

# Uncovering hidden maps: Illustrative narratology for digital artists/designers

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## Abstract

Interactive narratives have greatly changed our experience with story and storytelling. For a digital artist/designer, learning narrative techniques derived from fiction and film is crucial, as such techniques not only address the audience's reading/viewing habits but also are useful in breaking down a narrative into elements for the process of organizing/programming. This paper introduces an illustrative guide of narratology concepts for digital artists/designers, media students, and the like, and methods of uncovering the "hidden maps" in various kinds of narrative.

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## 1. Introduction

In our attempt to make a story interactive, we have found the *devil* is in the details of how, exactly, you deconstruct the story's content into pieces (or more specifically, a hierarchy of pieces), and how to build a system that integrates the player's interactions into the reconstruction—the performance—of those pieces. (Stern, 2004, p. 169, our italics).

Andrew Stern made the above comment when talking about his making of *Façade*, an interactive drama. He is definitely not the only digital artist/designer who has encountered the "devil." While many have proposed solutions through their works or products, we conducted research titled "Narrative Motifs, Patterns and Formulas for the Artist/Designer" that aimed at a graphical guide to help us to "see" the architecture of narrative works of all kinds. To approach Stern's questions from a narratology perspective is not to say that the story should be the exclusive focus of any new media artifact—regardless of its genre. As Henry Jenkins (2004) suggested:

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[a] discussion of the narrative potentials of games need not imply a privileging of storytelling over all the other possible things games can do, even if we might suggest that if game designers are going to tell stories, they should tell them well. In order to do that, game designers, who are most often schooled in computer science or graphic design, need to be retooled in the basic vocabulary of narrative theory (p. 120).

We began to construct an illustrative guide that may serve as a tool in teaching narrative techniques to a body of multilingual and multi-disciplined students (mostly without any training in storytelling), whose career goals vary from story/script writer, 2D/3D animator, filmmaker, multimedia theatre artist, game designer, to web designer and installation artist. The constant urge to reinvent and rediscover approaches that most students find pragmatic has motivated us; and although the guide is not yet complete, its methods of visualizing “hidden maps” within narratives have been tested by 211 media students over three years of teaching.

We started it off by defining “narrative” as “the art/science of storytelling” but soon replaced “storytelling” with “organization” due to some students’ resistance to the very idea of “story.” Seeing “narrative” as a way to organize, and including some quantitative methods, our charts and diagrams are designed to overcome limitations in verbal expression and previous training.

The primary texts used for class analysis include drama, novella, film, animation, game, interactive story/drama, etc. During their study, students were encouraged to “visualize” time and space in narrative and, more importantly, to share their experience through drawing time-lines, characters, and location maps. This exercise was meant to help these future artists/designers to “see” the structure of others’ works and prepare them for their own creative process—especially when such a process involves collaboration.

Our illustrative guide borrows most of its vocabulary of narratology from [Gerald Prince’s \(2003\) \*A Dictionary of Narratology\*](#)—a book not only rich and coherent but one that refers to arguably all important works on narratology. As many often find narratology theories to be loaded with wordplays, divisions, subdivisions, and lengthy explanations of synonyms with subtle nuances, which do not say much to the artist/designer, our “borrowing” involves a certain amount of simplification, redefinition, and modification.

## 2. Point of departure

Theorists often depart from the model of communication in discussing issues regarding narrative. There are quite a few models to date, but three key words remain at the core: Sender, Message, and Receiver, or, to use [Karl Bühler’s terms, Addresser, Context, and Addressee \(1934\)](#). The “model of communication in narratology” proven to be “most influential” so far has been proposed by [Roman Jakobson \(1987, p. 66\)](#), which includes Context, Contact, and Code—three significant factors in the interpretation of Message (see [Figure 1](#)).

For the analysis of narratives, Jakobson’s model is modified to focus on the Author–Text–Reader relation. In [Jacob Lothe’s \(2000\) model of narrative communication \(Figure 2\)](#), the Narrator–Narrative–Narratee relation is highlighted and grouped in the box of “narra-

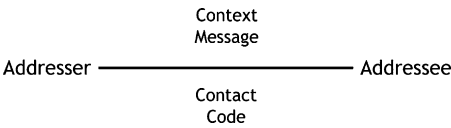


Fig. 1. Jakobson’s model of verbal communication.

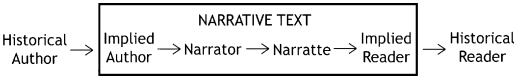


Fig. 2. Lothe’s model of narrative communication.

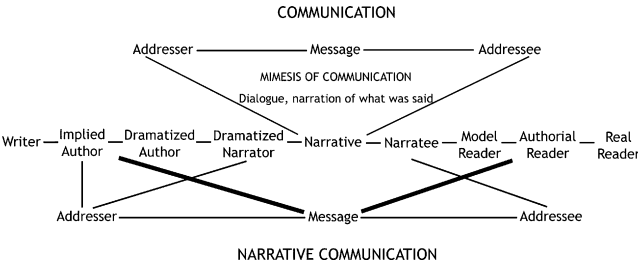


Fig. 3. Martin’s communication model.

tive text” (p. 15) where notions of “implied author” and “implied reader” are employed to differentiate the narrator from the “real” or “historical” author and reader (Iser, 1974, p. xii).<sup>1</sup>

A more complex model was built by Wallace Martin (1986) (Figure 3) where the “Addresser–Message–Addressee” core in communication is mirrored by that of “Author–Message–Reader” in narrative communication while the “writer” is subdivided into “implied author,” “dramatized author,” and “dramatized narrator” (p. 154).

For younger generations growing up with primarily visual media and having limited reading experience, the complicated divisions here are perhaps more confusing than helpful. Thus, the model we use is rather straightforward yet can be readily modified for people in different fields (Figure 4). With a “Sender–Message–Receiver” bar on top (which can be easily associated with email communication), the corresponding “Author–Text–Reader” bar can be easily accepted and lead to other references.

Since textual analysis dominates the discourse of both old and new media studies, the “Narrator–Narrative–Narratee” relation within the larger concept of “Text” is the focus of studies. Digital artists/designers may easily identify with “(Digital) Work” and “Audience/User” in the last bar of the diagram. In order to answer the question of how existing narrative techniques can be employed in the creative process of digital works, we will respectively discuss the artist/designer as narrator, (digital) work as narrative, and audience/user as narratee.

<sup>1</sup> In Modern literary history, literary studies can roughly be divided into author-oriented, text-oriented, and reader-oriented studies. Author-oriented studies scholars would research the details of the historical author’s life as keys to interpreting her “intention” (or intended message) in a certain work while reader-oriented studies would pay attention to reader’s response to a text, which once formed an influential trend in phenomenology. Nowadays, text-oriented studies (involving close-reading) dominate in old and new media.

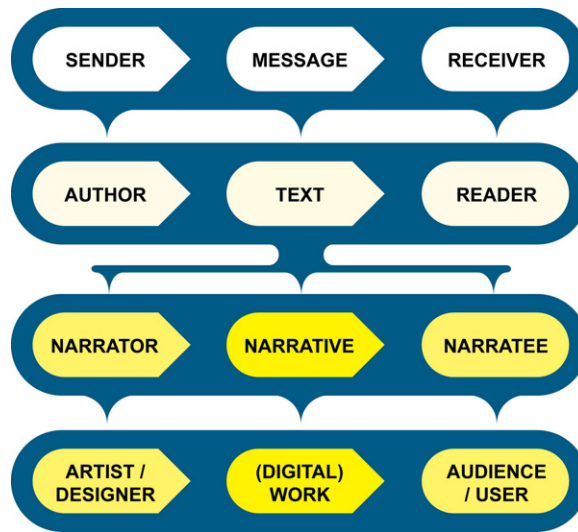


Fig. 4. Communication model.

### 3. Artist/designer as narrator

Before moving on, we should reaffirm that the narrator exists only in the “text”—be it fictional or virtual—and nowhere else; and the narrator never *is* the author although the author’s choice of the kind of narrator reflects her attitude toward the narrative and the narratee. A quick look at the literary history of the evolution of narrator/narrative voice may be helpful. Narrators are categorized according to their level of authority in Figure 5. The narrator with the highest possible authority is the omnipresent-omniscient narrator existing exclusively in such religious writings as *The Holy Bible*. Although the author of the book is a group of people, they all made the attempt to construct a sole, dominant, “holy” voice that is unquestionable. As readers are encouraged to grasp the text’s true message but not to challenge its authority, the act of reading may not be the most satisfactory one at all.<sup>2</sup>

The two kinds of narrators with which we are most familiar are the third-person/omniscient narrator and the first-person narrator (who is also the protagonist). These two kinds of narrators occur in most epics, fictions, and films. Compared to the third-person narrator, the narrator-“I” has certain advantages in exploring the psychological depth of both the protagonist and other characters. In fact, one of the most significant functions the subjective narrative voice (or narrator-“I”) is its challenge to the authority of the sole, dominant narrative voice of an omniscient narrator.

When a fiction has a hero like one from Dostoevsky’s novels, whose soulful confession in the form of internal monologue gradually commands the reader’s compassion, his voice can be equally authoritative to that of the omniscient narrator. As there is often a discrepancy between the hero’s voice and the narrator’s, the reader is required to make a decision on whom

<sup>2</sup> This is why in the 1980s, when scholars like Robert Polzin and Meir Sternberg began to, respectively, take a Structuralist approach and read the *Bible* as literature, their readers and students felt an earthquake.



Fig. 5. Narrator & narrative voice.

to believe; the act of reading becomes more interesting. [M.M. Bakhtin \(1981\)](#) called this kind of fiction “dialogic” and claims it is superior in comparison to fiction with one dominant voice (p. 313).

García Márquez’s fiction goes further and offers a “carnival” experience—in the Bakhtinian sense of the term—to the reader by dismantling the authority of the narrator-“I” and making each character’s reasoning valid and equal. When García Márquez’s narrator-“I” appears to

make a statement, she often provides us with information from another character rather than attempting to conclude or correct. In this way, the multiple narrative voices effectively call on reader's participation to construct their own truths, which do not automatically amount to *the whole truth*.

As Noah Wardrip-Fruin and Pat Harrigan (2004) pointed out, digital artists/designers often choose “first person” in the construction of their narrative.

The new media field includes those who use it to describe the well-known cinematic POV; those who associated it with the movement of a virtual “camera” through a computer graphic scene; those who mainly utter it as the first two words in the computer game genre of the “first person shooter”; and even those for whom it evokes images of invention and discovery, as in “arguably, the first person to make it work.” (p. xi)

The choice of “first person” clearly indicates an authorial position that is both political and pragmatic, but the “first person” in the quotation above mainly concerns camera position in film and is different from that of narrator-“I” or “first-person narrative voice” in fiction. It may be confusing to have more than one narrator-“I” in fiction, but film has the advantage of engaging multiple narrative voices since it can (mis)match the visual and the audio and have camera(s) to assume various perspectives. Interactive narrative may be even more powerful as it can imitate film techniques while providing more chances for viewer participation. When the narrative is moved to the computer-mediated environment, the audience/user is finally given the opportunity to construct her own story—as in the case of hypertexts, or to enter a “configurative practice”—as in computer games (Eskelinen, 2001, n.p.). As for Michael Joyce's (1990) hypertext *Afternoon, a story*, for instance, Jill Walker (1999) observed that one of the challenges for the reader is “the uncertainty in regard to who is narrating” as the author deliberately employed multiple narrative voices (p. 114).

Many games and interactive narratives have no discernable narrator at all, and this is why in studying adventure games Espen Aarseth (1997) suggested that the “narrator” should be replaced by the “intrigant” to represent “an immanent adversary who inhabits rather than transcends the game” (p. 127). When an interactive narrative is broken down to a finer granularity, the artist/designer still needs to organize her (multimedia) materials in the manner that the narrator organizes elements of a narrative. On most occasions, it is still necessary for the artist/designer to set up one or more subjective positions for the audience/viewer to assume. Again, the artist/designer needs to implement her ideas with skills to make her narrative appealing.

#### 4. Digital work as narrative

According to Aristotle, a whole story should have a “beginning,” a “middle,” and an “end,” and narrative techniques are about how a story moves from the beginning to the end (Whalley, 1997, p. 76). Digital arts have redefined “the beginning” and “the end” in more than one way, but most of them still maintain a quasi-narrative closure.

#### 4.1. Plot and narrative tension

The arrangement of events or the storyline is usually discussed as “plot”—one of the most common and confusing terms in narratology. Many believe that plot has an emphasis on causality. As E.M. Forster put it, “‘The king died and then the queen died’ is a story. ‘The king died and then the queen died of grief’ is a plot” (p. 60). Figure 6 includes the most famous graphic of a generalized plot in narratology—Gustav Freytag’s (1894) pyramid for tragedy (Prince, 2003, p.36). Mark Stephen Meadows (2002) has created a “subdivided” version of it in his analysis of digital narrative by adding a series of triangles on both sides of the pyramid, which is more precise for modern stories with more than one wave of ups and downs, twists and turns (see Figure 6’s lower diagram) (p. 23). In a sense, Meadows’ diagram depicts the plot more accurately since a story usually has more than one round of twists and turns.

When students were asked to draw a typical plot of comedy in which the protagonist is “rising” despite certain moments of “falling” or setback, they often came up with a diagram similar to the left half of Meadows’. They pointed out that in addition to the vertical and horizontal axis—representing “plot” and “time” respectively—a third axis in the “rising” direction indicates the degree of emotional satisfaction and/or social status. The right half of Meadows’ diagram, on the other hand, can be seen as the general plot of a tragedy. Although most authors would not construct a story in a strict symmetric or mathematical manner, a master storyteller like García Márquez does consider his story to be as precise as clockwork

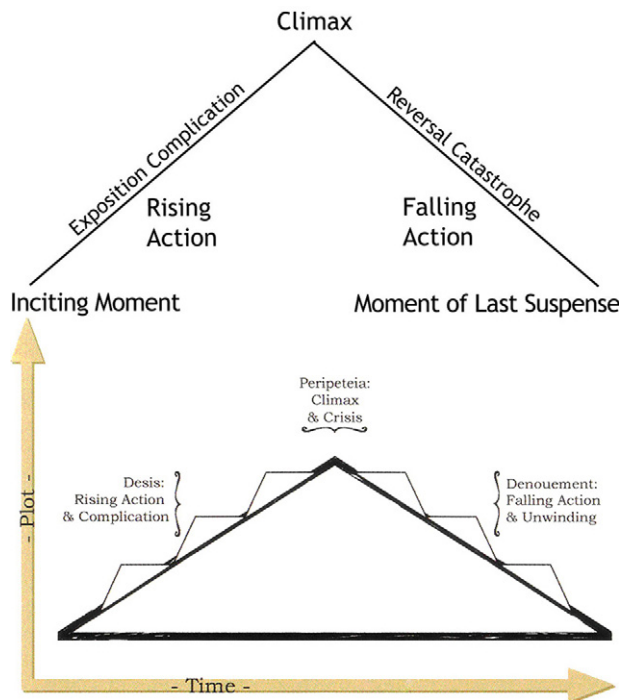


Fig. 6. Plot by Freytag and Meadows.



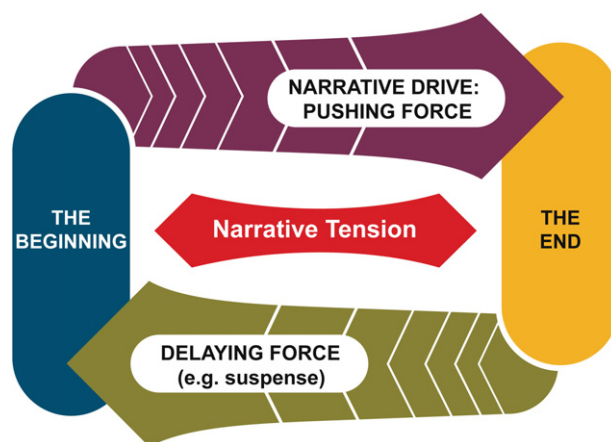


Fig. 7. Tension in narrative.

(Dryfus, 1983, p. 65). Indeed, calculation may help to enhance the overall control of rhythm in a narration in a manner similar to music composition.

What is often forgotten in many discussions of plot is that a good “tension” is the key to a master narrative—be it interactive or not. Between the beginning and the end, there are usually two forces: One pushes the narrative to move forward whereas the other delays the movement (Figure 7). The action and counteraction between these two forces form the tension in narrative. The driving force in a dramatic story is very often a desire or a quest for a person or an object while the delaying force is caused by suspense—including obstacles of various sorts and the lack of information/assistance. The purpose of a plot is to achieve this tension. Understanding of this concept would urge the artist/designer to find a point of interest for the audience/user and, eventually, help her to better control the creative process and the final work.

#### 4.2. Story time and narrative time

In any narrative, two time frames and sequential orders are always involved: the story time and the narrative time. The story time refers to the “actual” timeline where a sequence of events has taken place in the “real” or fictional world. The narrative time, on the other hand, refers to the sequence of events as they appear in the narrative. In Figure 8 (top left), story time—like real time—is continuous, while the narrative time is not.

In terms of duration, story time and narrative time rarely match. In reference to the story time, five speeds (or tempos) are usually identified (Figure 8, bottom left): *Ellipsis* is the fastest speed that simply skips a period or event; *summary* is the second fastest speed that uses a much shorter narrative time to depict events in the story time; *scene* refers to the speed that narrative time equates story time (e.g., when there is no dialogue in a film); *stretch* refers to a detailed description of a brief moment in story time where narrative time is longer than the story or event time; *pause* means that the narrative stops (e.g., a still shot occurs or a long description of the environment is inserted in written stories) (Prince, 2003, p. 98).



In fact, only in “playback” media such as film, video, animation, etc., can the narrative tempo be controlled with precision. During the act of reading, which is similar to the act of viewing an interactive narrative, narrative speeds (excluding *ellipsis* and *pause*) very much depend on the reader/viewer. In a film, for instance, the *scene* occurs over the duration of a dialogue when the actors talk in a “normal” speed as in real life—or story time in this case. In reading a book or viewing an interactive story, however, the reader/viewer may extend the duration or simply skip it by flipping over the page, clicking the mouse, and so forth. Due to such possibilities, the linearity and the duration can never be secured in non-playback media.

The most important notion relating to the order or sequence in the narrative is *anachrony*, which includes both *prolepsis* and *analepsis*, respectively referring to moving forward and backward in story time yet still within the narrative timeline (Figure 8, right). Actually, except for those narratives in historical books and some classical literature, there are very few examples in contemporary writing and film where the narrative strictly follows the story time in a chronological order. The general reader/audience nowadays is familiar with techniques such as *anticipation/flash-forward* and *retrospection/flashback*.

Story time cannot go back, but narrative time can. And the pleasure of the story often lies in the freedom to travel back and forth within the virtual time and space, which can be maximized in a computer-mediated interactive environment. For instance, time stops or decision points can be a designed choice for the viewer to enter; a loop can also be programmed so the viewer may remain in a time period—indulging herself or even feeling trapped.

Time in computer games can be very complicated due to the player’s interaction, but the binary of story time and narrative time can still shed some light on game time analysis. Markku Eskelinen (2004) split the game time scheme into “user time (the actions of the player) and event time (the happenings of the game).” Citing Metz’s comment that traditional narrative tends to “invent one time scheme in terms of another time scheme,” Eskelinen argued that in games both user time and event time are within the single dominant time scheme—the player’s “movement from the beginning to the winning or some other situation” (p. 39). In addition, since interactive narrative and games often contain elements from traditional narrative, narrative techniques with respect to time can be applied indirectly. A common example is the pervasive use of cinematic cut-scenes in modern computer games.

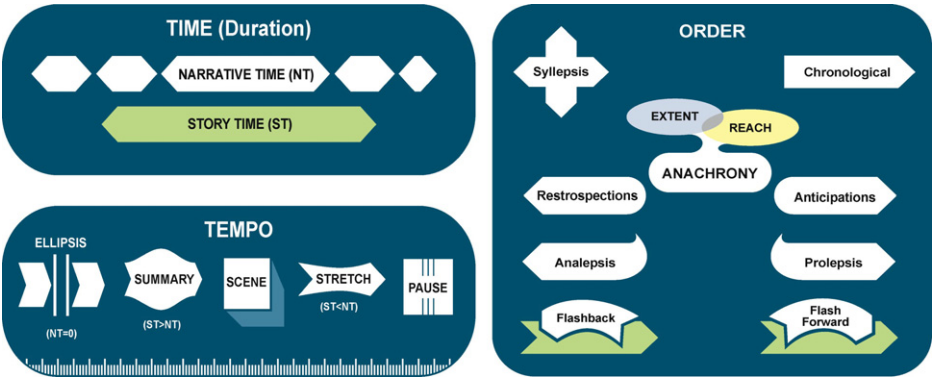


Fig. 8. Time, tempo and order in narrative.

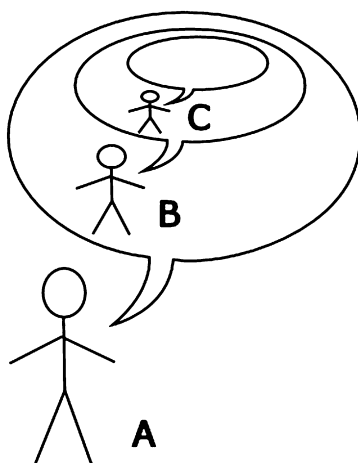


Fig. 9. Genette's narrative levels.

#### 4.3. Narrative level and loop

Fiction and film masterpieces often involve several levels of narrative in storytelling. [Gérard Genette \(1980\)](#) explains the levels of narrative ([Figure 8](#)): “Extradiegetic narrator A would produce a balloon—a first narrative with its diegesis—in which would appear an (intra)diegetic character B; she, in turn, would become the narrator of a metadiegetic narrative about a metadiegetic character C, who would possibly, in turn, etc” (p. 85).

If A, B and C tell exactly the same story, the narrative would form a perfect loop, as exemplified by a well-known Chinese story for children:

Once upon a time, there is a mountain. In the mountain, there is a temple. In the temple, an old monk is telling a story to a little monk. And the story goes: Once upon a time, there is a mountain . . .

The story goes on and on in an eternal loop. This narrative technique is called the Chinese boxes or *mise en abyme*,<sup>3</sup> which can be demonstrated by the painting in [Figure 10](#). The painting (photographed by the first author), which is in the shape of an arch, reveals people standing on both sides of a street. At the end of the street lies another arch in which the same cityscape reappears. In a photo or a painting, the illusion of such endless mirror images can be created to the limit of our eyesight whereas in a film or a fiction, such images may appear, but due to the limitation of length, embedded stories do not usually go beyond three levels in the narrative.

In an interactive digital work, however, a narrative can easily achieve a multi-level or even an eternal loop through programming. And such a loop can take on a variety of forms and circulate on different levels/interfaces. [Figure 11](#) includes three diagrams about interactive narrative. On the left is a “decision map” for *I'm Your Man*, which, according to [Marie-Laure Ryan \(2003\)](#), is “the first interactive movie commercially offered for personal computer” (p. 273). The diamonds indicate decisions involving different worlds, and rectangles indicate

<sup>3</sup> Similar to the Russian dolls, a set of Chinese boxes usually has five or six pieces, one inside another—all identical in shape, yet each reduces in size.



Fig. 10. Arch painting in Somerset Street, Ottawa.

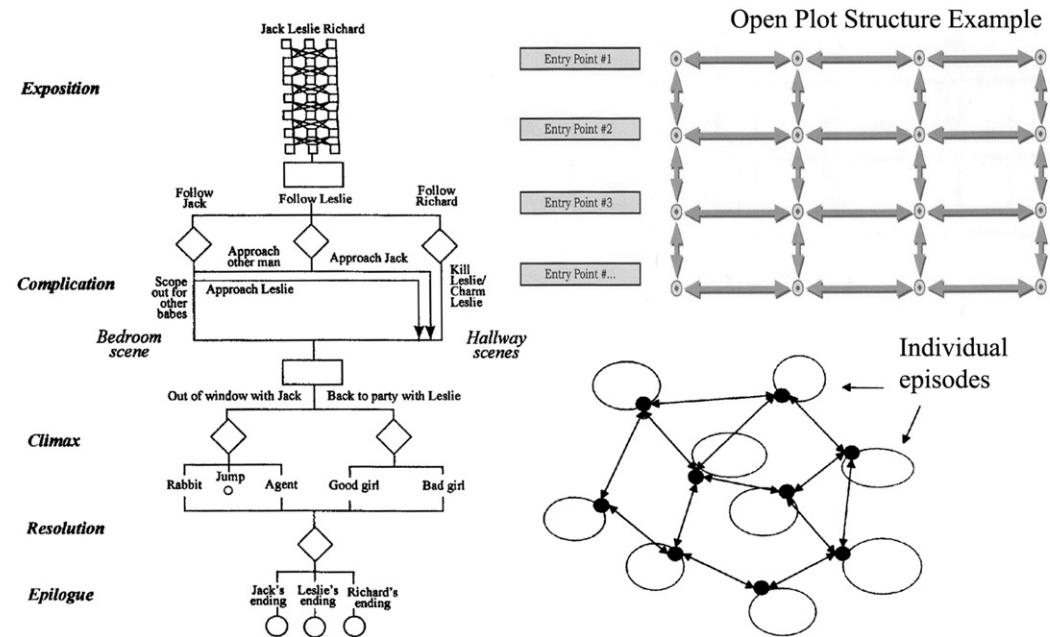


Fig. 11. Interactive movie, game and story-world.

decisions involving different locations. The map can be seen as a generalized flowchart for many role-playing games. The top right diagram is Meadow’s “open plot structure,” which redefines the Aristotelian “beginning” by “entry points” (2002, p. 66). The lower right graphic is Ryan’s diagram of action space and story-world, with each oval representing an “individual episode” (2003, p. 256).

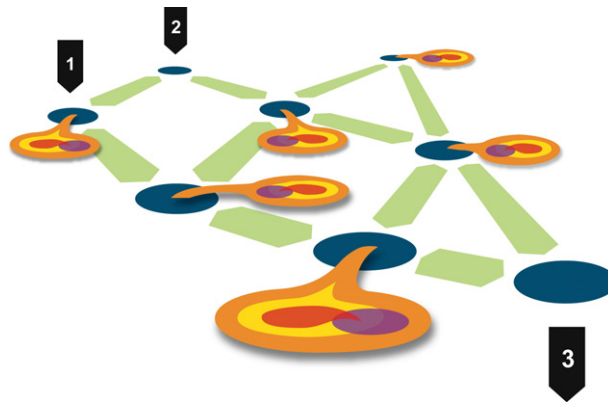


Fig. 12. Narrative levels and loops in digital work.

Integrating the three graphics above, **Figure 12** is a generalized structure map of an interactive narrative. The black arrows with numbers (1, 2, and 3) indicate the entry and exit points. The grand “beginning” in Aristotle’s definition is replaced by an interface usually with a “menu,” which immediately introduces choices of entry points. Once the viewer enters from a point, she will soon encounter an oval-shaped decision point. The double arrows show the directions narrative can move. At any decision point, the viewer can go into another (lower) narrative level indicated by a bubble, which might include more decision points. From those decision points, the viewer can go further into yet another level of narrative presented by another bubble. As a result, looping—repetitions between two decision points and circles among three or four decision points—is possible.

Many games have an opening interface marked with “game begins” and an ending one marked “game over.” In that case, there is a possibility for the viewer to jump from entry point 1 or 2 to the exit point 3, which marks the “ending.” In some interactive stories, however, point 3 shares the same interface of the “beginning;” namely, the viewer knows that it is “the end” when she goes back to the first menu that appeared. When the beginning and ending share the same interface, the Aristotelian linearity is broken by the loop. Traditional stories emphasize the changes taking place between the beginning and the end, which often indicate the cause and effect, but apparently interactive narrative may have different goals.

## 5. Audience/user as narratee

In a digital narrative, the intervention of interaction design usually involves three basic aspects: structure, time/order, and perspective. As we can see from **Figure 13**, “structure” can be either linear or non-linear, “time/order” can be either chronological or non-chronological, and “perspective” can be either singular or multiple.

In *Afternoon* (1990), for instance, Joyce played with all the three so that when pulling all the “nodes” together, the reader gets a non-linear, non-chronological, and multi-perspective story. We need to use caution when labeling a narrative “non-linear,” however, as the word

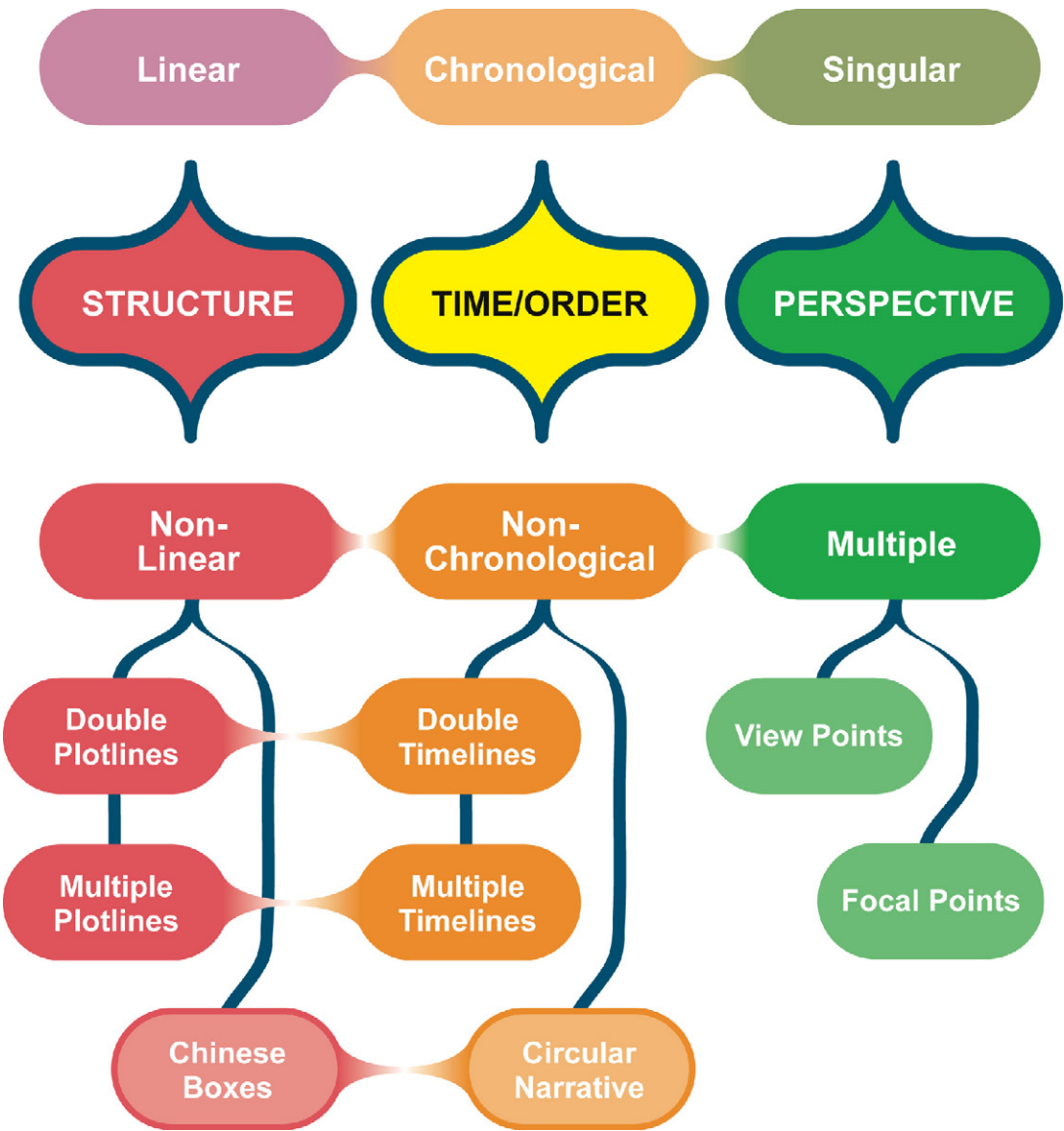


Fig. 13. Linearity and non-linearity in narrative.

does have more than one meaning. Aarseth (2003) pointed out that

It is not the plot, or the narrative, or any other well-known poetic unit that will be our definitive agency but the shape or structure of the text itself. A narrative may be perfectly nonlinear (for example, describing a sequence of events in a repetitive or non-sequential way) and yet be represented in a totally linear text. (p. 762)

In fact, the subversion of classical linear, chronological, and single-perspective narrative is not just the right of digital artists but what fiction and film authors have been attempting all

along, especially in so-called *non-linear* films like *Memento*, which engages reversed timelines with plenty of anachrony, or *Run Lola Run*, which has multiple realities. The authorial control here, however, is very limited. When watching a DVD, for instance, the viewer can choose her own path of traversing the film—either to proceed from the beginning to the end or to skip a chapter—in the same manner of a reader reading a book. In digital work, however, the control can be implemented through programming, and what the audience can experience very much depends on the artist/designer.

Perspective, often used interchangeably with point of view, refers to the “perceptual or conceptual position in terms of which the narrated situations and events are presented” (Prince, 2003, p. 75). Perspective/POV is a concept relating to both the narrator and the characters, regulating the source of information and the point of looking. Focalization, on the other hand, reveals the emphasis of narrative details. It is represented through a focal character (the character in focus) and the focus of narration, which governs the situations and events presented. In the act of reading/viewing, the reader/viewer’s attention is directed by the changing focalization; however, she is challenged to make her own decisions when more than one perspective is involved.

Perspective has a direct impact on the audience’s experience of the narrative. In some computer games, for example, the designer’s choice of POV affects the player’s engagement. If the game is mostly adopting an omniscient POV, realized by scenes imitating a high camera, the player will have an overall sense of the space. If the game assumes a subjective POV through an over-the-shoulder camera, as exemplified by the first-person shooter games, the player will automatically take this subjective position and identify with the hand/gun. On most occasions, a game involves both objective and subjective POVs at different levels of interaction so that the player will enjoy more. Such understandings of audience/user as narratee would, in turn, help the artist/designer to understand the role of narrator in their creative process.

## 6. Hidden maps uncovered

The above diagrams introduce some fundamental concepts in narratology; but, as mentioned before, they are designed to induce methods of uncovering the hidden maps in narratives. What we hope to achieve is good communication between people working in all kinds of media, and illustrative narratology is only a tool. Students appreciate our illustrative guide for three main reasons:

1. It identifies key motifs, patterns and formulas in a narrative
2. Each larger concept is explained through a branch or cluster of sub-level concepts
3. It evokes rather than discourages personal approaches to narrative devices and structure

As part of their course work, students were asked to draw their own maps of stories, films, and digital works, which we will share in order to further discussion on the potential dimensions of our illustrative guide.







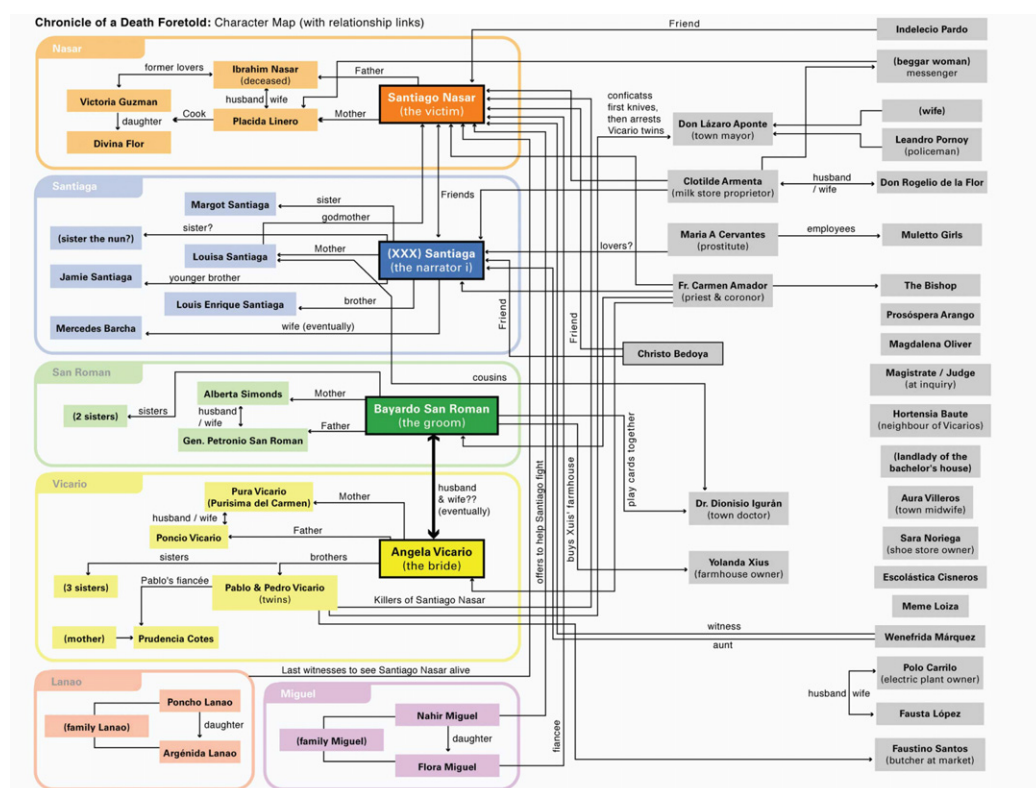


Fig. 15. Nick Foxall's character map for *Chronicle*.

represents the reader's reading experience with the complex relationship among the characters. As mentioned before, the function of the narrator-“I” (the second-to-top black-rimmed box of Figure 15) is to testify that every other character tells the truth—only that all the truths do not add up to *the whole truth*. Most films and interactive stories do not have as many characters, and thus after making the character map for *Chronicle*, students find all other texts easier in this aspect.

## 6.2. Timeline: narrative vs. story

The exercise with the timeline includes two parts: streaming out the narrative timeline and restoring the story timeline. Once the two timelines are mapped out, the time game can be “seen.” The example we used is *Memento* (2000), a film famous for its complicated timeline.<sup>4</sup> Nick and Connie marked the narrative order of scenes in blue arrows vs. the chronological story time in orange and identified the four scenes as the beginning/end and the middle in terms of turning points (Figure 16).

<sup>4</sup> An interesting paper titled “Movie Memento Plot FAQ” is posted at [http://www.designpattern.org/wp/?page\\_id=13](http://www.designpattern.org/wp/?page_id=13).

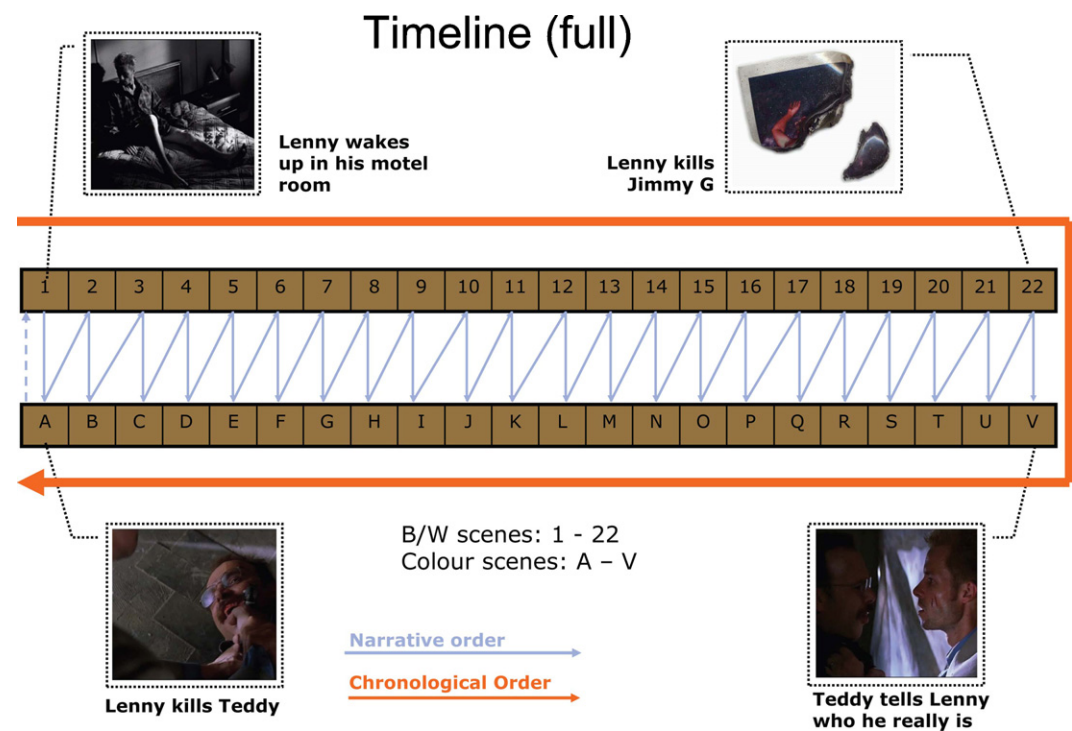


Fig. 16. Nick & Connie’s timeline for *Memento*.

All students found out that black and white sequences go forward or in chronological order while color sequences go backward, with the beginning of each sequence following the end of next sequence. In the film, this time game is attached to the protagonist Lenny’s *condition*: His short-term memory only lasts about 2 minutes, and then it is gone and needs to be renewed. He tattoos information on his body and takes snapshots of everyone he meets in order to remind himself of his mission, which is to exact revenge for his murdered wife even though his condition makes his mission nearly impossible. A few students examined the length of each sequence carefully and found a couple of them go beyond 4 minutes, which they considered an “error.”

The timelines are as useful for textual analysis as they are for the creative process. When the reference between story time and narrative time is unclear, as in many interactive stories and games, timeline can simply be a streaming. This method was used by Lam Wai-Keung in his graduation work, *Soldier Crab*, a 20-minute experimental short film that is *contra* the idea of story and linearity yet aims to carry forward the feeling of loneliness. There is only one character in the film, an old man whose daily routine includes shaving, dressing, taking pills, and walking around the apartment and the garden, which never changes.

Wai-Keung was not satisfied with his first cut as he felt that the narrative lacked good tension or rhythm. He learned about the timeline before, and we encouraged him to apply color coding to his sequences according to their “emotional level.” He then found that his first cut has blocks of gray—a color he uses for sequences without emotion at all—clustered together. He then rearranged his sequences and distributed other colors between the gray sequences until he saw



Festival. The piece later won prizes in a short film competition and was praised by the famous Chinese film director, Jia Zhangke, for “its good tension, its sensibility of human emotion, and the numerous possibilities it offers for interpretation.”

6.3. Location map: virtual vs. real

Most writers create a city or a town in their novels through words alone, but a writer like William Faulkner (1946, p. ii) draws a map of his fictional world (Figure 18). There is, of course, distance and difference between the real world and the fictional world, but for artists or designers, the visualization of the fictional world or virtual space is crucial.

When readers reconstruct the town maps according to verbal descriptions, however, the maps may not look the same. The three town maps in Figure 19 are, again, for *Chronicle of a Death Foretold* and the interesting thing is what students brought in from their cultures.

Sheetal Agarwal, a student from India, sees the town more in the way of a village where houses are not built on a flat city but on slopes and hills (left). The square occupies a significant space in the map, and the biggest house belongs to the protagonist Santiago. Nick Foxall is from the U.K., and in his mind the town center—the square—is in the shape of a triangle at the cross roads where three streets meet, which is quite common in old European cities (top right). Wade Chan is from Hong Kong where a square can be an insignificant (open) space in

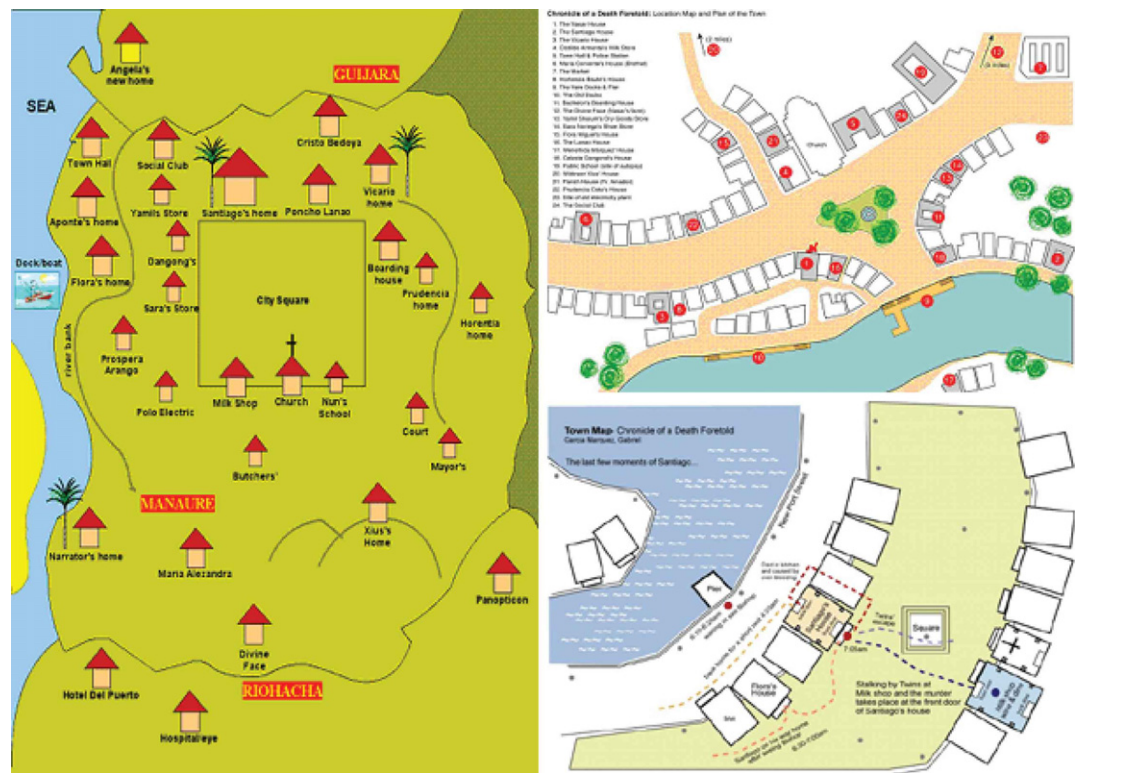
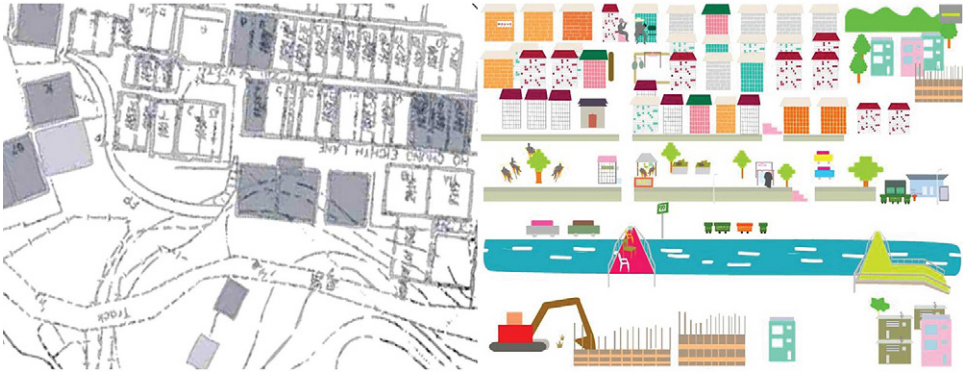


Fig. 19. Sheetal, Nick, and Wade’s town maps of *Chronicle*.





the middle of a street (lower right). If we turn Wade's map upside down, we can see its striking resemblance to Nick's map. Wade marks the route that Santiago travels before he is killed in red dotted lines, and the twin brothers chase him in blue dotted lines. The location map can also mark the protagonist traversing within the story world.

In Jessie's interactive narrative titled "Ho Chung," the main character is a place (Figure 20). The beginning interface is the "real map" of Ho Chung (left), a seaside district in Hong Kong. When clicking on it, we enter into a more colorful map (right) as Jessie remembers the place. We can click on the bridge and see a short video of a festive parade on it. We can click on an old lady sitting under a tree and listen to the stories of her youth and how she lost her husband in the war with Japan sixty years ago. Clicking on houses under construction, we get photos of the demolition site; clicking on children lead us to scribbled words and images. Sound clips picked from the environment are attached to images, so when hovering the mouse around the map, we can hear the "music" of the district with a string of notes. In this work, the narrative is organized via a location map, and various media come into play when we explore the place.

The locations in stories often carry symbolic meanings, indicating not only characters' journeys toward their destinations but also the territories occupied by different groups of people. In the location map, the protagonist's trail can be marked along the development of the story. Figure 21 shows an example that we adapted from several maps drawn by students—one that combines characters and locations in Sophocles' *Oedipus Rex*.

The Temple of Apollo, the cities of Thebes and Corinth, and Cithaeron Mountain, which are placed in four corners of a diamond, construct a Heaven–Earth–Hell hierarchy. The numbered arrows mark Oedipus's life route: (1) He is left to die in the mountain as a baby; (2) a messenger brings him to Corinth where he becomes the Prince; (3) he goes to Apollo to testify a prophecy he hears; (4) he kills his birth father at a crossroad; (5) he marries his mother in Thebes; and (6) he blinds himself and goes into exile. Such a symbolic route not only brings together the people (other characters) in his life but also marks the plot of the drama. For any narrative, various elements can be combined into one map when necessary.

## 7. Conclusion but not the end

The difficulty in teaching narrative theories to students in a new media field very often comes from their lack of knowledge of fiction and film classics. We first began to build an illustrative guide of narratology for the purpose of facilitating the students' learning process. Our first step was to search for graphical presentations of narrative techniques, but we did not find many, especially systematic ones, in books on narratology and other related literature. Only in books by Ryan (2003) and Meadows (2002) did we find sets of diagrams that were relatively consistent in style and that constructed ideas in a systematic way, though some fundamental concepts in storytelling were still left out. We then came down to our glossary of terms and constructed our initial set of diagrams. After collecting responses from students and colleagues, we have revised the content and improved the "look" of our diagrams.

To us, the students' responses and contributions are overwhelming. Using our illustrative guide as a touchstone, each student would draw her own maps in a unique way, combining different devices she obtained from previous training. Although each student's map may have a very different look, most of them can be understood by others. This fact reaffirms our belief in graphical presentation as an effective method in communication. Practically, in the creative process of a digital work, especially when such a process involves people from different fields, maps of narrative may help the artist/designer

1. to visualize the characters and their relationships
2. to understand the flow and arrangement of materials
3. to break down the story into reasonable granularities that are “visible” to all collaborators

In the field of game design, for instance, such maps will definitely help story writers, product designers, and programmers to “preview” the narrative and come down to the same flowchart.

The students’ input has not only inspired us in more than one respect regarding what we should include in our *guide* but has also filled the design process with fun and interaction. We cannot reveal all the graphics made by us and students, but we hope to share this idea with all those working in arts and media as the true spirit of communication is to achieve understanding by crossing boundaries.

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