M - L. Ryan (ed.):

Possible Worlds,
Artificial Intelligence
and Narrative Theory

6 The Modal Structure of Narrative Universes

The theory of possible worlds is applicable not only to the relation of a textual system of reality to our own native system, but also to the internal description of the semantic universe projected by the text—whether or not this universe is presented as a reflection of the system centered around AW. The concepts of modal logic provide an access to a textual semantics, and more particularly to a narrative semantics, which transcends the distinction between fiction and nonfiction.

One of the least controversial claims of contemporary narratology is that a narrative text is the representation of a number of events in a time sequence. An event, intuitively, is something that happens to an existent (character or object) and leads to changes in the overall state of a world. But if we take a close look at a typical narrative—the weekly summary of the soap opera "All My Children"—we notice that it recounts or implies many events that haven't yet, and may never actually happen, even though they form an integral part of the story:

> Tad Martin booked a one-way ticket from California to Pine Valley. On the phone, Phoebia nixed giving Tad an address where he can reach Hillary. Dixie opened Palmer's globe safe, but was disappointed to see that it only contained a cassette tape. Remy saved Frankie from getting hit by a train, but Frankie still blames Remy for Jesse's shooting death. Dixie's heart flutters whenever she's around Nico. Skye convinced Sean not to tell Tom that she isn't paralyzed. Nico warned Palmer to butt out of his relationship with Julie. Cliff told Cecily all about Sean serving time for murdering Sybil Thorne, but Sean talked Cecily into believing that he's not a bad guy. (9 Sept. 1988, by Nancy M. Reichardt. Copyright United Feature Syndicate)

Of the states and events directly mentioned or implied by the text, some are definitely nonactual:

> There is more than a cassette tape in Palmer's safe
> Frankie gets hit by a train
> Skye is paralyzed

Others are not-yet but should-be actual:

Tad goes to Pine Valley
Palmer gets out of his relationship with Julie

We also find must-not-be actual:

Tad Martin returns to California
Tad reaches Hillary
Nico retaliates against Palmer because Palmer does not
get out of his relationship with Julie
Sean tells Tom that Skye is not paralyzed

and may-have-been actual:

Remy caused Jesse's shooting death.

The narrative importance of nonfactual events was stressed more than twenty years ago by French structuralists. Bremond distinguishes two types of narrative statements: descriptive statements, which recount actual events [relatent un événement en acte, le faire effectif d'un actant]; and modalized statements, which "anticipate the hypothesis of a future event, of a virtual action" [anticipent l'hypothèse d'un événement futur, d'un faire virtuel] (1973:86). Todorov distinguishes four modal operators for narrative propositions: the *obligatory* mode, for events dictated by the laws of a society; the *optative* mode, for states and actions desired by the characters; the *conditional* mode, expressing action to which characters commit themselves if certain other events happen; and the *predictive* mode, for anticipated events (1969:46–49).

These observations are easily restated in the terminology of the present model. Bremond's descriptive statements are the states and events of the actual world of the narrative universe while his modalized statements describe the alternative possible worlds of the system. Todorov's catalog of modalities is an embryonic typology of APWs.

We have seen in the first part of this book that APWs are constructs of the human mind. The virtual in the narrative universe exists in the thoughts of characters. Narrative concerns primarily human (or human-like) action, and action is determined by the mind's involvement with external reality. Narrative semantics is rooted in an exploration of the world-making activity through which we interact with and try to shape the world we regard as actual. At the same time, a narrative semantics is a description of the cognitive categories in which readers classify the information provided by the text in their effort to make sense of the represented events. The following discussion of the possible worlds of the narrative universe should lay down the foundations for both of these aspects of narrative semantics.

To say that the cataloging of the constituent worlds of a narrative uni-

verse is an exploration of the human mind does not mean that all mental activities yield possible worlds. But it does mean that possible worlds are built from the various materials collected by the mind. Mental activity comprises two types of elements: some involve truth-functional and fact-defining propositions while some others do not. Among the former are "thinking that p," "hoping that p," "intending p." Among the latter are emotions, subjective judgments, and fleeting perceptions before they are turned into knowledge. The possible worlds of a character's domain are built out of truth-functional propositions; they are collections of facts which can be compared to the facts of the actual world. (One could of course speak of "worlds of emotions, judgments, perceptions," but this metaphorical use of the term "world" is stretched out too far to bear any meaningful relation to the theory of possible worlds.)

To form the image of a world, propositions must be held together by a modal operator acting as common denominator. In the literal sense of the term, a possible world is a set of propositions modalized by the operator of the so-called *alethic* system: possible, impossible, necessary. I have explored in chapter 2 the various interpretations that may be given to these concepts. But other operators have been proposed by logicians. Lubomír Doležel (1976a:7) enumerates the following systems of modalities:

(1) The *deontic* system, formed by the concepts of permission, prohibition, and obligation.

(2) The *axiological* system, which is assumed to be constituted by the concepts of goodness, badness, and indifference.

(3) The *epistemic* system, represented by concepts of knowledge, ignorance, and belief.

While the operators of the alethic system relate AW to TAW, the other operators relate TAW to the private worlds of characters. The epistemic system determines a knowledge-world (K-world), cut out from the general realm of perceptions; the axiological system determines a wish-world (W-world), extracted from subjective value judgments; and the axiological system determines what I shall call an obligation-world (O-world), dictated by social rules of behavior. In addition to these constructs, which are conceived as either images of TAW (K-world) or as models of what it should be (W-world, O-world), the human mind builds possible worlds as escapes from AW, as true alternatives: dreams, hallucinations, fantasies, and fictions. Let us call them fantasy-worlds, or rather, F-universes, since their structure is that of a modal system. In what follows, I propose to review the various spheres of the narrative universe, as a preliminary to a theory of narrative conflict and narrative action.

The Narrative Universe

The concept of narrative universe is best defined in contrast with a larger totality: the semantic domain of the text. The semantic domain is the sum of

the meanings suggested by a text, the set of all the valid inferences and interpretations. (I leave to others the task of determining what constitutes a valid interpretation.) Within the semantic domain, the text may outline a system of reality: an actual world, surrounded by APWs. I regard this semantic dimension as constitutive of the narrative text. Narrativity resides in a text's ability to bring a world to life, to populate it with individuals through singular existential statements, to place this world in history through statements of events affecting its members, and to convey the feeling of its actuality, thus opposing it implicitly or explicitly to a set of merely possible worlds.

While the narrative universe consists of a collection of facts established for the various worlds of the system, the semantic domain accepts any kind of meanings: statements of fact, generalizations, symbolic interpretations, subjective judgments expressed by the narrator, or formed by the reader. As a subjective judgment, the statement "All happy families . . ." is part of the semantic domain of *Anna Karenina*, but not of its narrative universe. It is not a hard fact within TRW, but only the opinion of the anonymous narrator.[1] The reader may decide that the statement is invalid, not only in AW but also in TRW. Another example of the difference between semantic domain and narrative universe is the image of the pear tree in Katherine Mansfield's short story "Bliss." In the semantic domain, the pear tree is both a pear tree and what it stands for—the experience of bliss. In the narrative universe, it is just an existent, a specific pear tree. But the statement "Bertha Young experiences bliss when she sees the pear tree" yields a fact for the actual world of the narrative universe, and it is by virtue of this fact that the symbolic meaning of the pear tree reaches the semantic domain.

The Factual Domain (Actual World)

At first sight, the concept of factual domain, or actual world, is rather unproblematic for narrative semantics: it is made up of what exists absolutely in the semantic universe of the text, as opposed to what exists in the minds of characters. But how is this absolute existence established, and what authority guarantees it to the reader? Is narrative semantics concerned with the facts of the world about which the text makes predications, its reference-world (what I have called TRW in chapter 1), or with the facts presented as actual by the text itself (TAW)? Or to put it another way: should narrative semantics take a *de re* or a *de dicto* approach to the concept of actual world? It was shown in chapter 1 that TRW differs from TAW only in inaccurate texts of nonfiction (errors, lies, exaggerations). But since a truly *narrative* semantics is not concerned with the distinction between fiction and nonfiction, its concepts should be general enough to account for both types of narrative. If a fisherman narrates his last expedition, and tells us of an epic fight to catch a hundred-pound swordfish, whereas he really pulled out without problem a two-pound crappy, it is a fact in his story that the fish weighed a hundred pounds and fought an epic fight, even if the story is false in reality. Narrative

semantics is concerned with what is true in the story, and not with what really happened. This supports the second of the two alternatives: a *de dicto* interpretation of the concept of factual domain, making it synonymous with TAW. To remain consistent with this conclusion, I will avoid the concept of TRW in the chapters of this book devoted to narrative semantics.

In fictional discourse, however, the *de dicto* position runs into the problem of authentication. How do we decide what the text establishes to be the case? In impersonal narration, as we have seen, the speaker has absolute authority, and his or her discourse yields directly what is to be taken as the actual world. But a personal narrator is a mind interposed between the facts and the reader, and the discourse reflects the contents of his or her mind. The reader in this case does not perceive the narrative actual world directly, but apprehends it through its reflection in a subjective world. The reader must sort out, among the narrator's assertions, those which yield objective facts and those which yield only the narrator's beliefs. When, for instance the narrator of *One Flew over the Cuckoo's Nest* declares that the orderlies of the mental hospital where he is a patient have sensitive equipment to detect his fear, we regard this belief as hallucination. But we accept as fact the statement that there are orderlies mopping the floor in the hallway. The existence of unreliable narrators in fiction demonstrates a possible gap between the world projected by the narrator's declarations (what could be called narratorial actual world, or NAW), and the facts of TAW.

This leads us to a pair of opposite observations: in nonfiction, the narrative actual world is what the speaker tells us to be the case, regardless of whether the narrator is right or wrong; but in fiction, the actual facts potentially conflict with the narrator's declarations. Who then guarantees the facts of the narrative universe? This apparent contradiction is resolved if we regard the actual speaker, rather than the narrator, as responsible for authenticating the factual domain. In fiction, the narrative actual world is determined by what the author wants the reader to take as fact (or rather, the implied author, since the authorial intent is always inferred on the basis of the text). Fictional role-playing opens the possibility for the substitute speaker to assert facts and to be overridden by the authorial projection of the factual domain. But in nonfiction, there is no doubling of the I: the narrator is the actual speaker, and what the narrator presents as fact necessarily belongs to the actual world of the textual universe.

The Components of the Actual World

As an entity existing in time, TAW is a succession of different states and events which together form a history. Each of the propositions constitutive of TAW is implicitly indexed by an absolute or relative temporal indicator (absolute: p is true at t_i; relative: q is posterior to p). TAW also comprises a set of general laws that determine the range of possible future developments of the plot out of the present situation. TAW is thus split into a factual and

an actualizable domain. This latter domain is technically a possible world, linked to the present state of TAW through the relation of temporal accessibility; but it differs from the other APWs of the narrative system in that it exists absolutely, rather than being created by the mental act of a character. (In the modal system of temporal accessibility, historical events may be regarded as necessary, since they cannot be erased, future events as possible, since they may or may not happen, and counterfactual events as impossible, since they missed the chance to be actualized. A world is temporally accessible from AW if at some time in the future the history of AW may become similar to the past of this world.)[2]

As we have seen in chapter 2, TAW may be either homogeneous or split into various spheres governed by different sets of laws. (Cf. Martínez-Bonati's concepts of uniregional and pluriregional narrative worlds [1983], or Thomas Pavel's concepts of flat and salient ontologies [1986:43–72].) The regions of a split ontology may be the sacred and the profane, as in medieval mystery plays, the realm of the dead and the realm of the living, as in ghost stories, the familiar and the uncanny, or more generally the natural and the supernatural, as in fantastic tales. In a narrative with a truly split ontology, the regions recognized as "other" exist as objectively as the unmarked domain of the ordinary. Readers accept their existence in TAW, regardless of whether or not their private ontologies recognize AW as divided into regions. It is important to distinguish TAWs with a split ontology from homogeneously supernatural TAWs, such as we find in fairy tales. In a narrative with a truly split ontology, communication between the different regions of reality occurs only at certain privileged moments, and is apprehended as the scandalous intrusion of a foreign element. In a supernatural but homogeneous TAW, species found in AW and species native to TAW (fairies, dwarves, and dragons) inhabit the same sphere, and the possibility of their interaction is taken for granted. It is not extraordinary for a poor girl to have a fairy godmother, or for a frog to be turned into a prince.

Different regions within the real world may be presented either as existing absolutely (as in medieval mystery plays), or as part of the private world-view of characters. Uniregional TAWs may contain individuals who adhere to a split ontology (Joan of Arc in Shaw's *Saint Joan*), or conversely, pluriregional TAWs may present characters who recognize only the realm of the profane (the myth of Don Juan).

K-World

In an epistemic system, the modal operators of necessity, possibility, and impossibility are translated into knowledge, belief, and ignorance. A K-world is realized in T/AW if it consists exclusively of known propositions; it is possible with respect to T/AW if it comprises known and believed propositions; and it conflicts with T/AW if it includes ignored propositions. (The symbol T/AW is used in this chapter whenever my remarks concern any system of reality, whether projected by a text or intuitively experienced as

"our native system.") A possible K-world is an incomplete representation, and an impossible K-world involves contrary-to-fact propositions.

The meaning of the operator of knowledge is fairly straightforward: a character "knows" a p, when he or she holds it for true in the reference world and p is objectively true in this world. But because of the inherently ambiguous nature of K-worlds, the other two operators are more problematic. A K-world can be conceived from either a first-person or a third-person perspective. In a first-person perspective, K-worlds may be either complete or incomplete with respect to their reference world, but never mistaken, since we have no external access to the reference world. My own K-world consists of propositions which I hold to be true (known p's), propositions which I hold to be probable (believed p's), and of propositions which I leave indeterminate (ignored p's). In a third-person perspective, the modal operators of the K-world are computed by comparing the truth value assigned to propositions by the subject with the objective truth value in the reference world (which may turn out to be the truth value assigned by a third party). The three operators mean respectively agreement, indeterminacy, and disagreement.

Indeterminacy may stem from two sources: nonconsideration or noncommitment. A K-world may be not only correct or incorrect, and complete or incomplete with respect to its reference-world, but also total or partial. An incomplete K-world means that some of the propositions in "the book" on the reference world are left indeterminate: did the butler kill Lady Higginbotham, or did he not do it, wonders Inspector Snively. A partial K-world leaves out some of the propositions in the book: returning from a week-end with his mistress, Lord Higginbotham is unaware that Lady Higginbotham has been murdered. An incomplete K-world fits on its reference world like a cover with some holes in the middle; the location of the holes is determined, and the character knows where his or her knowledge is defective. A partial K-world is like a cover that is too small, the regions beyond the cover remaining unsurveyed.

Since the distinction between partial and incomplete K-worlds is an important one in narrative semantics, we must distinguish four epistemic categories. The objective K-world of characters is computed by taking all the true propositions in the book on the reference world (which is established by the highest narrative authority), and by assigning to each of them one of the following operators:

+ (Correspondence, knowledge): x holds p firmly for true
− (Conflict, misbelief): x holds p firmly for false, while p is true
0 (Absence, ignorance): p is unknown to x
i (Indeterminacy, uncertainty, question): x is either uncommitted to the truth of p or leans to some degree toward the truth (i.e., considers p possible, probable, unlikely, etc.) A scale of coefficients, from 1–99 (low probability) to 50–50 (indeterminacy) to 99–1 (high probability) could be used to represent the various degrees of commitment to the truth of a proposition.

The subjective K-world of characters can be derived from the objective one by taking all the + and the i propositions. Among the i propositions, those with high coefficients yield the beliefs of characters, as opposed to their unconditional commitments, and those with 50-50 coefficients yield the questions that preoccupy their minds.

The reference world of a character's K-world may not only be TAW, but any of the private worlds of the narrative universe. The possibility for a K-world to reflect another character's K-world leads to potentially infinite recursive embedding. A K-world may represent a whole system of worlds, some of which may be reflections of itself in the K-world of another individual. This cross-interception of K-worlds is an important part of strategic reasoning: "He figures I'm going to throw the curve because he thinks I expect him to think I'm going to throw something else so I'll throw the curve instead," thinks a pitcher in "Reflex Curve," a short story by Charles Einstein (1979:368). In this reasoning, the self-embedding potential of K-worlds is taken to the utmost limits of intelligibility. Was it too far or not far enough? Embroiled in his own reasoning, the pitcher throws a curve—and the batter hits it for a game-winning home run.

Prospective Extension of K-Worlds

Just as TAW contains a domain of the actualizable, the K-world of characters includes a prospective domain, representing their apprehension of the tree of possible developments out of the present situation. The propositions of this prospective domain are modalized by an operator of temporal accessibility corresponding to Todorov's predictive mode. "It is possible that Tom will find out that I am not paralyzed" reasons Skye in "All My Children." Prospective beliefs may furthermore be paired by a conditional operator *if . . . then*: "If Tom finds out that I am not paralyzed, I will be in trouble." The recursive nesting of conditionals creates a garden of forking paths into the future, a branching system of ever-increasing complexity: If A, then B, otherwise C. If B then D, otherwise E, etc. The prospective domain of a character's K-world is of crucial importance in the formation of goals and the elaboration of plans—a topic to be discussed in the next chapter.

O-World

The obligation-world, or O-world of characters, is a system of commitments and prohibitions defined by social rules and moral principles. While the social rules are issued by an external authority, the moral principles may be defined by the characters themselves. These regulations specify actions as allowed (i.e., possible), obligatory (necessary), and prohibited (impossible). A person or character's O-world is satisfied in T/AW if all the obligations have been fulfilled and none of the interdictions transgressed. (Cf. Todorov's obligatory mode.)

A variation on this deontic interpretation of modal operators classifies actions as credits (acquisition of merit), debts (acquisition of demerit), and neutral. The acquisition of merit makes characters rewardable, while the acquisition of demerit makes them punishable. For the O-world to be satisfied in T/AW, all the merits must be rewarded, and all the demerits must be paid for by punishment or penitence. An O-world with unpunished infractions is in a state of conflict with T/AW, while an O-world with unrewarded merits is compatible with T/AW without being fully satisfied.

The credits and debts of the O-world may also be acquired through commitment to future actions (what Todorov calls the conditional mode): "If you do p, I will do q." A character's O-world remains in debt until all promises are kept. Since commitments derive from interpersonal contracts, O-worlds are interactive and mutually dependent. A credit in a character's domain means that another character has a promise to fulfill toward the first. Threats present an interesting conflict: by issuing a threat, characters create an obligation, and if the precondition obtains they will be in "debt" until they execute the threat. But since the accomplishment of the threat usually constitutes a moral infraction, the character trades one kind of debt for another. The same trade-off is characteristic of revenge, as opposed to legal punishment. Characters taking revenge make themselves liable to reciprocal action by the party of their victim, and the offended party will become an offender through the very action of repairing the offense against one of its members.

These examples demonstrate the potentially conflicting nature of obligations. An individual who belongs to a number of different groups may be subjected to incompatible systems of rules. A classical example of conflicting obligations is the predicament of Rodrigue in Corneille's *Le Cid*: he either challenges his father's insulter and violates the king's law, or he lets the insulter go unpunished and violates family rule.

W-World

The wish-world of characters is defined over propositions involving the axiological predicates good, bad, and neutral. The first of these predicates corresponds to Todorov's optative mode. While moral laws define goodness and badness relatively to the community, the law of desire defines these predicates relatively to the individual. The constitutive propositions of a W-world are of the form

$$x \text{ considers that } \begin{bmatrix} \text{state} \\ \text{action} \end{bmatrix} p \text{ is } \begin{bmatrix} \text{good} \\ \text{bad} \end{bmatrix} \text{ for } x$$

A desired state is typically the possession of a certain object. A desired action is an intrinsically rewarding activity such as making love, eating, or playing games.

A W-world is theoretically satisfied in T/AW if all the propositions labeled good are true in T/AW; it conflicts with T/AW if one of the dysphoric states or unwanted actions is actualized; and it stands in a neutral relation to T/AW—the character judging the state of T/AW acceptable—if the nonrealization of the desires does not lead to dysphoric situations. A neutral relation occurs when all coefficients of desirability remain in the middle range. Should an action or state be intensively desired, its nonrealization would be the object of an equally strong fear. But a character's W-world may be flexible enough to offer alternatives, so that the nonrealization of the highest wish can be partially made up by a less desirable but still positively valued state.

This potential flexibility of W-worlds suggests that the axiological operators "good" and "bad" are not binary categories, but the poles of a continuum. W-worlds are layered structures in which various situations are ranked according to their degree of desirability. In the course of a narrative, characters may aim successively at various layers of their W-world, settling for lower levels as the higher ones become unattainable. Or, on the contrary—like the fisherwoman in Grimm's fairy tale of "The Little Golden Fish"—they may start at the lowest level, and pursue higher and higher wishes. The system of values may furthermore be modified during the course of the action, so that what appears desirable at one time no longer seems so when it becomes reality.

The layers of a W-world differ not only through their degree of desirability, but also through their degree of compatibility with T/AW. A W-state defined over few propositions is compatible with a greater number of possible worlds than a W-state defined over few propositions, and T/AW has a greater chance to be one of these worlds. Another factor in this compatibility is of course the nature of the individual propositions. The W-state defined over the single proposition "x is king" may for instance be harder to realize than another state defined over forty.

Like O-worlds, W-worlds may be internally inconsistent. An individual may desire p on a level of consciousness, and ~p on another. The result is a chimeric W-world which will never be realized in T/AW. Examples of fictional characters living in such a world include Julien Sorel and Emma Bovary.

Pretended Worlds

The private domain of characters is not exhausted by sincere beliefs and desires, or genuine obligations. A character may forge a private world in order to deceive another. In the fable "The Fox and the Crow," for instance, the proposition "the fox finds the crow beautiful" belongs to a pretended world of judgment, and the proposition "the fox wants to hear the crow singing" to a pretended W-world. The complete semantic description of a character's domain thus includes both authentic and inauthentic constructs—beliefs and mock beliefs, desires and mock desires, true and faked obligations, as well as genuine and pretended intents.

F-Universes

A last type of private sphere involved in narrative semantics is formed by the mind's creations: dreams, hallucinations, fantasies, and fictional stories told to or composed by the characters. These constructs are not simply satellites of TAW, but complete universes, and they are reached by characters through a recentering. For the duration of a dream, the dreamer believes in the reality of the events he or she experiences, and the actual world of the dream takes the place of T/AW. The recentering of dreams, fantasies, and hallucinations differs from fictional recentering in that the basic identity of the subject is preserved through the relocation. Like the primary narrative system, F-universes consist of an actual F-world surrounded by the private worlds of its inhabitants. By virtue of the inherent recursivity of recentering, the members of F-worlds have at their disposal the entire array of world-creating activities: the characters in a dream may dream, the heroes of fictional fictions may write fictions. This type of recursive embedding differs from the one we have observed in K-worlds in that it does not propose ever new points of view on the same system, but transports the experiencer to ever new realities. Whereas K-recursion is like putting a new mirror in a room to reflect it from another angle, F-recursion is like crashing through the wall to enter another room.

While F-universes offer escapes from TAW, they may fulfill metaphorically the function of K-worlds or W-worlds with respect to the primary narrative system. The novels read by Don Quixote or Emma Bovary are selected by these characters as models of the world in which they wish to live. A character's knowledge is often made to expand into the future or into a sacred layer of reality by a dream sent from these other regions. Hallucinations can tell characters something about their real selves, as does the apparition of the devil to Ivan Karamazov. And finally, a fictional story may be told within a story as parable reflecting on TAW ("Die Wunderlichen Nachbarskinder" in Goethe's *Elective Affinities*). But not all F-universes lead back to the primary narrative system. In *Alice in Wonderland*, Alice's dream is not only introduced for its own sake, it even draws TAW into its own orbit. Once Alice awakes, she narrates her dream to her older sister, and the sister follows her, through daydreaming this time, on the paths of Wonderland.

Relations between Worlds

The relations among the worlds of the narrative system are not static, but change from state to state. The plot is the trace left by the movement of these worlds within the textual universe.

From the viewpoint of its participants, the goal of the narrative game—which is for them the game of life—is to make TAW coincide with as many as possible of their private worlds (F-universes excepted). The moves of the game are the actions through which characters attempt to alter relations

between worlds. A narrative move, writes Pavel, "is the choice of an action among a number of alternatives, in a certain strategic situation, and according to certain rules" (1985:17). The alternatives are the forking paths of projections; the strategic situation is the relative position of worlds on the board of the textual universe; and the rule of the game is to move one's pieces closer to the center.

For a move to occur and a plot to be started, there must be some sort of conflict in the textual universe. Plots originate in knots—and knots are created when the lines circumscribing the worlds of the narrative universe, instead of coinciding, intersect each other. In order to disentangle the lines in their domain, characters resort to plotting, with the almost inevitable effect of creating new knots in some other domain.

The best of all possible states of affairs for a system of reality is one in which the constitutive propositions of all private worlds are satisfied in the central world. In such a system, everybody's desires are fulfilled, all laws are respected, there is a consensus as to what is good for the group; what is good for the group is also good for every individual, everybody's actions respect these ideals, and everybody has epistemic access to all the worlds of the system. We can represent this situation as a number of coinciding circles. Whenever some proposition in a private world becomes unsatisfied in the central world, the system falls into a state of conflict. This event can be visualized as a satellite of TAW leaving its orbit.

By this definition, conflict is not simply the complication or thickening of the plot that occurs between exposition and resolution, but a more or less permanent condition of narrative universes. The denouement of a narrative is not the elimination of all conflicts, since the resolution of the hero's problems usually creates conflicts in his opponent's domain, but only the disappearance of the productive ones. A conflict is productive when its experiencer is in a position, and is willing, to take action toward its resolution. For conflict to disappear completely from a narrative universe the ending should be either eschatological or apocalyptic: all the villains should join the ranks of the good guys, or everybody should die.

Depending on which world strays away from TAW, or on the relative positions of worlds within a character's domain, we can establish a typology of narrative conflicts and narrative situations. Each type of conflict generates specific narrative themes, and a typology of narrative conflicts leads toward a typology of plots. The following discussion is an attempt to complete and systematize an earlier typology proposed by Doležel (1976a).

The primary level of conflict is between TAW and one of the worlds of a private domain. Whenever conflict exists objectively in a textual universe, it is found on this level. But other types of conflict may contribute to the further entanglement of a situation: conflict between the worlds of a character's domain; conflict inherent to one of these worlds; and conflict between the private worlds of different characters. These secondary conflicts all presuppose a basic conflict involving TAW.

Conflicts TAW/Private Worlds

The most frequently encountered conflicts of the primary level involve TAW and the W-worlds of characters. In this type of conflict, the W-world of x contains a proposition "x has y" or "x does y" which remains unfulfilled in TAW. Deficiencies of the W-world give rise to the theme of the quest. Most narratives present quest episodes, but it is in myths and fairy tales that the theme is the most dominant.

Conflicts of the O-world occur when a character's "moral account" falls in a state of debt through the violation of laws or through unfulfilled personal commitments. This type of conflict generates some of the most common thematic sequences of oral and popular narrative: prohibition-violation-punishment; mission-accomplishment-reward; favor-repayment; infraction-penitence; insult-revenge-revenge-revenge (and so on until one of the feuding parties exits from the system).

In the epistemic domain, conflict may take two forms: the error, which stems from contradictions between a K-world and its reference world; and the enigma, which stems from an incomplete K-world with well-defined areas of indeterminacy. The error may be spontaneous, as in tragedies, or the result of deceit, as in comedies and various other genres (fables, fairy tales, soap operas, and spy stories, to name a few). The enigma characteristic of mystery stories, gives rise to the theme of investigation. A particular form of enigma, the ontologically inexplicable, defines the genre of the fantastic. The so-called fantastic pits against each other the events of TAW and the characters' (and reader's) representation of the laws governing reality. The resolution of this type of conflict requires the sacrifice either of the K-world of the hero, or of the law-defying facts. In the one case the hero modifies his private ontology and accepts TAW as essentially pluriregional: the ghost is an intruder from the realm of the dead. In the other case, the hero expels the inexplicable facts from TAW by ascribing them to an APW created by an altered state of consciousness or by an act of forgery: the ghost is explained away as either a dream, a hallucination, an optical illusion, or as a normal person covered with a white sheet.

Conflicts within a Character's Domain

Conflict occurs within a character's domain when the satisfaction of one world of this domain requires the nonsatisfaction of another. This situation is captured by the formula

$$\sim\!\diamond\ (AW = K\text{-world} = O\text{-world} = W\text{-world})$$

Classical examples of such personal conflict include incompatibility between W-world and O-world (the realization of the character's desires requires some forbidden or morally wrong action, as in Crime and Punishment); and incompatibility between K-world and W-world (the satisfaction of a charac-

ter's desires is only made possible by his or her ignorance of facts, as in the myth of Oedipus).

Conflicts within a Private World

In this type of conflict, private worlds cannot be realized because of internal inconsistency (contradictory desires, simultaneous allegiance to incompatible sets of rules) or because characters are unable to outline their borders. This last situation is typical of the psychological novel of the late nineteenth and twentieth century. When the concept of the self is called into question, private worlds become so fuzzy, so unstable and problematic, that they cannot be measured against the sharply defined facts of an actual world. In popular and folklore genres, by contrast, the private worlds of characters consist of clearly defined and stable elements, and conflicts of this type hardly ever occur.

Conflicts between the Private Worlds of Different Characters

Narrative conflict occurs between domains whenever the realization of a private world requires the nonsatisfaction of some world (usually the corresponding one) in the domain of another character. The mutual compatibility or incompatibility of the private worlds of characters divides the cast into opposing factions, and defines interpersonal relations as either cooperative or antagonistic. Conflict between distinct domains is the most productive situation for narrative development. Narrative is a competitive game and cannot go on without opposition. The closest approximation of a narrative without antagonistic private domains is found when the opponent is not an individual but a natural phenomenon—as in the story pitting Hercules against the filthy stables of Augeas. But if conflict between private domains is almost inevitable in a narrative plot, it can receive various degrees of prominence. In a classical Proppian fairy tale, the conflict between the hero and the villain is productive on the macrolevel; the whole narrative can be summarized as "hero versus villain." But in a Bildungsroman, where the dominant structure is the progressive expansion of the hero's K-world, antagonism is most productive in the individual episodes of the microlevel.

Subjective vs. Objective Conflicts

Conflicts involving the O-world and W-world may either exist objectively, or be created by an epistemic conflict. When a character's K-world misrepresents TAW, it will also misrepresent the relationship between TAW and all the other worlds of the narrative system. The character may thus see a conflict where none exists objectively or may wrongly believe that his or her private worlds are satisfied in TAW. The first case is illustrated by Othello, the second by the myth of Oedipus. Othello's erroneous belief that Desdemona was unfaithful creates in his mind a triple conflict with TAW, involving his W-world, Desdemona's O-world, and his own O-world, since he feels obligated to punish her. When Oedipus marries Jocasta without realizing

that she is his mother, his incomplete K-world leads him to believe that both his W-world and O-world are satisfied in TAW.

Taken as a whole, the myth of Oedipus offers a particularly good example of the changing relations of private worlds to TAW during the course of the narrative action. The story begins in a state where all of Oedipus's worlds are in alignment with TAW. His meeting with Jocasta creates both an unfulfilled W-world requirement and a K-world conflict, since he wants to possess her and does not realize her true identity. Marriage to the queen and accession to the throne brings the satisfaction of Oedipus's W-world, but creates a transgression of the O-world which is kept hidden to him by the K-world conflict. The discovery of Jocasta's identity brings the K-world back into harmony with TAW, but throws the W-world out of orbit, and makes Oedipus aware of the conflict involving the O-world. After the voluntary penitence of the hero, his K-world and O-world are again compatible with reality, but the W-world remains forever unfulfilled.

The general system formed by the domains described above can be generated by the grammar of figure 12. Optional constituents are in parentheses. Of all the terminal categories appearing in the rules, two remain to be defined: the concepts of goal and plan, which together define the intent (I-world) of characters. The exploration of goals and plans and the discussion of their contribution to the dynamics of plot form the topic of chapter 7.

```
Global universe  → TAW, characters' domains
TAW              → Region 1 (Region 2) (Region 3?)
Characters' domain → Authentic worlds
                   → Pretended worlds
Authentic worlds → Alternative universes (F-universes)
                 → K-world
                 → O-world
                 → W-world
                 → I-world
Pretended worlds → Mock K-world
                 → Mock O-world
                 → Mock W-world
                 → Mock I-world
K-world     → AW, other characters' domains
O-world     → Credits, debts
W-world     → Desired states, feared states
I-world     → Goals, plans
Mock worlds → [Same structure as authentic counterparts]
F-universes → Dreams
              Fantasies
              Hallucinations
              Fictions
Dreams, Fantasies,
Hallucinations,
Fictions    → Global universe
( ) optional components
```
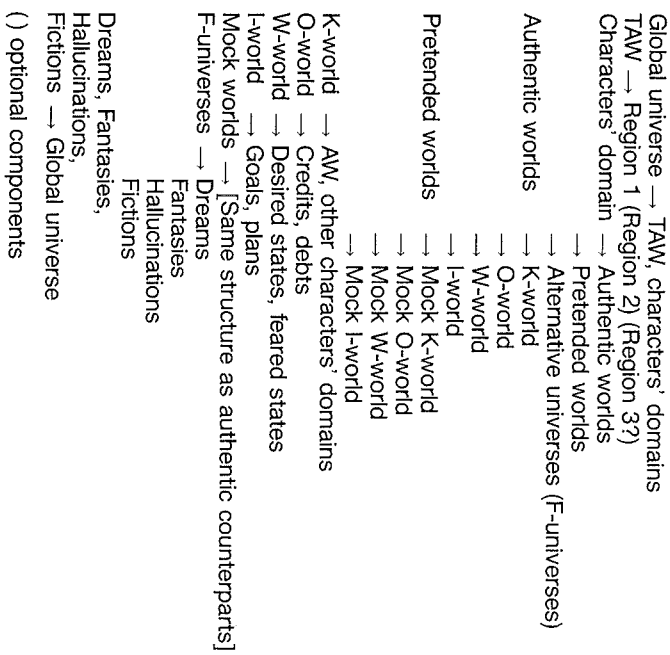
Figure 12
The modal structure of narrative universes