i.e., more-or-less 'well-formed' action sequences and their related causes and consequences (cf. Rumelhart, 1977; Stein & Glenn, 1979). Although potentially useful for studies of comprehension, such an approach is obviously not satisfactory when a basic question is *whether* a story production manifests the features of 'well-formed' episodes. Rather than divide the protocol according to a definition of episodes, the goals of the present analysis require division of the story according to more primitive criteria.

1.1 IDENTIFICATION OF NARRATIVE UNITS

One basic unit of story narratives is defined as *an overt action or coherent overt action sequence which occurs within a single coherent scene or sequence of scenes*. This definition requires step-wise definition of its components:

1.1.1 OVERT ACTIONS

Basic to the definition of narrative units is an understanding of what constitutes overt action. Overt actions are concrete behavior changes which are commonly understood as coordinated responses to other states or events. Agents of overt actions may be humans, animals, animated objects or mythic characters. The following guidelines enhance the reliability of this otherwise common sense concept:

1.1.1.1 Concreteness

Overt actions are those which are concrete and observable. This, of course, differentiates overt from covert actions, such as thinking, hallucinating, etc. Sometimes, however, verb forms are ambiguous and *may* be understood as concrete although not necessarily so. For example:

I went to see my friend.

Going to see a friend may involve a concrete action, e.g., walking, but this same wording may be paraphrased as "I was visiting my friend" which suggests no concrete behavioral event. Thus, when verbs describing actions are ambiguous, i.e., interpretable as concrete actions but not necessarily so, they are only judged as overt actions when they occur in a concrete, coherent scene. Thus, the following would be judged an overt action:

I went down the street to visit my friend.

1.1.1.2 Plausibility

Although the events or states to which actions are responses need not be explicitly described, an event is only an action when it is plausibly a behavior change in response to such states or events. Consider this example:

The driver did not see the intersection.

Since failing to perceive the intersection is not a behavior change in response to the intersection, the sentence fails to satisfy the criterion for identifying an action.

1.1.1.3 Verbs of position

Verbs denoting a character's spatial position, e.g., "John was sitting on the sofa", are not behavior changes and, therefore, not actions, although related verbs of transition to position are actions, e.g., "John sat down on the sofa".

1.1.1.4 Coordination

Coordinated effort rather than movement per se is necessary for identification of actions. Effort expenditure in unsuccessful or incomplete actions, e.g., pushing against an immovable object, is still regarded as an action. On the other hand, movement without coordinated effort, e.g., falling, is not sufficient to identify an action. Similarly, orienting acts of perception, e.g., looking, listening, identify overt actions whereas 'passive' registrations of information, e.g., seeing, hearing, do not identify overt actions.

1.1.2 INTER-EVENT RELATIONS

Also basic to the definition of narrative units is an understanding of what constitutes a coherent action sequence. Since coherence is defined in terms of temporal, enabling, and causal relations among elements, preliminary definition of these terms is required.

1.1.2.1 Temporal

The most elementary of these relations is when states and/or events are temporally related, i.e., one element precedes another but does not also enable or cause it. For example:

John kicked the ball. Then he walked off the field.

1.1.2.2 Enabling

States and/or events are connected by an enabling relation when an event provides the necessary but not sufficient conditions for the occurrence of a subsequent state or event. The most common enabling relation occurs when a transition action provides a necessary condition for execution of another action. For example:

I walked into the room and found an empty cigar box.

Here an act of perception is enabled by a transition action, i.e., walking into the room. Note that physical events may also enable actions:

The door fell off its hinges and the chickens escaped.

Note also that states alone cannot enable other states or actions. For example, the following does not constitute an enabling relation:

I was standing at the top of the stairs when I called down to my sister.

1.1.2.3 Causal

States and/or events are regarded as connected by a causal relation when an event provides the necessary and sufficient conditions for a subsequent state or event. The simplest form of causal relation is when a physical event causes a subsequent physical event, as in the following simple causal sequence:

The wind blew the door off. When it fell, it broke the bottles below.

Psychological causal relations are those that connect psychological states or involuntary actions with prior causal events. For example:

He took the potion and began to hallucinate.

John's sarcastic comment made me angry.

Motivational causal relations are those that connect purposive covert events (e.g., plans) or voluntary actions with prior causal events. For example:

The sherriff rode up to the cabin. The outlaw inside hurriedly looked for his rifle, thinking of how he could escape.

Here the arrival of the sheriff motivates purposive cognitive activity and a voluntary action.

Sometimes elements connected by temporal or enabling relations combine with other elements to cause a subsequent state or event. For example:

John climbed down the ladder and, when he stepped on the bottom rung, it broke. He fell on his head knocking himself dizzy.

Here the actor's descent of the ladder enables him to step on the bottom rung. Doing so physically causes it to break which physically causes him to fall which psychologically causes dizziness.

Two features of causal analysis require special consideration. First, all overt actions by characters within a protocol are regarded as caused, although those causes are not always explicitly described. Second, covert states (emotions) or events (thoughts about plans or goals) are not *by themselves* sufficient conditions for overt actions to occur (Omanon, in press), although they may interact with other elements to cause or alter the form of subsequent actions, as in this example:

I was mad as I entered the room. When he told me I was late, I just blew up at him.

1.1.3 ACTION SEQUENCE COHERENCE

The preceding relations can now be used to define coherent action sequences. Several factors define coherence among clusters of overt actions.

1.1.3.1 Analogous attempts

Sometimes several actions by a single character are coherent in that they are analogous attempts to achieve the same purpose:

John decided to raise funds for crippled children. He telephoned oil company executives for their donations. He wrote pleading letters to professional societies. And, he asked community leagues to begin door-to-door campaigns.

Here each action is an analogous component of a series of actions with a similar purpose. Although the narrator does not describe the causes of John's decision and subsequent actions, it is easy to imagine addition of the clause, "When Bill asked him to become involved in a worthwhile cause" to the first sentence in the example. In this case the coherence of the analogous actions is reinforced in that they are connected as a whole to that prior event by a causal relation.

Coherence of action is based upon a slightly different principle when several analogous actions are the different attempts to solve a problem. For example:

The elephant began to charge. The hunter reached for his gun but it was jammed. He shouted to his partner to shoot but his partner could not hear him. Finally, he avoided the raging animal by running behind a large tree.

Here the elephant's charge causes an action whose consequences, in conjunction with the original charge, cause the hunter to choose another course of action, and so on. The analogous actions are again connected as a whole to the original event by causal relations, but the original event alone does not cause the selection of different attempts to solve the hunter's problem.

In summary, action sequences may be coherent in that they are analogous attempts to achieve the same purpose.

1.1.3.2 Subgoal attempts

Sometimes several actions by a single character are coherent in that the component actions are connected as a whole to a prior event or state by a causal relation and they (the component actions) are connected to each other by enabling relations. This commonly occurs when the consequence of one action is a subgoal which enables an action whose consequence is a superordinate goal. For example:

The bell on the approaching ice cream wagon made Mary hungry, but she didn't have any money. Quickly she ran to her room, broke open her piggy bank, and, money in hand, was just able to get back to the street in time to meet the ice cream wagon and buy a vanilla cone.

Here again the sequence of actions is connected as a whole to a prior event by a causal relation. Also, the sequence of events has a singular purpose or goal, but the component actions are directed toward subgoals whose achievement eventually enables attainment of the superordinate goal. Specifically, running to her room produces a change in location that enables her to open her piggy bank. The consequence of that action is the acquisition of money that enables purchase of the ice cream. This type of action coherence involves an apparent plan with an *a priori* sequence of subgoal-goal relations.

A slightly different principle applies when unanticipated states or events disrupt an action or action sequence and the disruption must be removed or circumvented before the original purpose can be pursued. For example:

I was driving down a muddy road that was so slippery I decided to look for a place to pull off on the shoulder. I finally found one but an old woman was carefully stacking hay near the only safe spot. I asked her whether she would step aside while I parked nearby. She agreed and I was able to pull off safely.

The unanticipated obstacle in this example prompts an action whose consequences enable completion of the original action. Note that the component actions are connected as a whole to the initial event (driving on a slippery road) by causal relations, but that event alone is insufficient to cause the action removing an obstacle. The emergence of the woman is also a cause for that component of the action sequence.

In summary, action sequences may be coherent in that they are connected as a whole to prior elements by causal relations and to each other by enabling relations. Note: the principles of this and the preceding sections are generalizable to define coherence in the elements of dialogue between characters as well.

1.1.4 SCENES

Finally, basic to the definition of a narrative unit is the requirement that an action or coherent action sequence occur within a single concrete scene or a sequence of such scenes. Considerations in identification of scene units are described in section 1.2.

1.1.5 PRAGMATICS OF NARRATIVE UNIT IDENTIFICATION

The first concrete step required for identification of narrative units is the delineation of a more basic textual unit, the simple sentence. This step is required because particular combinations of simple sentences define narrative units and because assessment of all simple sentences within a protocol is useful as a criterion for completeness of the narrative analysis. The analysis begins, then, by listing, in order, all of the simple sentences that make up the protocol. A simple sentence contains a stated or implied grammatical subject and predicate and is never larger, although typically smaller, than a complete sentence. The following guidelines should allow reliable identification of these simple content units:

1.1.5.1 Agent-action-object sentences

Simple sentences include agent-action-object sentences, e.g., "I kicked the can along the street" or "I gave Mary a ruby"; agent-action sentences, e.g., "I walked along the street" or "I worked hard"; object-relational sentences, e.g., "I want a diamond ring" or "He dislikes John"; or identification/characterization sentences, e.g., "He is a logger" or "The water feels warm" or "I stood near the light".

1.1.5.2 Elaborative phrasing

When infinitive or participial phrases are used as noun phrases, e.g., "I watched the changing of the guard", or as identifying modifiers of noun phrases, e.g., "The boy changing clothes was dirty", the

sentence is a single content unit. However, if the infinitive or participial phrase is an elaborative rather than identifying phrase, it is scored as a separate unit, e.g., "Looking carefully through the microscope, I saw the mites". Analogously, complex sentences constitute a single content unit when the subordinate clauses are noun phrases, e.g., "When you go is of no concern to me", or when they are identifying modifying phrases, e.g., "The house that he sold was a wreck". However, when the subordinate clause elaborates rather than identifies a noun, it is a separate unit, e.g., "The boy, whose hair was blowing in the breeze, climbed onto his bicycle". Note, however, that complex sentences with an infinitive or participial phrase or a subordinate clause as an identifying modifier may sometimes portray an event that clearly meets the criteria for an overt action that is not represented elsewhere in the protocol, e.g., "We walked to a place where we could talk without interruption. . ." In this case two content units are noted.

1.1.5.3 Compound sentences

Compound sentences joined by coordinating or correlative conjunctions, e.g., and, but, either . . . or, are always more than one content unit. Sentences with compound predicates constitute multiple content units unless one verb phrase clearly refers to the same action, e.g., "I spoke up and said . . .".

1.1.6 REMOVAL OF ARTIFACTUAL CONTENT

The listing of simple sentence content units according to these criteria also provides the opportunity for removal of protocol sentences that depict the narrator's reactions to the task or the narrator's evaluations or interpretations of other protocol content. This procedural step is critical when narrator commentary about the task, etc., may provide the judge with information about experimental conditions to which he/she should be kept blind.

1.1.7 NARRATIVE UNIT SCORING

The analyst's second step is to locate and mark narrative units, i.e., any content units that depict overt actions or components of coherent overt action sequences. These are sequentially numbered, with each component of a complex action sequence given the same number. Sample protocols receiving this treatment are provided in Appendix A.

1.2 IDENTIFICATION OF SETTING UNITS

A second basic unit of story narratives is the setting. A setting is defined as *a scene or cluster of adjoining scenes which provide a context for story events.*

1.2.1 SCENE TYPES

A *concrete scene* is defined as an identifiable context, i.e., *a location identifiable by spatially and temporally invariant features*; these invariant features are normally visually accessible to an observer (hypothetical or real) who is not moving other than to reorient him/herself within that location. This occurs when temporally related events occur within a single, geographically connected area. For example:

The clouds were light and fluffy against the sky. A boy looked out of his open window. Then he closed the window. The wind started to blow.

The invariant presence of the clouds, sky, and window for the duration of the boy's temporally related acts of looking and closing the window concretely identify the concrete scene coherence in this narrative segment.

When the spatiotemporal context of events is not described in the story, occurrence of a scene may be inferred according to the presence of actions and characters. These are referred to as *inferred scenes* and are not sufficient to warrant identification of a narrative unit (see section 1.1.3).

1.2.1.1 Transition

A more subtle case is when an observer's continuous change of location occurs within a transition environment the attributes of which are nonetheless qualitatively invariant. For example:

I was hiking down an isolated trail. As I walked, I sang my favorite folksongs. Then I sang some hymns that I remembered from childhood.

The absence of described change in the features of the continuously changing physical location along the trail suggests its sameness and identifies the scene of this narrative segment.

1.2.1.2 Inferred from action

Sometimes the invariant features of a scene are not explicit but the concrete nature of the overt actions supports the inference that these events transpired within a particular location. For example:

I was waiting for a friend. I paced back and forth, looking at my watch.

Concrete actions are usually described by verbs used in the present tense (e.g., I am walking) or in the past tense (e.g., I was walking) but not usually by verbs used in the past perfect tense (e.g., I had been walking). Note that inferred scenes are not concrete and do not provide a basis for identifying a narrative unit (see section 1.1).

1.2.1.3 Inferred from historical action

Similarly, verbs used in the past perfect tense specify historical actions and therefore, by inference, an historical. Historical scenes are also not sufficient to identify a narrative unit.

1.2.1.4 Inferred from actors

The identifying features of a coherent scene may also be inferred because of the concretely depicted presence of other characters. For example:

I came across some people who were talking enthusiastically to each other.

1.2.1.5 Indefinite reference

A scene may also be indicated by indefinite references to unspecified locations. For example:

We were in some unrecognizable place when it started to storm.

Although vague, these contextual features nevertheless are sufficiently concrete to warrant identification of a narrative unit.

1.2.1.6 Historical location

A similar case occurs when overt actions do have an identified spatial location but only an unspecified historical temporal location. That these actions are historical rather than occurring in a story scene is typically suggested by use of past perfect tense:

We had left home to take a vacation and were driving on the road to Vancouver.

Here the action of driving is preceded by an historical enabling action (i.e., leaving home) which occurred in a historical setting. Such historical context for prior action is regarded as concrete.

1.2.1.7 Example

It may not be obvious that not all concrete story actions are described as occurring within specific scenes, but consider the following example:

I had talked with my psychology professor about my theory of dream function before. This time I had written a paper of which I was especially proud. I was in this same professor's

home. I told him I wanted his honest evaluation.

Note that the narrator's prior discussions and paper writing have no identifiable location. Furthermore, the use of past perfect tense in the sentences describing these actions confirms that these actions are in fact history, i.e., their occurrences are *completed* past events. Thus the scene is inferred on the basis of historical actions and is not concrete. In contrast, the requested evaluation does occur within a concrete location, the professor's home. The latter action may be considered a basis for identifying both a concrete scene and a narrative unit.

1.2.2 ADJOINING SCENES

The previous scene descriptions may now be used to describe settings composed of adjoining scenes. The meaning of "adjoining" requires further specification. Adjoining scenes are basically of three types.

1.2.2.1 Spatial proximity

The first of these is identifiable solely by virtue of spatial proximity of scenes which are components of a larger integral unit, e.g., rooms in a house, blocks in a city, cells in a prison, etc. As the examples indicate, adjoining scenes are typically identifiable because they are analogous components of a single, larger enclosing structure. At other times they are analogous components of a geographically defined integral area.

1.2.2.2 Action contiguity

The second type of adjoining scenes is identifiable by virtue of the component scenes' spatial contiguity, acknowledged by descriptions of concrete actions which transport a character from one scene to the other. For example,

I walked out of my front porch into my front yard.

Here, the component scenes (porch and yard) are identifiable as adjoining components of a single, larger setting because they are joined by the transportation action of walking. The actions of transportation or conveyance must be concrete and overt to warrant designating two scenes as adjoining. Moreover, *continuity* of the between-scene transportations in a normal temporal sequence must be maintained for scenes to be scored as adjoining, i.e., the actions must occur in *real time*. References to events which are impossible in real time (e.g., historical summaries), do not specify scene adjointment. Transition scenes depicting transportation or conveyance, then, may specify scene adjointment if the actions are overt, concrete and 'real'.

1.2.2.3 Ongoing transition

The third type of adjoining scene depicts ongoing transition, i.e., concrete, overt and real-time changes of location by transportation or conveyance (e.g., 'I walked down my front steps, across the lawn and along the street.'). Note that summarized transportations (e.g., 'We went to the show and home again') do not identify ongoing transition scenes because they do not depict 'real', overt actions in an actual spatio-temporal location.

1.2.3 PRAGMATICS OF SETTING IDENTIFICATION

The analyst's first step in the identification of settings is to locate and mark scene changes within the protocol. These are sequentially numbered and delimited in the protocol with square brackets (e.g., ['scene1'] ['scene2'] [etc.]) with each distinct scene (regardless of whether it is the recurrence of a previous scene) given a separate scene number. The next step of analysis is to assign a common setting number to all scene clusters connected by virtue of spatial proximity, action contiguity or ongoing transportation. Note: with this scoring system material recalled as an after thought to the story proper may systematically be incorporated into the story according to its setting number.

2. FEATURE ANALYSIS OF SETTINGS

2.1 SCORING OF INCONGRUITIES

Although a wide range of setting features may be assessed, the following selection is basically an adaptation of Gibson's (1979) theory of ecological optics. Also, several new variables are described here for the first time.

The basic procedure for each of the following assessments is to determine the presence and anomalous quality of certain optional features of the setting in a scene by scene analysis. When only the presence or absence of a particular scene feature is assessed, a score of 0 indicates that the feature is not present in the scene and a score of 1 indicates that the feature is present. This format is indicated by the parenthetic notation (0,1).

Most variables are also scorable for their anomalous quality and these require three additional categories. A score of 2 indicates that the feature is present as an ordinary, everyday or mundane state or event, yet is also inappropriate, incongruous or incorrect as determined by information privy to (and provided by) the dream narrator. For example, the anomalous quality of elements in the statement "I looked through a window in my bedroom wall" is scorable only if the dream narrator provides the information that no such window actually exists in the bedroom. Thus, this category is often (but not exclusively) indicated by statements which qualify states and events familiar to the dreamer, i.e., by statements which employ terms such as but, yet, although, still, however, etc., in conjunction with everyday situations.

A score of 3 indicates that the feature is present in the scene as an *unlikely* occurrence by objective standards, i.e., by the *judge's* knowledge of the likelihood of such an occurrence. For example, "The wall housed a 70-inch television screen." suggests an objectively unlikely situation even though such a situation is possible.

A score of 4 indicates the feature is present as an objectively impossible occurrence. For example, "The walls were wood but I could still see through them." is objectively and physically impossible.

Note that for some anomaly categories throughout the grammar, the above three options are described in greater detail; specific considerations and examples for these categories are treated in separate sections under the heading 'Incongruities'. The format for all variables employing the three anomaly options in addition to the presence absence (0,1) criterion is indicated by (0,1,2,3,4). Some variables are, however, scorable only for a particular subset of the anomalies. The scorable categories are indicated in parentheses, e.g., (0,1,2), (0,1,2,3).

Continuous variables are also specified in greater detail and require a separate 7-point notational system (1-7) (see e.g.,). Where anomaly options exist for continuous variables, a separate scoring category, utilizing only the anomaly categories 2, 3, and 4 described above, is provided following description of the continuous variable and is indicated by the notation (2,3,4).

2.2 NARRATOR PERSPECTIVE

The narrator is represented as some form of protagonist in the story and may be identifiable as any of the following agents:

2.2.1 OBSERVER

The narrator may be one of the story characters (i.e., refer to self in the narrative using the personal pronouns "I", "me", etc.) and be represented as an "observer" of the narrative events. The narrator may be an observer physically present in the dream, e.g., inactive bystander, member of an audience, (score=1) or an observer who is omniscient yet not physically represented in the narrative, e.g., an 'invisible' presence with knowledge of the thoughts and/or motives of other characters

(score=2). Alternatively, the narrator may be neither physically nor omnisciently present in the narrative (score=0) (0,1,2).

2.2.2 ACTING CHARACTER

The narrator may be depicted as a single story character engaged in overt actions (score=1) or as two or more characters engaged in overt actions, i.e., as multiply represented (score=2). Alternatively, no action of the narrator(s) may be depicted (score=0) (0,1,2).

2.2.3 DOMINANT ACTOR

The narrator is the story character whose overt actions, including speech, are more frequently described than those of any other character, i.e., the character whose simple actions (prior to their clustering as complex action sequences) are most frequently portrayed (0,1). Note that overt actions described as historical events are counted in making this decision.

2.2.4 DOMINANT COVERT ACTOR

The narrator is the story character whose internal responses, including internal responses related as historical, are most frequently described independent of their manifestation in overt actions, including speech (0,1). For example, "I was pleased" is an internal response not made manifest in an overt action. On the other hand, "He said that he was very much pleased" indicates an actor's internal state but not independent of the overt act of saying something about the state. The latter is *not* an internal response for the purposes of this decision about narrator perspective.

2.3 SETTING ATTRIBUTES

The next task for the judge is to describe variations in scene information within the setting. Each scene is scored for the features listed in sections 2.2.1 to 2.2.13 below. When multiple scenes are presented in the narrative, each subsequent scene is analyzed and scored according to these same criteria.

2.3.1 GENERAL SCENE DESCRIPTIONS: IDENTIFICATION

2.3.1.1 Personal association

The environment is identified by reference to personal association to any of the following (0,1,2,3,4):

- a. narrator
- b. protagonist
- c. character(s) in that scene
- d. character(s) in other scenes
- e. character(s) not in the story
- f. example

Scenes which are only remotely associated to any of the above are nevertheless scored if mention of that association contributes to identification of the scene as in the following example:

We were camping out in the willows near my uncle's land.

g. incongruities

Anomalous personal association (my uncle's farm but here someone else owned it); unlikely personal associations (in this woman's coal mine); impossible personal associations (my cat's coal mine).

2.3.1.2 Naming

The environment is identified by reference to proper nouns, names, or labels (e.g., city names). Environments with only remote references to names or labels e.g., "a motel outside of Edmonton", are also scored (0,1,2,3,4).

a. naming incongruities

Anomalous names (Edmonton only it was called Vancouver); unlikely names (Siberia); impossible names (fictitious or unpronounceable names).

2.3.1.3 Location

The scene is either an *outdoor* environment, i.e., a location where open sky is the predominant overhead surface (score=0) or an *indoor* environment ('enclosure'), i.e., a location where a ceiling is the covering surface of the scene (score=1). Note that walls per se do not necessarily determine an indoor environment unless they are normally understood to support a ceiling (e.g., walls of a house).

2.3.1.4 Inference

The scene is *inferred* by any of the following (0,1,2,3,4):

- a. concrete protagonist actions**
- b. concrete other character actions**
- c. indefinite descriptions**
- d. historical actions**

2.3.1.5 Transition

The scene is *static* (score=0) or *transitional* (score=1) or anomalous by virtue of *summarization* (e.g., I took a trip to the farm.) (score=2,3,4).

2.3.1.6 Formation

Environmental formations are wholly or partly:

a. natural

in origin, e.g., plains, mountains, caves, cliffs (0,1,2,3,4).

Incongruities: Anomalous natural formation (on the back lawn only it was where the garden should be); unlikely natural formations (a huge cave); impossible natural formations (a glacier in the jungle).

b. constructed

i.e., man-made, e.g., outdoor stadiums, city centres, highways (0,1,2,3,4).

Incongruities: Anomalous constructions (a gravelled road that is known to be paved); unlikely constructions (a house built on an angle); impossible constructions (a dome covering the entire city).

2.3.1.7 Mood

The general 'mood' of the environment is characterized by any of the following qualities (0,1,2,3):

a. affiliation

(e.g., a night club)

b. aggression or threat

(e.g., a jungle)

c. nurturance

(e.g., a restaurant)

d. incongruities

Anomalous mood (the hallway was dark and suddenly more horrifying); unlikely moods (a haunted house).

2.3.2 GENERAL SCENE DESCRIPTIONS: CONNECTIVITY

The following criteria define the relationships between temporally adjacent (but not necessarily adjoining) scenes in the narrative, i.e., between the scenes as they are introduced into the narrative. The scene may be part of a more inclusive setting by virtue of membership in a larger integral setting as one component connected to another:

2.3.2.1 By spatial proximity

(0,1).

2.3.2.2 By real-time actions

of transportation or conveyance (0,1).

2.3.2.3 As ongoing transition

(0,1,2,3,4).

2.3.3 GENERAL SCENE DESCRIPTIONS: OBJECTS

The following features are scored for any objects occurring within an outdoor environment or an enclosure. Where enclosures are not the focus of story events but nevertheless occur in an outdoor scene, they are scored as objects in that scene.

2.3.3.1 Personal ownership

Unlike the case of environments and enclosures, objects must be identified by *explicit* reference to ownership, for instance, by the use of possessive nouns or pronouns (e.g., "Jim's book", "her plant"). Ownership of an object may not be assumed by that object's presence in an environment 'owned' by a character. In the example, "I turned on the TV in my living room", the narrator has not made an explicit reference to ownership of the television. Objects may be identified by reference to personal ownership by any of the following (0,1,2,3,4):

a. narrator

- b. protagonist
- c. character(s) in the scene
- d. character(s) in other scenes
- e. character(s) not in the story

2.3.3.2 Moods

Objects are identified by reference to commonly known features, independent of the internal responses of characters, which evoke any of the following moods (0,1,2,3):

- a. affiliation
(e.g., gifts, currency)
- b. aggression
(e.g., weapons)
- c. nurturance
(e.g., food, clothing, medical supplies)

2.3.3.3 Environment relationship

Objects display an explicit or inferred relationship to the outdoor environment, enclosure, or surrounding medium by any of the following features:

a. attachment

to some surface. In outdoor environments, objects are usually attached to the ground (e.g., tree, light standard), in enclosures, usually the floor, ceiling, or walls (e.g., telephone, car radio) (0,1,2,3,4).

b. detachment

or potential freedom of movement. Any object resting on or leaning against a surface (e.g., driftwood, kitchen chair) is detached (0,1,2,3,4).

1. independent or environmentally induced *movement* (0,1,2,3,4).

2.3.3.4 Story focus

Objects form part of the *focus* of story states and events, i.e., they are the focus of a character's actions or internal responses (e.g., concrete instruments, obstacles, topics of conversation, etc.) (0,1,2,3,4).

2.3.4 SPECIFIC SCENE DESCRIPTIONS: GROSS LAYOUT

Information in the description of the scene, excluding information about *movement*, whether outdoor environment or indoor enclosure, explicitly includes any of the following global features:

2.3.4.1 Surfaces

a. horizontal

(e.g., the ground, a floor) (0,1,2,3,4).

b. vertical

(e.g., canyon walls, bedroom walls) (0,1,2,3,4).

c. concavities

(e.g., valleys, grooves, depressions) (0,1,2,3,4).

d. convexities

(e.g., hills, bumps in floor, bulging walls) (0,1,2,3,4).

e. incongruities

Anomalous surface (our backyard was sloped at more of an angle than it is usually is); unlikely surfaces (the wall of the building was buckled severely in several places); impossible surfaces (a mountain standing on end).

2.3.4.2 Apertures

(e.g., cave openings, holes, windows, doors) (0,1,2,3,4).

incongruities

Anomalous apertures (the front door had the backdoor knob on it); unlikely apertures (a round opening in the wall of the sleep lab); impossible apertures (a circular opening in the sky).

2.3.4.3 Paths

Surfaces relatively free of obstacles and which suggest sidelong boundaries. Simply walking or driving 'along' does not define a path. Three types of path are scorable according to their use in ongoing story events. They may be used for:

a. horizontal passage

(e.g., level roads, sidewalks, hallways) (0,1,2,3,4). Note: paths not explicitly denoting ascent or descent (see below) by the story context (e.g., "Our bus drove along the highway to Banff.") may be inferred to be horizontal.

b. ascent

(e.g., ladder, escalator, crane) (0,1,2,3,4).

c. descent

(e.g., elevator, rope, stairs) (0,1,2,3,4).

d. incongruities

Anomalous paths (our hallway stretched into an unfamiliar wing of the house); unlikely paths (a moving sidewalk); impossible paths (a stairway leading to the clouds).

2.3.4.4 Barriers

i.e., obstacles to overt action in the narrative including brinks and water margins. Two types may be scored according the requirements of the story events. Barriers may obstruct:

a. action

(e.g., wire fence, glass, wall) (0,1,2,3,4).

b. vision

(e.g., clouds, smoke, trees) (0,1,2,3,4). Note: action and vision barrier types are not mutually exclusive.

2.3.4.5 Presence of water

excluding references to water in the medium (e.g., rain) (0,1,2,3,4).

2.3.4.6 Presence of fire

(0,1,2,3,4).

2.3.5 SPECIFIC SCENE DESCRIPTIONS: OBJECT SHAPE

Information in the scene describes the coarse structure of objects (including enclosures as objects) mentioning any of the following defining features:

2.3.5.1 Faces

(e.g., cubical, circular, square, 'odd-shaped') (0,1,2,3).

2.3.5.2 Edges

(e.g., rounded, razor-sharp, blunt) (0,1,2,3).

2.3.5.3 Vertices

(e.g., pin-headed, corners, elbows) (0,1,2,3).

2.3.5.4 Incongruities

Anomalous shape (our fridge was shorter and narrower than it normally is); unlikely shapes (a 12-sided object).

2.3.6 SPECIFIC SCENE DESCRIPTIONS: COMPOSITION

Information in the scene describes aspects of the material or chemical composition of surfaces or objects by reference to either:

2.3.6.1 Inorganic composition

(e.g., steel, concrete, plastic, glass) (0,1).

2.3.6.2 Organic composition

(e.g., cedar, paper, flesh, feces) (0,1).

2.3.6.3 Incongruities

Anomalous composition (my desk was made of stone); unlikely composition (a trunk made of paper); impossible composition (a 'bionic' hand).

2.3.7 SPECIFIC SCENE DESCRIPTIONS: PHYSICAL TEXTURE/CONSISTENCY

The properties of any surface or object in the scene are revealed by reference to any of the following features. Note that properties of the medium are not scored here (see section 10).

2.3.7.1 "Tactual" surface texture

(e.g., soft, smooth, grainy, hot, sticky, greasy) (0,1,2,3,4).

2.3.7.2 Fluid resistance to gravity

, i.e., viscosity, rate of flow (e.g., swampy, oozy, splashing, dripping, pouring) (0,1,2,3,4).

2.3.7.3 Material resistance to deformation

, i.e., flexibility, rigidity, malleability (e.g., rubbery, stiff, gummy) (0,1,2,3,4).

2.3.7.4 Material resistance to disintegration

, i.e., tenacity, breakability, brittleness (e.g., chip, tear, shatter, carve) (0,1,2,3,4).

2.3.7.5 Incongruities

Anomalous texture and consistency (my cat's fur seemed strangely coarse and matted); unlikely textures and consistencies (a golf club made of rubber); impossible textures and consistencies (an unbreakable egg).

2.3.8 SPECIFIC SCENE DESCRIPTORS: OPTIC STRUCTURE

The scene is described with reference to any visual terms including:

2.3.8.1 Pure color

(e.g., red, pink, beige) (0,1,2,3,4).

2.3.8.2 Color patterns

(e.g., checkered, spiral latticework, striped) (0,1,2,3,4). Note: color patterns are differentiated from human artworks (see section 13) in that they provide no meaningful information other than their aesthetic appeal. For example, orange dappled wallpaper is patterned, whereas flowery orange wallpaper denotes artwork.

2.3.8.3 Differential brightness or whiteness

such as mention of achromatic color (black, grey, white), or differential shading, shadows, contrasts, etc. (0,1,2,3,4).

2.3.8.4 Incongruities

Anomalous optic structure (her eyes were now green and not blue); unlikely optic structure (he was dressed in a purple fluorescent tuxedo); impossible optic structure (the sun was emitting green light).

2.3.9 SPECIAL SCENE DESCRIPTIONS: MEDIUM

Information in the narrative may refer specifically to aspects of the medium, i.e., the atmosphere surrounding the scene, independent of outdoor environment or enclosure surfaces or objects. The medium is described as

2.3.9.1 Invariant

The consistency of the medium, including any reference to existing weather conditions, is invariant (0,1,2,3,4).

2.3.9.2 Transformed

The consistency of the medium is described as changing in quality or intensity (e.g., "It started to snow", "The smoke became thicker") (0,1,2,3,4).

2.3.9.3 Sensory

The invariant and/or transformative qualities of the medium are experienced by the story characters in any of the following sensory modes:

a. visual

(e.g., "I stared into the fog") (0,1,2,3,4).

b. kinesthetic

(e.g., "The heavy wind made it impossible to run") (0,1,2,3,4).

c. thermal

(e.g., "It grew hotter") (0,1,2,3,4).

d. olfactory

(e.g., "An unpleasant odor emanated from the sink.") (0,1,2,3,4).

e. incongruities

Anomalous medium (my office was unusually smoky); unlikely mediums (the air was filled with noxious gas); impossible mediums (the house was a total vacuum).

2.3.10 SPECIAL SCENE DESCRIPTIONS: VISUAL SURFACES

Surfaces or objects in the scene display any of the following special features:

2.3.10.1 Independent illumination

(e.g., astral bodies, car and house lights) (0,1,2,3,4).

2.3.10.2 Transforming properties

Include refraction (e.g., lenses, rainbows), reflection (e.g., mirrors), translucence (e.g., lampshade, cloudcover), etc.(0,1,2,3,4).

2.3.10.3 Incongruities

Special visual anomalies (the light from the fridge was much brighter than usual); unlikely visual effects (the room was full of mirrors casting images of tunnels everywhere); impossible visual effects (intersecting rainbows)

2.3.11 SPECIAL SCENE DESCRIPTIONS: MOVEMENT

Surfaces or objects, excluding story characters, display any of the following movement features:

2.3.11.1 Independent movement

Story events originating in the environment, including repetitive events (e.g., waterfalls, geysers), catastrophes (e.g., earthquakes, lightning, wind), and apparently uncaused events (e.g., falling boulders) (0,1,2,3,4).

a. incongruities

Anomalous movement (Somehow there was a weathervane spinning on our roof); unlikely movement (A geyser erupted in the schoolyard); impossible movement (The door 'magically' opened).

2.3.11.2 Animation

of normally inanimate objects (e.g., two rocks conversing) (0,1).

2.3.11.3 Personification

of nonhuman characters (e.g., emotional expression or speech by animals) (0,1).

2.3.12 SPECIAL SCENE DESCRIPTIONS: HUMAN DISPLAYS

Surfaces and objects may provide meaningful information in addition to their normal features of shape, composition, texture, etc. because of human manipulations or processing. Human displays portrayed in the narrative may include:

2.3.12.1 Artworks

(e.g., sculptures, paintings, crafts, scrawls, etc.) (0,1,2,3,4).

2.3.12.2 Illuminated images

(e.g., T.V., movie screens, photographs) (0,1,2,3,4).

2.3.12.3 Symbollic language

(e.g., letters, books, hieroglyphics, etc.) (0,1,2,3,4).

2.3.12.4 Incongruities

Anomalous displays (a painting of mine done somehow in someone else's style); unlikely displays (a 7-foot T.V. screen); impossible displays (a life-size statue carved from solid diamond).

2.3.13 SPECIAL SCENE DESCRIPTIONS: PERCEPTUAL REDUCTION**2.3.13.1 Scene clarity**

Attributes of the depicted scene, other than changes in the surrounding medium, produce a reduced perceptual clarity of the scene and events. (e.g., "The thief's outline was nondistinct against the dark wall.") (0,1,2,3,4).

2.3.13.2 Protagonist misperception

Attributes of the protagonist produce a reduced perceptual clarity of the scene and events (e.g., "My body was insensitive to the pain.", "I missed the action because my eyes were closed.") (0,1,2,3,4).

2.3.13.3 Incongruities

Anomalous perceptual reduction (my vision was blurry); unlikely perceptual reduction (he moved so quickly that I could not identify him); impossible perceptual reduction (she started to turn invisible).

2.3.14 TEMPORAL DESCRIPTION

2.3.14.1 Local time

Information referring to the *time of day* whether by natural means (e.g., sun, shadows) or by timepieces, is rated on a 7-point scale where 1 = no explicit temporal information to 4 = moderately explicit temporal information to 7 = explicit temporal information (1-7).

a. incongruities

Local time anomalies (crossing time zones, hypersensitivity to time) (score=2); unlikely temporal occurrences (coincidences, unexplained strokes of luck) (score=3); impossible temporal occurrences (acceleration/deceleration of time, telling the time from objects other than timepieces) (score=4) (2,3,4).

2.3.14.2 Ordering

Information identifying the *temporal ordering* of the various events within the scene is rated on a 7-point scale from 1 = complete ambiguity of the temporal order of events in the scene to 4 = moderate clarity about the temporal ordering of events to 7 = complete clarity about temporal ordering of events in the scene. Temporal ordering increases to the extent that temporal sequential relations are explicit in descriptions of events in the scene.

a. ordering incongruities

Temporal ordering anomalies (large temporal gaps between events) (score=2); unlikely orderings (concurrent events) (score=3); impossible orderings (age regression) (score=4) (2,3,4).

2.3.14.3 Continuity

If minimal temporal ordering information is provided, i.e., the preceding score = 2 to 7, the temporal sequence is rated as either *continuous* (score = 0) or *discontinuous* (score = 1). The latter occurs when gaps in time are explicitly mentioned, e.g., phrases like "later on", "a little later", etc. denote discontinuous shifts in temporal locus. Note: the scene must remain constant for temporal discontinuity to be scored; otherwise a scene change is scored (0,1).

3. FEATURE ANALYSIS OF CHARACTERS

Characters, including the protagonist, are considered a part of the scene independent of whether they are depicted as engaging in overt actions. Any animate story figure (or group of undifferentiated figures) is regarded as a character and each is identified and rated according to the following procedure. First, when rating the initial scene, the judge should also list on the protocol all of the characters represented in any part of the narrative. The protagonist of the story is defined as that character whose overt actions, including speech, are more frequently described than those of any other character. If this criterion is insufficient to identify a protagonist, the protagonist is that character whose internal responses to narrative events are most frequently described independent of their manifestation in overt actions, including speech. It should be obvious from section A that the narrator *may* depict him/herself as the protagonist. *Beginning with the protagonist*, each character is assigned a number corresponding to the order in which the character was introduced into the narrative (the protagonist is always assigned '0'). The following categories are then scored *scene-by-scene* for each character until all the scenes in the narrative (including the scenes in which the character is absent) have been scored.

3.1 CHARACTER-SCENE CONTEMPORANEITY

Characters may be depicted as (0,1,2,3,4):

3.1.1 PRESENT IN THE SCENE

Depiction of presence may be by direct reference or description (e.g., use of 2nd or 3rd person pronouns) to the character at any point in the scene or may be inferred from appropriate social action where presence of another character is *clearly* implied as an object of a known character's action, e.g., "It was a tennis match and John was serving (to X?).".

3.1.2 ENTERING THE SCENE

The character is described as being encountered in the scene at some time other than the onset of the scene events. Entrances must be explicit and not ambiguous to be scored as such.

3.1.3 LEAVING THE SCENE

The character is described as leaving or otherwise becoming absent from the scene. Note that termination of the scene events is not sufficient to score character exit.

3.1.4 USING APERTURES

The character is depicted as either entering or leaving the scene through a specific aperture, e.g., door, open window, etc.

3.1.5 INCONGRUITIES

Anomalies of contemporaneity (talking to my father but he wasn't there physically); unlikely contemporaneity (a large Indian was sitting at the seminar table); impossible contemporaneity (a priest appeared in the room out of nowhere)

3.2 CHARACTER ATTRIBUTES

Identifying and elaborative attributes of the character are scored as follows:

3.2.1 CHARACTER IDENTIFICATION

Identifying information about the character sufficiently specific to allow pronominal references later in the narrative, e.g., names, identifying markings, etc. Note that identifying information must be differentiated from elaborative information. For example, "the boy from Illinois . . ." includes identifying information although, had the boy already been identifiable from prior information, "the boy, who was from Illinois . . ." would be understood as providing elaborative information. Note also that identifying information may include specific actions or transient states, e.g., "the boy who was running . . ." The presence of identifying information of the following three types is scored (0,1,2,3,4):

3.2.1.1 Character naming

Identification is enabled by use of *names, initials, or pronominal references* to the character.

3.2.1.2 Species/Appearance

Identification is enabled by a *species name*, e.g., a bear, an ~~ogre~~, or *attributes of physical appearance*, e.g., a voluptuous woman.

3.2.1.3 State information

Identification is enabled by temperament, aptitudes, interpersonal relationships or affiliations.

3.2.1.4 Action patterns

Identification is enabled by repetitive or transient actions that unambiguously refer to the character, e.g., "the woman who was walking up the stairs . . ." (Note: had the woman already been identified, the fact of her ascent of the stairs would be a simple action and not scored as identifying information).

3.2.1.5 Identification incongruities

Anomalous identifying information (my sister only called Alice); unlikely identifying information (a woman with a large tumour on her neck); impossible identifying information (a man who had the ability to see what everyone else was thinking)

3.2.2 ELABORATIVE DESCRIPTION

Beyond identifying information, elaborative description of the character includes any of the following *stable* features:

3.2.2.1 Physical appearance

Descriptions of attributes such as skin color or typical dress (0,1,2,3,4).

3.2.2.2 State information

Descriptions of temperament, aptitudes, enduring interpersonal relationships, enduring obligations or privileges (0,1,2,3,4).

3.2.2.3 Characterizing action patterns

Descriptions of habitual or repetitive actions such as those associated with occupation or role. These descriptions may be quite abstract portrayals, e.g., "He was a baker." (0,1,2,3,4).

3.2.3 CHARACTER TRANSFORMATION

The elaborative, but not identifying, attributes of the protagonist are described as being *transformed through maturation or metamorphosis* at some time during the story. The transformation must involve *stable* attributes to be scored here.

3.2.3.1 Species/Appearance

The transformation involves stable features of *species name* or *physical appearance*, e.g., "suddenly his face changed to that of a hairy beast" (0,1).

3.2.3.2 State information

The transformation involves stable *state information*, e.g., "then I seemed to change into a mathematical wizard" (0,1).

3.2.3.3 Action patterns

The transformation involves stable *action patterns*, e.g., "suddenly she became someone who disagreed with everyone about something" (0,1).

3.3 ACTION CHARACTERISTICS

3.3.1 ACTION CODING

The actions of all characters are scored according to a variety of criteria described below. These ratings are complete d character by character and yet each character's ratings are coded in such a way that data can also be summarized by character, setting, scene, narrative unit or action order. Each simple action is labelled according to the following criteria:

3.3.1.1 Character identification number

3.3.1.2 Setting number

3.3.1.3 Scene order

Whether the scene is the first, second, third, etc., to occur in the protocol is indicated.

3.3.1.4 Narrative unit

This score indicates which simple actions are associated with complex action sequences.

3.3.1.5 Action order

Whether the action is the first, second, third, etc., to occur within the scene being scored is indicated.

3.3.2 ACTION SCORING

Actual scoring of the overt actions proceeds by labelling the protagonist's first overt action within a scene according to the preceding instructions. If the character's first overt action is a *simple* action occurring in a *single* scene, it is scored according to the criteria described in sections 6-12 before going on to the character's next simple action. If the character's first overt action is a simple action depicting scene *transition*, (e.g., "I was walking on a trail in the jungle; suddenly the trail became a sidewalk in Montreal"), the action is labelled and scored twice, once for each scene. If the first character action is part of a complex action sequence, each component simple action is labelled and then scored according to sections 6-12. Then, the criteria for 6-11 (not 12) are applied collectively to the complex action sequence as a whole, substituting the phrase "coherent action sequence" for "action" where appropriate. (Note: an exception is when an embedded action by the actor is *not* related to other actions in the complex action sequence by causal or enabling relations. This pattern defines a subplot.) When the composite rating is complete, the judge may proceed to analyze each of the subsequent character actions in this same way. When all of the first character's (i.e., the protagonist's) actions have been rated, the second character's actions are rated in order, and so on.

3.3.3 ACTION TYPE: CAUSAL RELATIONS

3.3.3.1 Action cause

A character's action may be *psychologically caused* (score = 0) or *motivationally caused* (score = 1). When causes are not explicit in the narrative, this judgment may be based upon common sense judgments about the nature of the action, e.g., riding a bicycle is generally understood as a motivationally caused action (0,1).

3.3.3.2 Action disruption

Actions may occur in the presence of events or states that partly or completely *disrupt* execution of the action or *prevent* its purpose from being attained. The presence or absence of each of the following types of disruptive states or events is scored (0,1,2,3,4):

a. environmental events

E.g., icy roads prevent driving to a certain location.

b. other character actions

E.g., "He pulled me back when I tried to walk forward".

c. actor's own states/actions

E.g., fatigue, lack of coordination. Note: emotional states, e.g., fear, may be regarded as disruptive when they are described independent of any environmental events or other's actions that caused that emotion. When such events are states they are scored as the disruptive events and not the emotions per se.

3.3.3.3 Action facilitation

Actions may also occur in the presence of events or states which *facilitate* or *enable* execution of an action but do not cause it. The presence or absence of each of the following types of facilitative states or events is scored (0,1,2,3,4):

a. environmental events

E.g., "The wet snow made it easier to turn with my skis".

b. other character actions

E.g., "He helped boost me up into the hayloft".

c. actor's own states/actions

E.g., athletic ability, exceptional ease of movement.

3.3.3.4 Incongruities

Anomalies of causal relation (I pulled the trigger repeatedly as if by reflex); unlikely causal relation (paralysis, weightlessness); impossible causal relation (telepathy, mind control, flying)

3.3.4 INITIATING EVENTS

The circumstances that motivate or psychologically cause an action can be characterized according to the following criteria:

3.3.4.1 Historical context

Certain events, although not necessarily connected by causal relations to the action, may be regarded as historical context for those actions. The presence or absence of the following types of historical context is scored (0,1,2,3,4):

a. transitory state

A transitory state is present in the character at the onset of the events depicted within the scene. These states may be understood as historically inspired feelings, needs, concerns, or transitory obligations and cannot have been inspired or caused by prior events depicted in the story scene per se., e.g., "I had been in the sun and was feeling warm and tired as I talked to Bob".

b. historical action

Historically inspired or caused actions which are ongoing at the onset of the events depicted within the scene and which are completed prior to onset of scene events, or which occur within "story-time" but not within the story scene. For example, "I had bought new skis and was skiing in the river valley." Again, these must be historical events and not inspired or caused by prior events occurring in the story scene per se.

c. incongruities

Anomalous historical context (I had the feeling that I was at home although I should have been at work); unlikely historical context (We had been hiking for 5 days without a break); impossible historical context (There had been this cosmic war)

3.3.4.2 Story-time initiating events

Presence or absence of each of the following types of non-historical initiating events are indicated (0,1,2,3,4):

a. environmental events

The initiating events, in whole or in part, include environmental events, i.e., changes in the environment that are physically caused. For example, rain may motivationally cause a retreat indoors, or, a thunderclap may psychologically cause trembling.

b. other character actions

The initiating events, in whole or in part, include the actions of characters other than the actor, including speech as well as overt behavior. For example, a mother's command may motivationally cause cleaning up toys. Or, a lumberjack's action may physically cause a tree to lie across the road, thus motivating the actor's detour.

c. actor's own actions

The initiating event, in whole or in part, includes the actions of the actor. These may be searching or orienting actions, e.g., "He looked down the road and saw someone coming.", or they may be transition actions or historical actions, e.g., "I had been walking on the road when I tripped and fell."

d. an episode

The initiating event is itself an episode describing the actor's or another character's action and its relation to other states or events, or describing an historical action and its relation to other states or events. For this purpose, the episode must be a complete episode, i.e., it must contain an initiating event, an action, and a consequence where either the action or its consequence causes the actor's initial action. For example, "I accidentally stepped on my dog's foot and he bit me; so I cried and ran for help." (Note that this means that an episode *may* be completely historical - except for the consequence which in whole or in part causes the actor's behavior.)

e. incongruities

Anomalous initiating events (My mother's unexpected and frightful name-calling brought tears to my eyes); unlikely initiating events (the sight of the cat made him run for safety); impossible initiating events (I drove the bears away with mental threats).

3.3.5 INTERNAL REACTIONS TO THE INITIATING EVENT

The actor's reactions to the initiating event may include internal responses. The scoring criteria indicate the presence or absence of the following types of internal reactions:

3.3.5.1 Affective change

The initiating event psychologically causes reported affective changes in the actor, e.g., insult causes anger (0,1). The reported affective changes may be represented as judgments of an omniscient narrator, e.g., "he became angry.", or as contents of overt communicative gestures, e.g., "He said he was angry", or "He waved his fist at me."

3.3.5.2 Affective elaboration

If affective changes are explicitly described, the *degree of elaboration and expressive detail* is rated on a scale from 1 = no elaboration or detail to 4 = moderate elaboration and detail to 7 = very extensive elaboration and detail (If no affective reactions are reported explicitly, the score of 0 is entered for this rating)(1-7).

3.3.5.3 Incongruities

Anomalous affect (What should have been laughter came out of me as an odd wail); unlikely affect (two women were shrieking continuously at the top of their lungs); impossible affect (?) (2,3,4).

3.3.5.4 Affect quality

The quality of explicitly reported affect is scored with a 1 in any of the 8 variables in the following scheme. If the initiating event and/or subsequent action allow ready inference of an affective response (e.g., "He insulted me and I retaliated" suggest anger), the quality of that affective response is also scored according to the scheme below except that it is scored 2 rather than 1. Absence of affect in any category is scored 0 (0,1,2). Note that more than one emotional quality may be represented, e.g., simultaneous anger and surprise.

a. happiness

Includes all descriptions of a general state of pleasant feeling tone, e.g., contented, pleased, relieved, cheerful, glad, gratified, joyful, relaxed.

b. anger

Includes annoyed, irritated, mad, provoked, furious, enraged, incensed, indignant.

c. sadness

Includes all descriptions of an unhappy feeling tone, e.g., disappointed, depressed, hopeless, heartbroken, miserable, downhearted.

d. fear

Includes descriptions of discomfort in the face of threat, e.g., terrified, frightened, scared, alarmed, panicky, nervous, apprehensive.

e. guilt/shame

Includes descriptions of discomfort in the face of moral misconduct, e.g., remorseful, apologetic, regretful, ashamed.

f. surprise/startle

Includes surprised, astonished, amazed, awestruck.

g. interest/uncertainty

Includes descriptions of acceptant uncertainty, e.g., puzzled, perplexed, strange, bewildered, confused.

h. disgust

Includes descriptions of revulsion, e.g., disgusted, repulsed, nauseous.

3.3.5.5 Cognitive activity

The initiating event causes cognitive activity in the actor independent of the actor's goals or plans. This may include (0,1,2,3,4):

a. cognitive placement

Cognitions "place" an initiating event by reference to other *specific* and *similar situations*, e.g., "This was like the time that I . . .", or *associated memories* e.g., "The gambler remembered that he still owed me \$100."

b. cognitive conceptions

Cognitions may reflect *inferences* or *beliefs* about the initiating events, e.g., "I thought he wanted to hurt me", or *abstract statements* that are related to the initiating events as an instance, e.g., "I thought he was the type of person who could not be trusted."

c. moral judgements

Cognitions may reflect *explicit moral evaluations*, e.g., "What he did was bad (wrong)."

d. incongruities

Anomalous cognitions (I remembered a promise I had made to her although it was somehow different); unlikely cognitions (I thought that I had discovered the secret principle of dreaming); impossible cognitions (thinking comprehensibly in an unknown foreign language)

3.3.5.6 Goals of action

The initiating event causes *considerations of goals*, i.e., cognitions indicating prior awareness of the goals of the ensuing action. This may include (0,1,2,3,4):

a. explicit acknowledgment of goals

Statements about needs, wants, desires, e.g., "I wanted to scare her."

b. means to an end

Prior consideration of different means to an end, i.e., statements about plans or alternate means to the desired end (e.g., "I thought I could get help by screaming even louder.") or statements about choice or decision making which imply consideration of alternative actions (e.g., "I decided to go visit my friends").

c. incongruities

Anomalous goals (I wanted to finish my degree only now in the area of music); unlikely goals (John planned to shovel the snow off the entire front street); impossible goals (We intended to travel to one of Jupiter's moons).

3.3.5.7 Goal types: scoring

If 1 is scored in any of the previous goal categories, the nature of the explicitly stated goal of the action is scored 0 or 1 on each of the 14 variables in the following scheme. In addition, if the initiating event and/or subsequent action allows ready inference of the goal or goals of the action, the nature of the goal(s) is also scored except that each implicit goal is scored 2 rather than 1. Note that more than one goal may be represented in the same act.

3.3.5.8 Social goal types

a. affiliation

- Actions designed to form or further a mutually harmonious and friendly relationship with another character (0,1,2). The actions include:
 - establishment of a long-term close relationship with a character (proposing marriage, being married, expressing love, with or without sexuality).
 - socially acceptable forms of friendly physical contact (shaking hands, dancing, kissing, or embracing).
 - requesting a character to share in a pleasant social activity (dating, visiting).
- verbal or gestural expression of friendliness (greetings, waving hello or goodbye, smiling, telephoning or writing someone for a friendly purpose).
- non-exploitive helpfulness, rendering of favors, or gratification of others' needs.

b. aggression

- Actions designed to annoy, harm, or overcome another character (0,1,2). These include:
 - killing, physically harming, or (verbally or physically) threatening these.
 - physically or, with threats, verbally coercing a character into performing an act.
 - theft or destruction of possessions belonging to a character.
 - accusations, insults, or criticism of another character.

c. rejection

- Actions which have as their goal, separation, exclusion, or abandonment of another character (with or without aggression) (0,1,2). These include:
 - avoiding, abandoning, or withdrawing from another character (divorcing, jilting, snubbing).
 - verbal expression of dislike or indifference to another character.
 - excluding displacing characters from dyadic, group, or institutional interaction situations.

d. autonomy

- Actions designed to resist, control or influence attempts (0,1,2). These include:
 - avoiding or quitting activities suggested, requested or prescribed by others.
 - defying convention or refusing to be restricted by obligations or routines.
 - escaping or defying authority or confinement.

e. dominance

- Actions designed to control the human environment by influencing or controlling the sentiments or behaviors of others (0,1,2). These include:
 - attempts to command, request, suggest or persuade another character to change behavior, with or without sanctions or threatened sanctions.
 - attempts to make rules, to organize, or to govern others.
 - exploitive or self-serving attempts to help, nurture or otherwise gratify another's needs.

f. dependence

- Actions designed to solicit, request, or otherwise obtain the favors, skills, or assets of another character (0,1,2). These include:
 - submitting to or cooperating with a character who is being dominant or nurturant.
 - requesting or soliciting aid from another character (medical aid, food, support).
 - praising or expressing gratitude to another character.

3.3.5.9 Pleasure goal types**a. sentience**

- Actions which have as their goal the enjoyment of non-sexual sensations (0,1,2). These include:
 - seeking or commenting on pleasure from auditory (music), gustatory (wine or food), visual (art), or kinetic (dancing) sensations.
 - aesthetically organizing one's immediate environment (care of one's body, clothing, possessions or surroundings).

b. sexuality

- Actions directed toward the enjoyment of sexual sensations (0,1,2). These include:
 - having, or attempting to have sexual intercourse with another, including related foreplay, fondling, kissing, and bodily contact.
 - making advances, flirting, or otherwise engaging in a pleasant heterosexual interaction to further a potentially erotic relationship.
 - viewing or stimulating sexual areas of the body to produce sexual arousal.

c. play

- Actions directed toward fun or amusement without further purpose (0,1,2). These include:
 - participation in sports, dancing, cards, or other games.
 - attempting to entertain, amuse, or fascinate others (jokes, artistic performances).

d. achievement

- Actions directed toward the accomplishment of something difficult or toward judgments of competence (0,1,2). These include:
 - mastering, organizing or manipulating the environment as skillfully and independently as possible (solving problems, studying, practicing skills).
 - attempting to rival and surpass others' performance through the exercise of talents or abilities.
 - striving to attain recognition or prestige because of one's aptitudes or skills.

3.3.5.10 Avoidance goal types**a. blamavoidance**

- Actions which have as their goal the avoidance of blame or of rejection because of blame (0,1,2). These include:
 - verbal or physical counteraction of other's moral censure, rebuke, or punishment (defending oneself, making amends).
 - engaging in acts because of felt obligation or because of definitions of propriety or correctness (being polite).
 - avoiding moral censure by covering exposed body parts, concealing wrong-doing, or escaping punishment.

b. infravoidance

- Actions designed to avoid failure or judgments of incompetence (0,1,2). These include:
 - actions, including speech, to counteract belittlement, derision, or ridicule for failure or perceived inadequacy (self-enhancing descriptions, demonstrating competence).
 - avoiding perceived inadequacy by concealing failure, covering deformities or ugliness, or escaping derision or ridicule.

c. harmavoidance

- Actions which have as their goal the avoidance of physical injury, illness, or death (0,1,2). These include:
- defending oneself against bodily harm or illness (retaliation, obtaining medical treatment).
- engaging in acts to enhance physical well-being (exercising, altering one's diet).
- escaping situations which threaten physical injury, illness, or death.

d. depravoidance

- Actions which have as their goal the alteration of a deprivation condition such as hunger, thirst, or fatigue (0,1,2). These include:
- acquiring and/or ingesting food or drink for the sake of sustenance (excluding, for example, purely social drinking).
- compensating for fatigue by resting, sleeping, or discontinuing trying activity.

3.3.5.11 Goal ambiguity

The extent to which the action may be unambiguously associated with a unique goal or subgoal as defined by one or more of the categories in the previous section is scored on a 7-point scale where 1 = unambiguous association with a unique goal; 4 = moderately ambiguous association with a unique goal; and 7 = completely ambiguous goal (1-7).

3.3.5.12 Goal attainment

The extent to which the action results in attainment of the inferred or explicitly stated goal or subgoal is rated on a 5-point scale where 0 = no goal inference possible; 1 = goal non-attainment; 2 = partial goal attainment; 3 = complete goal attainment; and 5 = unexpected goal termination. Note that goal attainment is scored in reference to *subgoals* when considering individual component actions of subgoal-goal narrative units (1-5).

3.3.6 ACTION CONSEQUENCES

The presence or absence of each of the following types of action consequences is scored (0,1):

3.3.6.1 Environmental events

The consequences of actions, in whole or in part, include changes in the environment. For example, the actor's pushing a door may physically cause its collapse. Or, the actor's command may motivationally cause a lumberjack to engage in actions which fell a tree.

3.3.6.2 Character actions

The consequences of actions, in whole or in part, include the actions of other characters, including their speech or overt behavior. For example, the actor may wave a flag, motivationally causing another character to sing the national anthem.

3.3.6.3 Actor's own actions

The consequences may include further actions of the actor. For example, writing a paper may motivationally cause discussing it with colleagues.

3.3.6.4 Internal reactions

The consequences of an action, in whole or in part, include the internal reactions to the action per se, i.e., the internal reactions are direct responses to the action itself and *not* to the environmental events, or actions which are referred to as consequences in the immediately preceding sections. For example, the actor's intrinsic pleasure in an act such as flying or the actor's thoughts about the action would be scored here.

3.3.6.5 An episode

The consequences of an action may be an episode, i.e., the actor's action and/or its consequences may be the initiating event in a subsequent complete episode.

3.3.6.6 Incongruities

Anomalous consequences (the car made an unusual gurgling sound after I started it); unlikely consequences (I won the lottery draw); impossible consequences (the shaman's ritual brought my brother back to life).

3.3.7 INTERNAL REACTIONS TO THE CONSEQUENCES

3.3.7.1 Affective change

The consequence may psychologically cause *explicitly represented affective changes* in the actor or these affective reactions may not be explicit but should be *inferred* by the judge on the basis of his knowledge and familiarity with story context.

a. affect elaboration

When the former occurs the degree of elaboration and expressive detail is rated on a scale from 1 = very little elaboration and detail to 4 = moderate elaboration and detail to 7 = very extensive elaboration and detail. If its affective reactions must be inferred, 0 is scored (1-7).

b. incongruities

Anomalous internal reaction (there was an unusual sense of desperation intermixed with my sadness); unlikely internal reactions (they all laughed as the casket was lowered in the grave); impossible internal reactions (?) (2,3,4).

c. affective quality

Regardless of whether the consequences cause explicit or implicit affective reactions, the quality of these reactions is rated as follows. The score of 0 is given when these affective consequences are negative, as in the case of goal nonattainment. The score of 2 is given when these affective consequences are positive; as in the case of goal attainment. Finally, the score of 1 is given when the affective consequences are neutral (0,1,2).

Note: when the consequences of an action are affective reactions and these affective reactions are inconsistent with the explicit or inferred reactions to the consequences, the affective quality of the latter is scored here.

d. cognitions

The consequences elicit thoughts, memories, and/or other cognitive events (0,1,2,3,4).

3.3.8 ACTION TYPE: COMPLEXITY

The following three judgments are based upon considerations discussed in part I: Note that 'analogous' and 'subgoal' action types are not mutually exclusive.

3.3.8.1 Simple overt

The character's action is a *simple overt action* (0,1).

3.3.8.2 Analogous attempts

The character's action is a component of a coherent action sequence which includes *analogous actions with a similar identical goal* (0,1). Score 2 if the action type must be inferred to be analogous. Score 3 if the action implies a subgoal-goal structure. Score 4 if the action refers to subsequent acts in that

narrative unit but is not merely redundant with those acts (0,1,2,3,4).

3.3.8.3 Subgoal attempts

The character's action is a component of a coherent action sequence in which some subgoal action components are executed to attain or achieve a *superordinate goal*. Score 2 if the action must be inferred to be a subgoal-goal component. Score 3 if the component implies an analogous structure. Score 4 if the action refers to other actions in the narrative unit (0,1,2,3,4).

3.3.9 ACTION TYPE: COMPONENT ACTIONS

The simple action is classified as an instance of the following categories including optional anomaly scores. Note that these categories are not mutually exclusive.

3.3.9.1 Attending

- Actions attending or focusing a sense organ toward a stimulus, e.g., to listen, to look for. The description of the action must include the suggestion or implication that a reorientation of the senses has occurred and not passive reception of a stimulus. For example, listening for a sound is an attending action but passively hearing another speak is not.

3.3.9.2 Speaking

- Actions of producing speech or other vocalizations (e.g., singing) for the purpose of transferring information to another character. These actions are typically motivationally caused but some instances may be psychologically caused (e.g., purring, screaming) (0,1,2,3,4).

3.3.9.3 Ingesting

- Actions by which a character takes into his/her/its body an object or substance, e.g., to eat, smoke, drink, breathe.

3.3.9.4 Expelling

- Actions by which a character expels or ejects an object or substance from his/her/its body into the environment, e.g., to vomit, sweat, spit.

3.3.9.5 Grasping

- Actions by which a character grasps and/or physically holds onto an object or character. These actions involve the hands, and occasionally the feet of the character.

3.3.9.6 Letting go

- Actions by which a character terminates a grasp or hold on an object or character, allowing existing forces, e.g., gravity, to exert their physical influence on it.

3.3.9.7 Pushing

- Actions by which a physical force is applied to an object or character to propel it away from the actor, e.g., to kick, throw, push.

3.3.9.8 Pulling

- Actions by which a physical force is applied to an object or character to propel it toward the actor, e.g., to embrace, pull.

3.3.9.9 Locomotion

- Actions by which a character changes physical location within or between scenes by transporting his/her/its entire body in acts such as running, walking, etc. Locomotion in which the character is

transported by other means than these, e.g., while sitting in a car or train, are not classified here.

3.3.9.10 Transportation

- When location change occurs independent of the character's running or walking but dependent upon the exertion of other propelling forces, e.g., being driven in or driving a car. Also, scored here are location changes that are associated with allowing gravity to exert its force, e.g., falling, or those that are associated with unexpectedly efficacious actions such as flying.

3.3.9.11 Postural action

- isometric activity, trying, exerting.

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