CHAPTER 11

Sequence, Linearity, Spatiality, or Why Be Afraid of Fixed Narrative Order?

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WHETHER IT IS conceived as an order inherent to the events of a story or as the order in which these events are presented by discourse, narrative sequence is a basically linear phenomenon. In contemporary literary theory, linearity is generally regarded with contempt, because its one-dimensionality suggests lack of complexity, and complexity tends to be praised as an inherently desirable property of artistic texts. In this chapter, I propose to investigate the sources of this rejection of linear sequence as well as the fortune of attempts to create narratives that do away with it.

The postmodern suspicion toward sequence can be traced back to Roland Barthes's *S/Z* and to its famous opposition between the *scriptible* (writerly) and the *lisible* (readerly). *S/Z* was written in the aftermath of the events of 1968, a period when many French intellectuals aspired to some kind of political relevance, which meant the adoption of a Marxist vocabulary. Barthes observes that the institution of literature is based on an opposition between producer and consumer. Blatantly ignoring the complexity of the reading process, he associates the *lisible* with a product that turns us into passive consumers who mindlessly devour the text until no page is left:

> Notre littérature est marquée par le divorce impitoyable que l'institution littéraire maintient entre le fabricant et l'usager du texte, son propriétaire et son

> client, son auteur et son lecteur. Ce lecteur est alors plongé dans une sorte d'oisiveté, d'intransitivité, et, pour tout dire, de *sérieux:* au lieu de jouer lui-même, d'accéder pleinement a l'enchantement du signifiant, à la volupté de l'écriture, il ne lui reste plus en partage que la pauvre liberté de recevoir ou de rejeter le texte: la lecture n'est plus qu'un *referendum.* (10)
>
> Our literature is characterized by the pitiless divorce which the literary institution maintains between the producer of the text and its user, between its owner and its customer, between its author and its reader. This reader is thereby plunged into a kind of idleness—he is intransitive; he is, in short, *serious:* instead of functioning ["playing" would be a better translation] himself, instead of gaining access to the magic of the signifier, to the pleasure of writing, he is left with no more than the poor freedom either to accept or reject the text: reading is nothing more than a *referendum.* (English version, 4)[1]

To the conception of literature as a product to be consumed, Barthes opposes the vision of literature as a *travail,*[2] which means "as a process":

> Pourquoi le scriptible est-il notre valeur? Parce que l'enjeu du travail littéraire (de la littérature comme travail), c'est de faire du lecteur, non plus un consommateur, mais un producteur du texte. (10)
>
> Why is the writerly our value? Because the goal of literary work (of literature as work) is to make the reader no longer a consumer, but a producer of the text. (4)

If the *scriptible* is a process, not a product, it cannot be embodied in any actual text. "Le texte scriptible n'est pas une chose, on le trouvera mal en librairie. . . . Le scriptible—c'est nous en train d'écrire" (11) [The writerly text is not a thing, we would have a hard time finding it in a bookstore. . . . The writerly text is *ourselves writing*] (5). The consequence of this purely mental nature of the *scriptible* is that it cannot be described, since the activity of the writing mind is largely inaccessible to observation (or if it can be observed, it is through its products). In order to formulate an aesthetics, which is the point of the whole discussion, Barthes replaces the binary opposition *scriptible-lisible* with

1. This idea of referendum has become literalized with the use of the "Like" button in certain social media Web sites, such as U-Tube or Facebook.

2. It is ironic that while Barthes, the would-be political activist, describes literature as work, Barthes, the hedonist, uses the metaphor of play, the exact opposite of work.

a concept that tolerates various degrees of actualization: the concept of *texte pluriel* [plural text]. The more plurality a text possesses, the more it will turn the reader into a producer. The description of full plurality has become an enduring manifesto of postmodern aesthetics:

> Posons d'abord l'image d'un pluriel triomphant, que ne vient appauvrir aucune contrainte de représentation (d'imitation). Dans ce texte idéal, les réseaux sont multiples et jouent entre eux sans qu'aucun puisse coiffer les autres; ce texte est une galaxie de signifiants, non une structure de signifiés; il n'a pas de commencement; il est réversible; on y accède par plusieurs entrées dont aucune ne peut être à coup sûr déclarée principale; les codes qu'il mobilise se profilent *à perte de vue,* ils sont indécidables (le sens n'y est jamais soumis à un principe de décision, sinon par coup de dés); de ce texte absolument pluriel, les systèmes de sens peuvent s'emparer, mais leur nombre n'est jamais clos, ayant pour mesure l'infini du langage. (12)

> Let us first posit the image of a triumphant plural, unimpoverished by any constraint of representation (of imitation). In this ideal text, the networks are many and interact, without any one of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifieds; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend *as far as the eye can reach,* they are indeterminable (meaning here is never subject to a principle of determination, unless by throwing dice); the systems of meaning can take over this absolutely plural text, but their number is never closed, based as it is on the infinity of language. (5–6)

To this image of a total or "triumphant pluralism," Barthes opposes a structure that limits the infinity of language and is therefore typical of the "classical" or "readerly" text. This structure is narrativity:

> Tout cela revient à dire que pour le texte pluriel, il ne peut y avoir de structure narrative, de grammaire ou de logique du récit; si donc les unes et les autres se laissent parfois approcher, c'est *dans la mesure* (en donnant a cette expression sa pleine valeur qualitative) où l'on a affaire à des textes incomplètement pluriels, des textes dont le pluriel est plus ou moins parcimonieux. (12)

> All of which comes down to saying that for the plural text, there cannot be a narrative structure, a grammar or a logic; thus, if one or another of these are sometimes permitted to come forward, it is *in proportion* (giving this

> expression its full quantitative value) as we are dealing with incompletely plural texts, texts whose plural is more or less parsimonious. (6)

Why can the *texte pluriel* not have a narrative structure? To see this, let's return to Barthes's description of full pluralism. Following Barthes's image of the *réseau,* we can represent this pluralism as a distributed network (figure 11.1a). In contrast to a line, a network requires two dimensions: it is therefore a spatial object. The fundamental property of a network, compared to a tree diagram (figure 11.1b) or a vector, is that it has no root node, and it allows loops. There is consequently no entry point, and there are many different ways to reach a given node. Once they enter the network, explorers must make a decision every time they reach a node that is connected to many other nodes. It is this constant need to make decisions that elevates, in Barthes's view, the reader of plural texts from a passive consumer to an active producer. Since there is a virtually infinite variety of routes through the network, which means an infinite number of potential interpretations, it is impossible to produce a reading that exhausts the meaning of the text. Narrativity conflicts with Barthes's vision of a triumphal pluralism for at least three reasons. First, Barthes regards unrestricted pluralism as incompatible with "imitation," or the constraints of representation.

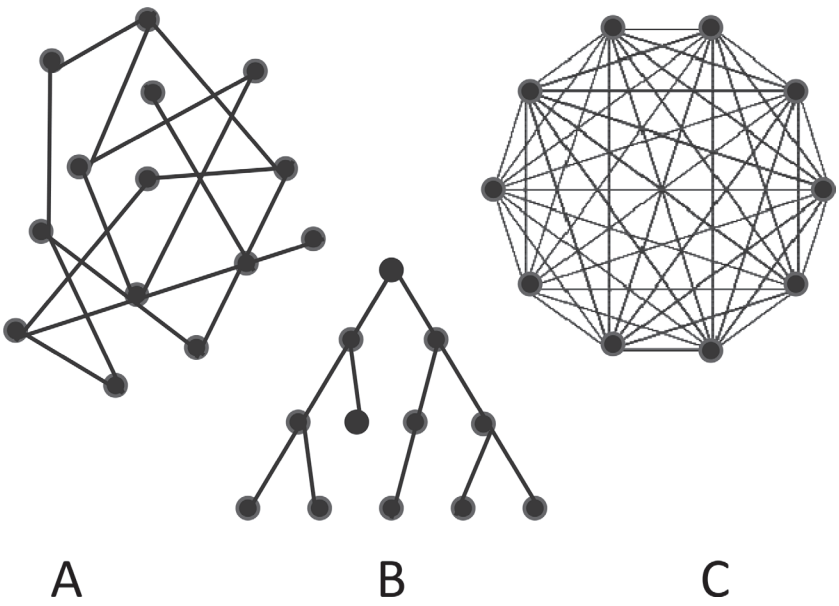

FIGURE 11.1. Types of networks: (a) distributed network, (b) tree, (c) complete graph

I don't know if by "imitation" he means "imitation of something that exists in the real world," such as a horse, or simply the ability to evoke the mental representation of a familiar object, whether real or imaginary, in which case imitation could concern a unicorn. At any rate, when readers regard a group of words as the evocation of a particular object, they reduce the polysemy inherent to each word by focusing on the meaning that relates to the kind of object that is being described at the expense of the other meanings conventionally encoded in that word. Since narrative is a fundamentally mimetic form of discourse, it cannot avoid this limitation of potential meanings. Poetry, being far less mimetic, is much more respectful of polysemy. Barthes was indeed writing in a time when poetry was regarded as the model of literary meaning and though he was never particularly interested in the lyric, he was certainly supportive of theories that regarded the practice of literary art as letting language speak for itself by liberating the multiple meanings inherent to each word.[3]

Second, while a network is a spatial structure, narrativity is a fundamentally temporal structure. This is not to say that space does not play a role in narrative: stories concern a world that functions as a spatial container for existents; thanks to the actions of these existents, the world undergoes changes. Following a story means building a mental simulation (Oatley 13–14) of the changes that take place in a world and of the processes that occasion these changes. Bakhtin expressed this inseparability of space and time through the concept of *chronotope*. But space and time have fundamentally different properties. Because space has more than one dimension, one can go from one point in space to another through several routes. But time is one-dimensional; it is traditionally represented by images such as the river or the flight of an arrow, which suggests a unidirectional movement along a line. If we represent a story through a diagram, there will be only one trajectory that goes from the world of time 1 to the world of time 2: changing the order of the events will result in the best cases in a different story, and in the worst case in no story at all.[4] When a narrative sequence involves causality, it cannot be inverted, because an inversion would mean that the effect precedes the cause—an order that most philosophers regard as logically impossible (e.g., Tooley). Moreover, if time could be represented through a spatial network, the loops of the

3. I am thinking here of New Criticism, or of thinkers such as Heidegger or Maurice Blanchot, who interrogated poets, especially Hölderlin, Trakl, Rilke, and Mallarmé, for the essence of literary language.

4. I am talking here about major events that have an impact on the story. On the level of minor or routine events, order may be inverted without significant consequences. For instance, a character may go to the doctor and then to the supermarket, or vice-versa, since there is no causal relation between these events.

network would mean that it is possible to return to an earlier time. It could be argued that time-travel stories involve temporal loops; but these stories are notorious for creating all sorts of logical paradoxes (cf. Nahin).

The network structure of the plural text leads to the third reason why Barthes's vision of triumphant pluralism cannot take narrative form: narrative, as Aristotle taught us, has a beginning and an end; but networks, because of their loops, allow endless wandering. Barthes is dreaming of a text that renews itself constantly and holds the reader forever fascinated—which means forever captive—in stark contrast to the consumerist page-turners that we read for the plot, driven by the desire to find out how it ends.

Barthes must have found sufficient pluralism in narrative texts to entertain himself, because his critical work is entirely devoted to "readerly" stories, whether these stories come from popular culture or classical literature. Yet his conception of the ultimate text as a network created by the infinity of language reflects a general trend in twentieth-century literature and criticism that Fredric Jameson has called the *spatial turn.* Jameson claims that "our daily life, our psychic experiences, our cultural languages are today dominated by categories of space rather than by categories of time" (64). I find this claim hyperbolic; recent art and literature play with time as much as they play with space. But because time is usually represented in language through spatial metaphors, and because it is conceptualized through spatial diagrams, experiments with narrative time often involve new types of spatial organization.

The spatial turn is a broad-ranging movement that covers a wide variety of phenomena. In criticism, it has inspired the school known as "spatial form" (inspired by Joseph Frank), which focuses on synchronic relations between the parts of the text rather than on the diachronic relations between constituents. This focus, which is also typical of structuralism and of the Geneva school of criticism, has led to an emphasis on individual themes and to a neglect of both plot and the dynamics of storytelling.[5] In practice, the spatial turn has produced forms of narrative composition that break down narrative sequence and deemphasize causality through compositional devices such as fragmentation, montage of disparate elements, and juxtaposition of parallel plot lines. Here, I will restrict my investigation of the spatial turn to one type of phenomenon: the attempt to build stories based on the two-dimensional structure of the network rather than on one-dimensional sequences.

The elements—or nodes—of a network can be more or less densely connected. In a loosely connected network, there are long stretches of linear

5. See Rousset for a critical program that respects both spatial form and diachronic sequence.

sequences; in a densely connected network, there is a wide choice of paths of navigation. Maximal connectivity occurs when every node has a path that leads to every other node. This is known in graph theory as a complete graph (figure 11.1c). A text that relies on a complete graph is Marc Saporta's novel *Composition No. 1,* which was printed on a deck of cards and produces a different sequence of discourse with every reshuffling. In this type of structure, the text can start with any card, and any card can succeed any other card. This represents a literal implementation of Barthes's vision of a text that can be entered through multiple points and where meaning is created by chance—what he calls *un coup de dés*—rather than by a rational principle of decision. In such a text, the author has no control over narrative sequence, and the reader has no reason to choose one path rather than another. The question, of course, is whether the total randomness of the system can really produce anything worth calling meaning. It certainly cannot create narrative meaning, because narrativity is based on an asymmetric relation between cause and effect: if A causes B, A must precede B; but a random shuffling can generate the sequence AB as well as the sequence BA.

The idea of the narrative text as a set of loose leaves has had no progeny, beyond a few imitations of *Composition No. 1* in various languages: it was one of those experiments whose artistic value lies entirely in their novelty, and which are not worth repeating once they lose this novelty.[6] But in the mid-eighties, the development of digital technology inspired a new type of play with network structure. This new type is known as hypertext. Rather than allowing free passage from any node of the network to any other node, as was the case with the complete graph of Saporta, hypertext is based on a limited system of built-in links between individual units of text.[7] The user passes from one unit to another by clicking on a hot spot that activates the link. Through the placement of links, the author can control which units follow each other, but if the network is densely connected, she cannot control lon-

6. For Umberto Eco, *Composition No. 1* embodies the problematic nature of experimental art: "I recently came across *Composition No. 1,* by Marc Saporta. A brief look at the book was enough to tell me what its mechanism was, and what vision of life (and obviously, what vision of literature) it proposed, after which I did not feel the slightest desire to read even one of its loose pages, despite its promise to yield a different story every time it was shuffled. To me the book had exhausted all its possible readings in the very enunciation of its constructive idea" (170–71). Eco might not be giving a fair chance to *Composition No. 1,* but if Saporta's narrative experiment does not inspire him to read it, even less would a work that borrows Saporta's original idea.

7. For an example of what a hypertext network might look like, using the software Tinderbox, see David Kolb, *Sprawling Places* (http://www.dkolb.org/sprawlingplaces/images/fullsize/themapof.jpg).

ger sequences. When the reader has no specific reason to make one choice rather than another, and when the choices offered to her are too numerous to be anticipated by the designer, progression through the network becomes a random process.

The literary applications of the hypertext principle were promoted by early theorists as "a vindication of postmodern theory" (Bolter 24) or as "the convergence of contemporary critical theory and technology," which is the title of George Landow's work, in which we read: "Hypertext embodies many of the ideas and attitudes proposed by Barthes, Derrida, Foucault, and others" (91). Barthes's description of the plural text in *S/Z* played a particularly prominent role in this theorization. Just as Barthes argued that the plural text elevates the reader from passive consumer to active producer of meaning, the early advocates of hypertext (e.g., Landow) claimed that the system of choices of hypertext turns the reader into a writer. But if the choice of links to follow is purely random, which means if the user's exploration of the network is a blind navigation, then the user's activity is no more worthy of being described as "writing" than the automatic act of turning the pages of a book. The only difference that elevates the so-called reader-author of hypertext over the consumerist reader who is driven by the desire to find out how it ends is that his reading experience never ends: hypertext is a "garden of forking paths,"[8] in which readers can loop forever, unable to tell how far along they are in the text, since the text resides in the invisible memory of the computer, rather than in the visible volume of a book.[9] According to the advocates of hypertext, this impossibility to conceive reading as a progress toward a goal encourages the attitude toward the text that Baudelaire described as *flânerie*. In contrast to the traveler who moves from one point to another and regards the space between these two points as an obstacle to overcome, the *flâneur* wanders for the pure pleasure of the journey, open to whatever discoveries the vagaries of his itinerary will bring, and he develops an aesthetic relation to space. By analogy, the reader who has been freed from the pull of narrative toward its outcome—from what Raphaël Baroni calls *la tension narrative*—is supposed to develop an appreciation of the text as an open space of signification.

Yet without a plot to give the reader a global view of the text, it becomes very difficult to keep its elements in memory and to imagine meaningful

8. Title of a short story by Jorge Luis Borges, which was very inspirational for hypertext authors, especially Stuart Moulthrop, who created a hypertext extension of it (unpublished; mentioned in Wardrip-Fruin and Montfort, 691).

9. A point made by Shelley Jackson in her hypertext fiction *Patchwork Girl*.

connections between these elements, unless of course the text is as short as a poem. The cognitive value of narrative, together with its universal appeal, might explain why the proponents of hypertext were not ready to accept Barthes's claim that narrativity is incompatible with triumphant pluralism. Hypertext was widely promoted as the novel of the future, and the texts that are now regarded as the classics of the genre all retain some kind of narrative structure. I am thinking here of texts such as Michael Joyce's *afternoon: a story* and *Twelve Blue* (online), Stuart Moulthrop's *Victory Garden*, and Shelley Jackson's *Patchwork Girl.* These texts tell about characters who are engaged in certain situations, who perform actions, who interact with other characters, who experience changes in their world, and who are emotionally affected by these changes. For hypertext to retain some degree of narrativity, there must be limitations on the connectivity of the network: by this I mean that there must be reasonably long stretches of nodes with a linear connection, so that they can be interpreted as a chronological and causal sequence. But for the hypertext mechanism to be justified, these linear sequences must occasionally intersect; in other words, there must be decision points. This raises the problem of the meaning of the reader's choices.

Since narrative consists of both story and discourse, the choices can be given two interpretations: they can be seen as a way to generate different stories taking place in different storyworlds, or as a way to generate different discourse sequences that describe the same world and tell the same story. According to the first view, the contents of the nodes are events, the links stand for temporal and causal relations, and the task of the reader is to imagine connections between the events encountered during his traversal of the network that give narrative meaning to the sequence. For instance, out the elements listed below, at least three stories can be constructed (I let the reader imagine the causal connections that turn the sequences into meaningful narratives):

John is rich
John marries a movie star
John gambles
John is poor
John's wife divorces him

John is poor
John's wife divorces him
John gambles
John is rich
John marries a movie star

John marries a movie star
John is rich
John's wife divorces him
John gambles
John is poor

Here I have somewhat cheated by using a nondefinite description for John's wife: in stories 1 and 3 she is the same person as the movie star, but not in story 2. However, if hypertext authors are going to produce systems that generate different stories with each run, they will have to play such tricks. These three stories can be represented by the network of figure 11.2. For this system to generate well-formed stories that come to closure, however, a rule must be included specifying that every node must be visited and visited only once.

Although hypertext has occasionally been praised as a story-generating machine, it has not been used in the generative way I have just suggested, because it would be too difficult to design a network that produces well-formed

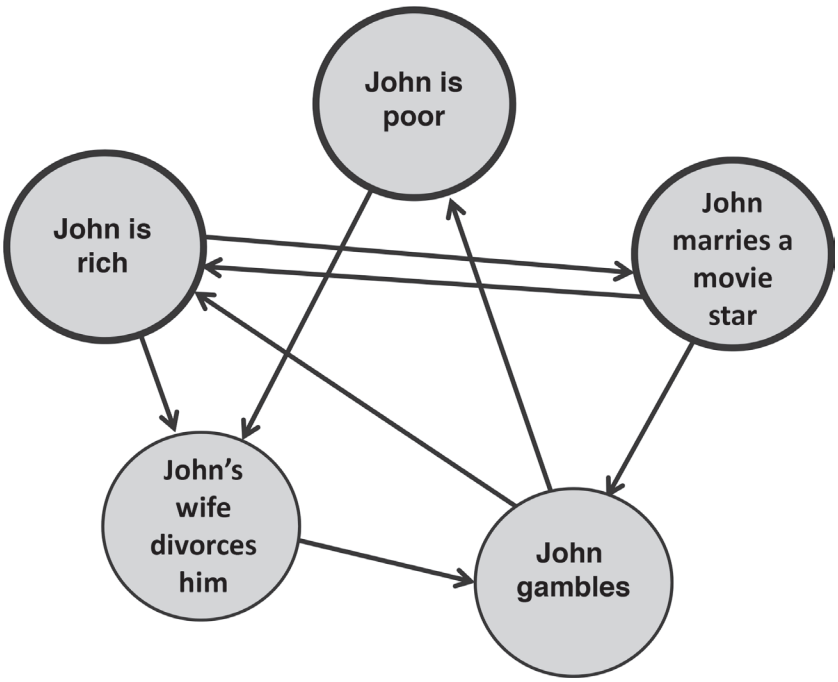

FIGURE 11.2. Generative network for the sample stories. Rule: every node must be visited, and visited only once.

stories, nothing but well-formed stories, and emergent stories—that is, stories that have not been foreseen by the author. If a story-generating system does not fulfill these three conditions, it will not be considered significant from a computational point of view: it would be just too easy to create a system that generates a handful of well-formed stories and a thousand strings of nonsense, or a system that generates nothing more than the stories anticipated by the designer. I am not even mentioning the aesthetic quality of the output, which has remained, so far, the most elusive property of computer-generated stories.

An alternative conception that also operates on the level of story consists of regarding hypertext as a way to explore the various possibilities that can develop out of a given situation. Normally the exploration of such possibilities would take the form of a tree-shaped diagram (figure 11.1b). Since trees do not have loops, each branch can be kept separate, and the succession of nodes can be associated with a linear time flow without creating the problem of time travel; but this linear flow also prevents the endless play of signification that Barthes associates with the network. When the reader reaches the end of a branch, she reaches the end of the story associated with that branch, and she must start again from the root node to explore another possibility. This explains why hypertext authors have avoided tree-diagrams in favor of a structure that makes the representation of different possibilities intersect with each other and in which, consequently, the reader can loop forever. Michael Joyce's *afternoon* focuses for instance on an accident that the narrator observes. He wonders if the victims of this accident were or were not his ex-wife and son, if they died or are still alive, and whether or not he caused the accident. As the reader navigates the text, she is taken from one version to another, often without noticing the transitions and without being able to distinguish an actual sequence corresponding to the facts from counterfactual possibilities. To make sense of the text, and to avoid logical contradiction, she might conceive the text as the flow of a mental activity that contemplates various possibilities, and she will associate some nodes with one particular possible world and some nodes with another. But since different versions can share some elements, it might be impossible to sort out every node as belonging to this or that version. When the reader's navigation through the network of hypertext is conceived as a representation of the flow of mental activity, a return to a node that has already been visited is not interpreted as time travel, but as a return of thought to a certain event. In different runs of the text, the narrator's mind will consequently follow different paths and visit different memories. I find the mentalist interpretation the most satisfactory way to give narrative significance to hypertext; but its availability depends on the thematics of the work and on how the author handles the system. Michael Joyce is a master of this art.

One may wonder whether the representation of multiple entangled possibilities truly requires the interface typical of hypertext. Consider Robert Coover's print short story, "The Babysitter." It consists of 107 numbered and linearly ordered paragraphs representing the various events that can occur between the moment a couple leaves for a party, entrusting its three children to the care of an attractive babysitter, and the moment the couple returns home (figure 11.3). In one version, the babysitter is murdered, in another she is raped by her boyfriend and his buddy, in another the baby drowns in the tub, and in yet another the father leaves the party under the pretext that he needs to check on the children, while he is really driven by the hope of having sex with the babysitter. The rigid order of appearance determined by the print medium does not prevent the reader from trying to construct different stories by sorting out the paragraphs and assigning them to different narrative sequences (figure 11.4). But this sorting remains approximative. A precise mapping of the text into distinct scenarios—for instance, by assigning paragraphs 1, 3, 13, 24, and 107 to one possible scenario, and paragraphs 1, 6, 12, 19, 32, and 107 to another—would exceed the cognitive abilities of the reader, because many paragraphs are compatible with different versions.[10] The inextricable entanglement of these versions becomes obvious when 107, the last paragraph, asserts events that belong to multiple alternative sequences: "Your children are murdered, your husband gone, a corpse in your bathtub, and your house is wrecked. I'm sorry. But what can I say?" (239). Coover's story has been called a "print hypertext," but "The Babysitter" is much more respectful of chronological sequence than network-based hypertext narratives. While it might not be cognitively feasible to arrange the segments into precise sequences, the linear progression of the text corresponds roughly to the passing of time that takes place in the storyworld: just as in a narrative that adheres to chronological order, early in the text means early in the evening, and late in the text means late in the evening. The loops of network-based hypertexts would prevent this sense of progression. I also think that the print story's ability to combine multiple possibilities with a sense of temporal progression could not be efficiently realized in digital hypertext, because in print the presentation of several possible developments in round-robin fashion allows the reader to watch them progress more or less simultaneously, even if this means in a scrambled order, while in hypertext, she must make a choice among different possibilities. Once a possibility has been selected, the others

10. Given sufficient time and effort, it would certainly be possible to map "The Babysitter" in terms of possible sequences of events, but it would take a writing system that makes it easy to erase and correct. I tried mapping the text with pencil and paper, but I gave up after many false starts, discouraged by the sheer number of possibilities.

FIGURE 11.3. The linear discourse structure of Robert Coover's "The Babysitter"

become inaccessible until she returns to their point of divergence, a return that might or might not happen.

So far I have considered naturalizations of the hypertext mechanism that operate on the level of story. The alternative is to regard all the nodes as the representation of the same storyworld and to interpret the variability of the sequences generated by the system as a discourse phenomenon. In this case, every sequence generated by the reader will represent a different itinerary across the storyworld. This conceptualization would be unproblematic if storyworlds consisted of space exclusively, since you can always travel through a territory by taking different routes. But because storyworlds are made of time as much as they are of space, these different itineraries involve a more or less arbitrary disruption of narrative sequence. I say arbitrary because, as I have argued, the order of presentation cannot be fully controlled by the author. In this conception, the text is a jigsaw puzzle whose pieces come to the reader one by one in order to be assembled into a coherent picture. We can also compare this process to the game of Tetris: chunks of story appear on the screen in an order blindly specified by the user's choices, and she tries to fit these chunks into a global narrative pattern, just as the player of Tetris tries to fit the pieces that fall from the top of the screen into a solid row. If we conceive narrativity as a type of content located exclusively on the level of story—that is, as a sequence of events involving characters and leading to changes in the storyworld (cf. Ryan, "Toward a Definition of Narrative")—then this conception of hypertext can be compatible with a narrative interpretation. But if we adopt Meir Sternberg's more dynamic and more rhetorical definition of narrative, which regards storytelling as a presentation of information about worlds, existents, and events that generates specific responses, such as suspense, curiosity, or surprise,[11] then the randomization of sequence that inevitably occurs in hypertext is incompatible with any of these basic narrative effects. Suspense, curiosity, and surprise are highly dependent on a controlled management of

11. "I define narrativity as the play of suspense/curiosity/surprise between represented and communicative time (in whatever combination, whatever medium, whatever manifest or latent form). Along the same functional lines, I define narrative as a discourse where such play dominates: narrativity then ascends from a possibly marginal or secondary role to the status of regulating principle, first among the priorities of telling/reading" (Sternberg 529).

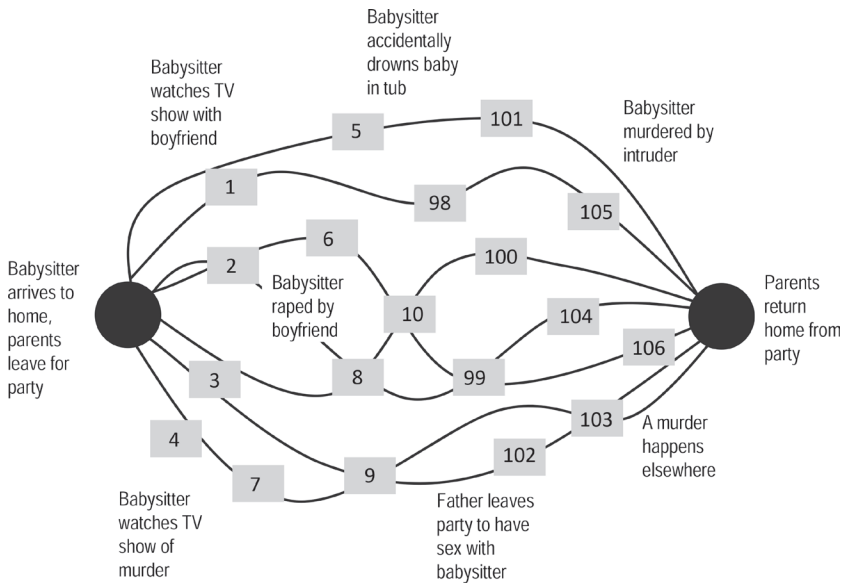

FIGURE 11.4. What the reader's mental map of "The Babysitter" could look like, if the reader had perfect memory of the text

information that determines what the reader knows and does not know when he reaches a certain point in the story. With a hypertext based on a network, however, the reader might reach a certain node through different routes: in one case, he might learn the identity of the murderer before discovering the body; in another case, he first finds the body and then learns who did it; and in yet another case, he might tire of operating the system after a few nodes and never find the body. It could be argued that a well-designed hypertext should exercise sufficient control over the reader's path and maintain sufficient interest to avoid such problems. But if the reader's narrative satisfaction depends on top-down control and on carefully planned discourse sequences, why bother with hypertext at all, since the main reason for adopting this interface is to challenge top-down control?

I am not saying that hypertext is a useless device. It is after all the principle that organizes the gigantic bank of information that we call the Internet. But surfing the Web and reading hypertext fiction are very different experiences. When we surf the Web, we go for specific pieces of information contained in individual locations, not for a global textual experience that covers many nodes. The buttons of a well-designed Web site display text labels that tell the user what kind of information the next page will offer. Like the signs at

an intersection of roads, these labels allow the traveler to make the kind of rational decisions that, according to Barthes, would restrict the pluralism of the literary text. And while the Web as a whole is a network of incredible complexity, most of its individual sites are organized as wheels (a configuration formally equivalent to a tree), with a home page serving as a hub for clearly distinct branches that remain neatly separate so that the designer can control the user's progression along these branches.

In the literary domain, hypertext has been most successful as the representation of stream-of-consciousness or of dream worlds, in which images flow into each other and undergo incessant transformations.[12] In dream realities, events occur and they create change, but these changes do not need to observe the laws of nature, so that A causes B is just as possible as B causes A. Hypertext could also be very useful in representing an experience of space typical of twentieth-century literature, especially of literature that represents the city: the experience of being lost in a maze. Alain Robbe-Grillet's *Dans le labyrinthe,* or Claude Simon's *La Route des Flandres,* with their frequent returns to the same images, would fare reasonably well in hypertext format. But the argument can be turned around: if print narrative, with its fixed discourse sequence, can give the impression of wandering in circles, why do we need hypertext? Here I will play the devil's advocate by saying that with print texts we know how far along we are in our reading and that we will eventually get out of the maze, but with hypertext we may run in circles forever and truly experience the frustration of going nowhere.

The end of the hypertext adventure in pluralism is well known. Far from becoming the dominant form of narrative that its advocates anticipated, hypertext has faded away and is now regarded as a form typical of the nineties. Scholarly activity about the genre (e.g., Bell) still focuses heavily on the same group of classics (Michael Joyce, Stuart Moulthrop, Shelley Jackson, and a few others), all dating back to the same period. Traditional novels, based on fixed sequence, have lost none of their popularity to narrative with variable sequence, and digital textuality has taken two directions. First, with the development of the multimodal capacities of computers, we have seen more and more works in the tradition of concrete poetry, visual poetry, and surrealist experiments with aleatory writing (cf. Ryan, "What Has the Computer Done for the Word?"). These works dismantle language into its basic elements—words and letters—, make them dance on the screen, and perform quite literally the play with signifiers that Barthes regarded as the trademark of the *scriptible*—I would say a little bit too literally, because a pure play with

12. I am thinking here of Michael Joyce's hypertext, *Twelve Blue.*

signifiers loses sight of the signifieds. Turning language into pure spectacle, these experiments do away with sequence, mostly on the intersentential level but also occasionally on the level of syntax.[13] The few recent works of digital literature that remain focused on storytelling, such as Kate Pullinger's *Animated Alice,* are combinations of words, images, and animation that minimize interactivity and revert to a linear organization.

The other branch of digital textuality is the wildly popular domain of video games. Here, sequence is all-important, since the player's progression in the game depends on the pursuit of specific goals, and the achievement of these goals depends on a causal chain: for instance, before you can open a door, you must find the key; before you can start a car, you must fill the tank with gas. But the fixed sequences written into the design of the game often combine with a freedom to wander through the game world and a choice of ways to solve a certain problem. Games are spatial and temporal texts on a very literal level, the level of the world being represented, rather than on the level of the organization and succession of the signifiers, as was the case with hypertext. Their underlying structure is not a network but a combination of flowchart and tree (figure 11.5): a flowchart when there are many different ways to solve the same problem; a tree when the actions of the player steer the plot in different directions, for instance, by offering different endings. On this type of diagram, one of the two axes stands for temporal progression, and the other stands for different possibilities of action. (In the networks that map hypertext, by contrast, both axes stand for possible transitions, without taking semantics into consideration.) If video games have turned into the most successful form of digital entertainment, despite their lack of variety on the level of plot,[14] it is because their creators understand the importance of designing the experience of the player as a journey through a fictional world that offers opportunities for adventures, dangers, interesting encounters, and surprises, a world that rewards players with a sense of achievement for every level passed, rather than frustrating their need for closure and coherence. The difference between a network narrative with largely randomized sequence and a well-designed flowchart narrative with built-in sequences is the difference between holding the

13. See the *Electronic Literature Collection,* vol. 1 (http://collection.eliterature.org/1/) and vol. 2 (http://collection.eliterature.org/2/). I am thinking particularly of works by John Cayley, Giselle Beiguelman, Jason Nelson, Judd Morrissey, Edward Falco, and Brian Kim Stefans.

14. This lack of variety can be explained by the fact that due to the difficulty for computers to process language, interaction with game worlds is largely limited to physical actions such as moving, picking up objects, and using them. This limitation predisposes games to superhero plots focused on the solving of problems and the defeat of enemies at the expense of plots concerned with the evolution of human relations.

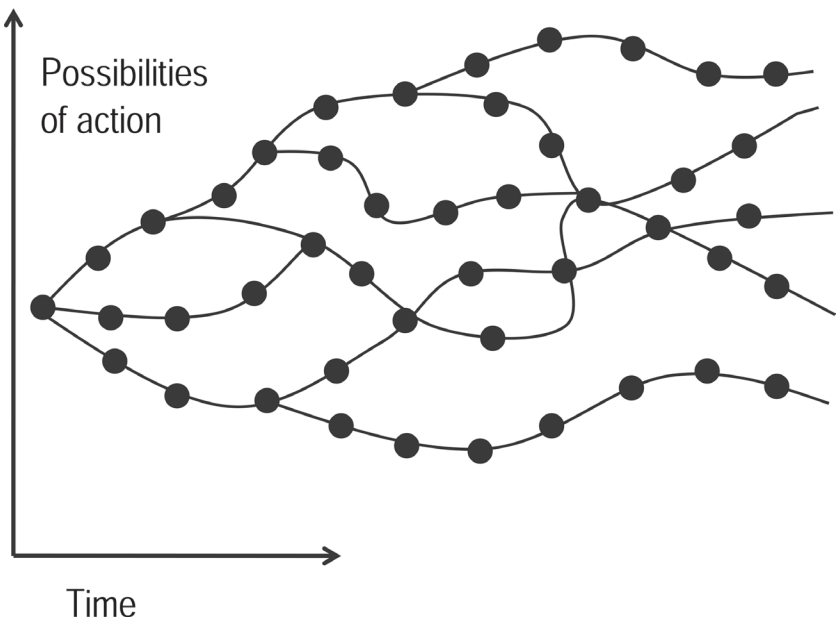

FIGURE 11.5. Structure of a typical computer game showing a combination of flowchart and tree

user captive in a labyrinth and creating a captivating storyworld. It is a safe bet that the top-down control of the author or designer over narrative sequence will outlast all attempts to do away with it.

This does not mean that Barthes's dream of the plural text should be abandoned. The spatiality of the network is fully compatible with the temporality of narrative sequence, if we think of narrative sequence as one of the many lines that traverse the network. The various points on this line can be interconnected through a complex web of relations—for instance, the beginning foreshadowing the end, or parallelism and oppositions between themes and situations that occur at different moments on the narrative time line. The logical line of the plot can also serve as a support for digressions, descriptions, imagery, opinions, and evaluations that expand the text's patterns of signification. Far from being a restriction of pluralism, narrative sequence is both an intrinsic source of pleasure—the pleasure of being taken along for a ride toward a point of view from which everything will ideally make sense—and a mnemonic structure that provides the reader with a global view of the text, for it is much easier to remember information when it is narratively—that is, temporally and causally—connected. In a longer text, it is the global view

afforded by narrative sequence that enables readers to detect and follow the multiple threads of signification that weave together its aesthetic texture.

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