A human being sits by the campfire and tells stories – the listeners laugh, cry, ask questions, grumble and shout remarks. A human being writes a novel – the readers can laugh, cry or write letters. A film runs on television – the viewers can laugh, cry, fall asleep or press buttons.

STORYTELLING AND AUDIENCE INTERACTIVITY – A CONTRADICTION IN TERMS!

Who is not pleased to be told, ‘You’re such a good listener’? Behind the compliment, all the same, is the question of what an ability to ‘listen well’ actually means. Is not listening per se a passive activity and therefore not susceptible either to measurement or evaluation? By what cues do speakers know, or sense, that people are really listening to them? Does it simply come down to attentive glances, mute signs of agreement, invisible oscillations or ‘good vibrations’? Depending on the type of performance – a concert, a play, a cabaret act or a reading – ‘good listening’ certainly also includes more distinct reactions. For the event as a whole, audience participation plays an important role, even if it is something that can merely be reckoned with, but by no means counted upon.

Audience feedback is important in the theatre, in order, above all, to create the right atmosphere, to bring closer to each other the transmitters and receivers or, put differently, tune them to similar wavelengths. Only then can the performers subtly and subliminally exchange information between the memorised lines, concurrent to the rehearsed gestures, and beyond the fixed scenarios. Seasoned performers subconsciously register the timbre of an audience’s burst of laughter in reaction to a slip of the tongue, or gauge the degree of sarcasm with which throats are cleared after a pretended ad lib, and respond immediately to the audience mood by shifting the pitch, varying the tempo, or altering the sequence of songs. A number of factors decide how much leeway remains for re-shuffling the numbers in a show, or how much audience interaction is effective or feasible. Due to their largely pre-programmed course, rigidly structured and technically elaborate productions restrict the actors’ degree of freedom much more than, say, the deliberately simple performances put on for children, be it with puppets or flesh-and-blood actors.
Seen from this angle, children are especially good listeners. Not only do they quickly identify with the story and its characters, they are also much less inhibited in showing the emotions stimulated by the narration.

THE POWER OF THE AUTHOR AS NARRATOR AND THE BORDERS OF INTERACTION IN REGARD TO AUDIENCE PARTICIPATION

To what degree does the storytelling process, or even the course of the story, change in response to an audience that acts, interacts, interferes? The bards of old were already very much aware of what they wanted to recount. Their manner of interrupting a narrative by asking the listeners questions, by rhetorically deviating from the main plot, by inserting theatrical pauses, were means to the end of building up tension, of involving the listeners, of captivating them. A good narrator so skillfully integrated spontaneous ideas that he could repeatedly return to the planned course of the plot, yet still produce the crucial atmosphere of direct interaction. That was the art of rhetoric.

These interjections must nevertheless be limited in number and length, otherwise the plot becomes unclear and dramatic tension evaporates. That is why parliamentary chairpersons curb the volume of disruptive, but animated heckling, in debates; or, in order to obtain a result, a judge presiding over a court session orchestrates the interaction during the cross-examination. Interaction is a question of timing first, and of dosage second, but above all one of casting. Without a master of ceremonies, no story emerges. Instead, the tale drifts into aimless chattering, and the listeners lose interest.

FROM HUMAN INTERACTION TO MEDIATED INTERACTIVITY

Up to now, 'interaction' has been seen as a direct component of human communication, as an act transacted face-to-face in 'real-time'. The Duden dictionary, a standard authority on the usage and interpretation of the German language, defines 'interaction' as 'interrelations between persons and groups'. In the case of analogue media, viewers or listeners initially merely received transmitted broadcasts from the apparatus. Interactive feedback could not be given, particularly in the case of pre-recorded broadcasts, whose reception was deferred. Contemporary users of digital media can directly interact with each other over telephonic lines, video-conferencing or live internet chatrooms. (This degree of directness becomes impossible when listening to a message on an answering machine, watching a broadcast recorded on videotape or using a website stored on data servers, since communication is staggered in time and separated, as it were, by the medium.) Interestingly though, early media formats repeatedly experimented with precursors of interaction and interactivity, even if the modern implications of those concepts was not known. Thus, German television in the mid-1970s broadcast a drama that broke down the boundary between pre-recorded and live performance. This 'whodunnit' entitled Dem Täter auf der Spur ('On the Culprit's Tracks') did not end with the crime being solved, although there were a number of suspects, but instead cut to a studio where the actors and a live audience were present. The actors – and that was the new angle – remained in character as detective and suspects, while the studio guests were asked to assist the
detective by questioning the suspects to conclusively prove guilt. The individual viewing of a broadcast turned into a collective process—the audience had to jointly *analyse* and evaluate the information furnished by the plot and the easily overseen or deliberately misleading details. It was particularly interesting to observe the behaviour of the actors, who were required to 'improvise to plan'. Unlike the viewers, the cast obviously knew who the murderer was, but were also subordinate to the specifications of the script and the character briefing. However, they were required to deliver spontaneous and flexible reactions to unexpected questions within the scope of the plot.

This television experiment was based on a principle that anticipated a number of issues peculiar to 'interactive storytelling', although, since the audience was involved on-site in a kind of 'real-time metalogue', it was more a case of a live experiment with 'interaction'. For the actors, it was important to receive a thorough briefing on how to behave, react, interact— not just in response to the interrogators— but also in regard to each other, so that ultimately they could spontaneously create 'internal directions'. The actors were practically 'programmed' for their parts without knowing what, and how much, of their internalised repertory would be demanded during the live cross-examination after the broadcast.

**FROM THE OPERATION OF MACHINES TO DIALOGUE WITH MEDIA MACHINES**

*Interactivity*, which the *Duden* calls a 'dialogue between a computer and its user', begins where interaction ends. Only recently, by the way, did the lexicographers accept a word long current in the realm of multimedia; before then, as far as the editors were concerned, 'interactivity' did not exist as a concept at all. By now, most internet users have a precise idea of what to understand by and expect from interactivity. Typical *interactivities* are the selection of commands from menus, the clicking of buttons or the activation of *links*, the entry of search words in databases, the adjustment of certain playback parameters such as volume or display forms, as well as responding to questions or messages in contextual dialogue boxes.

However, when comparing the definitions of interaction and interactivity, a glance back over the history of media usage reveals that the 'interactive' must by no means be considered an exclusive domain of the computer. The notorious 'language laboratory'— an experimental method of individually controlled learning, based on analogue technology and magnetic-tape recording— offered a minimal degree of interactivity, but included the content. Pinball machines, by contrast, are low on content, but provide plenty of interactivity. As a general rule, it might therefore suffice to define *interactivity* as the dialogue between a machine and its user. Whereas, in the context of media that are invariably intended to deliver content, and (among other things), to tell stories and to broadcast messages, the notion of interactivity requires more differentiated consideration. It describes something more than the rules for using an apparatus. In connection with storytelling, therefore, it is of limited usefulness to see interactivity as meaning merely the 'operation' of a machine, in the sense of throwing levers, pressing buttons and pushing pedals. Subsumed into the concept of 'interactivity' is rather a dialogue with people, conducted across the detour of a machine. Firstly, the machine must have something to say to us, to tell us. Something furnished by its makers, something
they built-in 'under their breath'. Secondly, the machine must be capable of being a good listener in the abstract sense, namely, a sensitive narrator, who notices input of all kinds and reacts in compliance with a set of predefined rules.

INTERACTIVE STORYTELLING: EXTENDED NARRATIVE STRUCTURES AND THE STAGING OF INTERACTIVITY

Thanks to the computer and its rapidly increasing multimedia capabilities, the 1980s and above all the 1990s brought enhanced possibilities for 'programming' a story's backdrops, spaces, locations and events, along with a model for using these constituents and showing how they must change. Over the past 20 years, the possibilities of programming real character attributes, authentic instructions for action and binding behavioural patterns for artificial actors have vastly increased. Likewise, the programming has become more various and elegant and thus gradually more 'realistic'. In this respect, we can now largely provide the technical options necessary to carry forward a project on the multimedia computer that began on television with *Dem Tater auf der Spur*: namely the non-linear (or, preferably, interactive) narration of a story.

'Interactive storytelling', as a new discipline of narrative art, faces the task of developing a new species of extended-content script. In other words more plots, more storylines, more occurrences are required. In contrast to a linear novel or film narrative, what initially exists in a writer's mind as a sequence of events (usually composed of many parallel and over-layered strands), must now actually be recorded and made accessible. However, it is important to devise a concept for interactive reception as well as for the fictional content. The many writers — professional and hobby scriptwriters alike — of the science-fiction series *Star Trek* are very familiar with proceedings such as 'manuals' that detail for each figure the *vita*, family tree, character attributes and record of what happened to them in previous episodes. These *vitas*, which are never fully narrated in the individual episodes, are the basis of the so-called 'back story', proper to every scriptwriter's stock-in-trade. Ensuring that narration remains logical and consistent with regard to content the 'back story' is particularly indispensable for series' writers so that each episode makes sense.

MORE THAN SCREENPLAYS — COMPREHENSIVE RULES FOR MANY DIFFERENT NARRATIVE CASES

*Star Trek* continues to function primarily as a TV series based on linear narratives and a linear sequence of instalments. This aspect however, is one which computer-assisted, interactively narrated stories also take into account when stipulating what can be interactively influenced, either consciously or indirectly (the original *Star Trek* games only partially count, since the narrative component is very slight in comparison to the proportion of action and shooting scenes). The way users navigate through scenery and scenes, 'interact' both with locations and, even more importantly, virtual actors, the perspectives from which they view events, the atmospheres and moods encountered and experienced: everything has to be consciously designed and must adhere to fixed rules. This might also be termed the 'staging of inter-activity'.
When it comes to storytelling, then, interactivity initially appeals to the 'good' listener in the user. It appeals to the listener, who shows reactions and communicates something to the speaker (in this case the programme running on the machine), in order to exercise an influence. Compared with the degree of interactivity most contemporary computer games offer (in terms of apparatus and dialogue), this influence may be slight. Yet, it is considerable when compared with traditional media, whose invariably linear sequence (here, any exceptions confirm the rule) is unvaryingly, faithfully and repeatedly reproduced. Admittedly, the way something is (subjectively) perceived can change, just as the effect and meaning of certain songs change over the years. However, if we place intervals, stops and leaps to one side, the course of a story cannot even be influenced, let alone changed, either in its dramatic structure or in its content or message. As Uli Plank puts it, 'all one can do is press buttons, opt in or opt out.'

Compared with the switching on and off of the narrative machines we have so far encountered, interactivity – something perhaps more accurately described as the 'art of designing inter-relationships' – is more concerned with differentiated control knobs, slides and adjusting instruments equipped with a feedback option. 'Interactive storytelling' therefore implies not only the 'good listener' in the user, but also an imaginary 'receptive narrator', who plays for us the part of a system receptive to input. A narrator who, in the figurative sense, glances up from his storyboard, deliberately asks questions, and attentively offers us a virtual ear, tuned to catch quiet murmurs of agreement or dissent. A narrator who involves us in decisions, even delegates the latter, but goes to all this trouble only to rouse the 'good listener' in us all. For a listener curious about the ending is above all one who listens well. That kind of listener is curious, not only to hear the outcome, but also the lead-up, the presentation, the delay tactics – curious, in other words, about the narration.

INTERACTIVE NARRATION OR NARRATIVE INTERACTIVITY?
The relationship between narration and interactivity would appear to be antithetical. Does that make the fusion of 'narration' (the art of captivating the listener with good storytelling) with 'interactivity' (the art of liberating the user with well-designed man-machine inter-relationships) a contradiction in terms? Is the notion of 'interactive storytelling' a paradox? 'Linear media are becoming part of the content of the world of non-linear entertainment', says Ulrich Weinberg, a professor at the Academy of Film and Television Studies in Potsdam. He continues. 'The entertainment medium of the future is non-linear, virtual and three-dimensional.' He is of the opinion that virtual actors will very soon possess the qualities of real people, in the sense that they exercise a charm that makes one want to observe them. He even speculates that in the future attending a virtual competition involving thousands of players will be potentially more exciting than the television broadcast of the Olympic Games.

Certainly, it is difficult to forecast how in the future people will rate an interactively playable multi-user production. Weinberg's allusion to the sporting character of interactive games separates them from 'narration'. Pure entertainment, including sporting competitions, tells no story – or, at best, the
unchanging one of victors and vanquished. If, however, in line with Weinberg's further prediction, thousands of actors simultaneously meet up in virtual spaces and enter a parallel world, a plot whose framework is predefined, but whose course can be actively determined by every single actor, then it is valid to ask whether it is ultimately permissible to leave the narrative flow to its own devices. Is there not a case for saying that the narrative and interactive strings must be pulled by an author, or mentor, or master of ceremonies?

Who, in this imagined scenario, would be the author, or would there be several authors? If so, how many authors could this kind of story environment tolerate? Will desktop authoring for 'Everyman' naturally follow on from desktop publishing, video and multimedia? Are we all such good storytellers and rules-inventors (not to mention listeners) that a framework is all we need to guarantee ourselves and our co-players a few interesting hours?

Obviously, the experimental artistic handling of interactivity and dramatic structure must be rated differently from scenic narration. If, for instance, we deprive language of its meaning by removing linguistic standards such as sentence structure and semantics, or break down the written word into its raw material of letters and sounds, we can be certain of coming up with experimental onomatopoeia, along the lines of the concrete poetry written by the Austrian poet Ernst Jandl (1925–2000). However, if we subsequently want to tell somebody about this linguistic experience, we must first reassemble the letters in accordance with specific rules, in order to reconvey the content of the story.

THE ART OF STORYTELLING – AND THE INTERACTIVE CHALLENGE IT FACES

Time-tested narrative skills, which have been passed down to us, are the art of omission and the art of good timing. The reporter of an occurrence is neither able to chronologically reflect the events, nor to give a complete account of them. He assumes a subjective viewpoint from which he filters, evaluates and accentuates. The linear sequences he chooses to present as sub-stories are important, as are the ‘scenes’ he composes with words and gestures, and the emotions he is able to convey or produce. All these descriptions follow a (invisible) storyline. Scriptwriters call this framework the plot – the imagined trajectory of the figures with a role to play (the cast), and the description of a basic conflict.

A specially skilful method of disseminating scraps of information is demonstrated by the thriller genre’s usage of pointed or veiled hints, evidence that could incriminate or clear the suspects; surprising statements by new characters who suddenly pop up; or unexpected occurrences showing up everything that came before in a new light. A story’s dynamism, tension and entertainment value are ideally the result of the way the narrated reality is selected and apportioned, and of the targeted ‘timing’ of the turning points.

It is necessary to examine which traditional narrative structure needs to be taken into account. extended or even renewed for the interactive narrative form. Certain specific narrative genres can
sometimes be more suitable for interactive adaptation than others. Interactive storytelling is less about re-inventing narration itself, than about exploring specific peculiarities, regularities and rules. At the beginning, the same questions apply: how do I put in place a plot along with locations, characters, and a basic conflict? How, for instance, does the action radius of the viewer (the active player, in this case) relate to the story? Does the narrative perspective need to be limited as a result?

SIGNIFICANCE AND OPTIONS OF THE 'INTERACTIVE VIEWPOINT'

In the early 1990s, a thriller staged from two different viewpoints was broadcast simultaneously on Germany's first and second public TV channels. Running under the title \textit{Umschalten Erlaubt} (‘Switching Permitted’), the version shown on the first channel was shot from the criminal's viewpoint, while the second channel showed the events through the eyes of the main female character. Both characters went their separate ways, meaning viewers of either version experienced two different stories based on the same plot. Although ‘zapping’ between these subjective viewpoints was styled ‘interactivity’, the very filmic chronology of the thriller ultimately provided insufficient impetus to amount to ‘interactive storytelling’ – in regard both to the making and the viewing.

Nevertheless, this experiment (dubbed, somewhat over-enthusiastically, ‘interactive television’) at least impressed on a wide audience some awareness of how the narrative perspective could manipulate an audience’s perception of a story. It may also have roused in the viewers some sense of the importance of a flexible point of view as an active contributor to a story’s reception. A major role is played in interactive applications by the cinematic device of the subjective camera, with players in many computer-game stories assuming the role of the main protagonist and experiencing the plot in the first person. Since the recipient is expected to participate in almost every scene, the suggestion is often conveyed that what happens next is solely dependent on the player’s interventions. As regards point of view, a wealth of new, and as yet unexplored, territories have opened up, promising excellent opportunities for integrating and combining these new possibilities with traditional film viewpoints.

With its multimedia story, for instance, the interactive docu-thriller \textit{Berlin Connection} relies on the players' powers of observation. The protagonist is a British photojournalist dispatched to Berlin on an assignment. As a professional, he is used to looking at things precisely and seeing them ‘in terms of pictures’. Appropriately, Berlin Connection conveys its framing story solely by stills, that often, due to minimal motion phases, create a very realistic impression. This is reinforced by a soundtrack blending dialogue with multilayered background noise such as city streets with roaring cars, barking dogs, yelling children or music.
Berlin Connection makes variegated and appropriate use of the starting premise and perspective of the 'photographer-in-a-strange-city' plot. Thus, events repeatedly require the player to grab hold of the virtual camera in order to record scenes that have just been experienced. The displayed image turns into a viewfinder for this purpose, while the humming of a camera motor and the click of the shutter release authentically convey the sense of taking a photo. The user is expected not only to see and 'feel' through the photographer's eyes, but also to be his camera's eye – for only the knowledge subsequently gained by analysing the self-recorded moments makes it possible to advance through the story. The fact that some, but not all, of the self-shot photos prove to be crucial during the course of the story, is an especially good adaptation of a trick used by any good plot-maker. The player is obliged to 'get stuck in', and on one occasion (the love scene hinted at early in the plot), prove his sense of timing. All this clearly illustrates interactive storytelling's potential for directly and effectively drawing the audience into the plot.


The film-based CD-ROM thriller Psychic Detective provides another impressive example of how the narrative perspective can be changed. In the role of Eric Fox, a sleuth who has to solve a case of murder, players have the option of assuming the identity of any characters they come into contact with, and from then onward view events from the new perspective until a different identity is chosen. In order to solve the puzzle, which offers 14 different endings, it is necessary to experience all scenes and parallel plots in detail and several times over. The interactive video game nevertheless remains attractive throughout its duration, since the user can assume the role both of victim and murderer. So a host of specific demands are imposed on the script, particularly those concerning continuity.

The creators of the CD-ROM adventure game Bod Mojo likewise had an original idea around viewpoint and its resultant visual presentation. Players are treated to a worm's-eye view of the macrocosm inhabited by a cockroach, and thus receive unusually detailed and revealing views of mundane items of furniture in the shabby hotel that constitutes the game and navigation environment. Charming though these images are, the attraction of remaining a helpless roach for the entire game is finite. The narrative interest likewise tends to pale from a certain point on – for instance, when a player is forced to repeatedly explore the same corners in the hope of finding the 'hole' which offers escape to the next scene. At such points, a change of viewpoint (which Bod Mojo does offer) can help to make the pictures interesting once more. However, this example shows how important it is to link purely interactive scenarios with autonomous plot sequences that pick up the most recent storyline – if needs be, without regard to the specific situation of the interactively 'acting' main character – and in this way drive forward the story. 'Interactive storytelling', it is becoming clear, demands a functioning interplay of linear narration, active plot motifs, and rules for interactive usage.
THE NECESSITY OF ACTIVE PLOT MOTIFS AND RULES OF PLAY WITHIN INTERACTIVE NARRATIVE CONCEPTS

If chess is used as a metaphor for interactive narration, some basic attributes of the latter become evident: move and countermove. Two possible ends exist: checkmate or draw, but there are a multitude of possible lead-ups to either conclusion. The art of multimedia authoring and direction (interestingly, neither traditional nor new designations have become established for these professions), now consists in deploying an intelligent regulating mechanism to plan and stage linkages that are as varied as possible and adhere to a logical course and appropriate dramatic structure. A multimedia narrative scaffold of set pieces, whose temporal sequence is not necessarily defined and may even be circular, takes the place of the classical linear plot.

However intricate this temporal sequence may be, and however invisibly it is interwoven with the events, it must remain logical and recognisable so that the user/observer is able to recognise plot goals he can aim at interactively. The staging of the outcome or, the different endings, must, unlike chess, make do with a manageable number of variations.

Apropos narrative sequences, therefore, it remains necessary to question the legitimacy of demands for 'high-grade', and, if possible, unlimited, interactivity potential, which allows for the random exploration of virtual realities. A staged experience is logically required to move within a demarcated framework or space. Otherwise, the imaginary, but (in my experience) mandatory storyline will ultimately lose significance.

The majority of the so-called 'jump'n'run' computer games could serve as examples demonstrating the opposite. Although based on rough-hewn plots, in reality they unfold the various 'levels' as arenas for the associated games of skill. By the end, the alleged content has long been forgotten and the game is primary. In the ‘adventure’ computer game genre, by contrast, one often comes across a very successful symbiosis of plot and game. For instance, the share of narration in the Tomb Raider series, with its heroine Lara Croft, far surpasses the gaming component.

Nevertheless, on closer inspection the strategic creation and marketing of a virtual (cult) figure deliberately masks the rather modest ratio of story and content to interactivity. Not for nothing, presumably, did the makers allow the heroine to die after the fourth game instalment, only to be resurrected shortly afterwards in a feature film. One should not be surprised to find that in future interactive game-films (or film-games?), the 'flesh-and-blood' pixel heroine Lara Croft, gives priority to narration.
ONCE RULES COME INTO PLAY, IS THERE NO TRULY AUTONOMOUS INTERACTIVITY?
For many, to play interactively means being able to imitate the action radius and sensory experiences of the real environment. Applications and accessory devices attempting to improve the simulation of reality, to enhance the ‘sensuality’ of the computer machine, have pursued the same direction, be it with control levers and steering wheels for flight and racing-car simulators, or data gloves or virtual-reality helmets fitted with stereo 3D spectacles. Others have approached the reconstruction of real conditions using virtual worlds, populated by virtual representatives in the form of individual avatars, able to be separately controlled by several users. While this successfully generates a genuine realm of possibilities – a cyberspace with an accompanying range of options – the space alone tells no story. Only when plot motifs come into existence within the space does a need to act arise. In ordered circumstances, this need leads to patterns of action, modes of behaviour and even, ultimately, back to rules of play around which the playful handling of a story can develop as virtual role-playing in cyberspace. If this is not the case, anarchic dimensions are fast reached that, because they are uncontrolled, can very quickly become devoid of meaning. This in turn proves that a new story cannot emerge solely due to the complexity or the alleged coexistence of several virtual ‘alter egos’. In cyberspace, too, the issues of authorship, agreeing upon rules and the contextual game environment, arise. According to one school of opinion, truly autonomous interactivity ceases to exist once rules come into play. The opposite is actually true. Specifications challenge the players to use their imaginations and strategic intuition in order to get to grips with a role and interact within a fictional game-story environment.

Even a complex simulation-game like SimCity is based on a claim demarcated by fixed rules. Only individual human life is surrounded by authentic boundlessness, in which interaction can entail a corresponding degree of unpredictable consequences.

‘STRUCTURE IS THE KEY TO UNDERSTANDING THIS NEW MEDIUM’
The above statement is by Greg Roach, one of the first commercial authors, producers and directors of interactive story-games. He adds:

You have to think in dimensions, in layered text and images, in hologram-type constructions where time can be fluid, where plots can branch, where users are actors groping through and constructing the version of the work they see with the choices they make. Mostly they don’t see the whole thing. The whole is apprehended through the exploration.6

Thus, renewing traditional, acquired narrative structures is particularly vital in the successful handling of interactive stories. The contribution of a professional author/director – in the sense of the classical film ‘auteur’ – is indispensable. After all, it is the writer, who not only lays the foundation stones, but also drafts a relatively precise idea. Anybody intending to interactively relate an authored story must be aware of the narrow precipice to be negotiated, in trying to bring
about an intersection between the actual story (as raw material) and the possibilities of the interactive game. This inevitably requires the author to develop well-contrived rules of play that, to some degree, are artfully inserted turning points, scenes must be devised that hold themselves accountable to narration and interactivity, pairs of protagonists must be contrasted, and one must keep the story on course, while at the same time giving the multilayered plot scope for development.

Impossible though it is to provide instructions for constructing an interactive story or a ready-made method of networking the components listed above, several attributes have emerged that help meet the demands for complexity as well as satisfy the resultant requirements. The thriller, detective story and documentary game genres, for instance, have proved to be especially suitable for game-based plot extensions, just as over the years the increasingly narratised component of adventure games written for computers has resulted in ever more complex storytelling environments.

In the interactive documentary-thriller Berlin Connection, the narrator's juggling of facts and red herrings is simultaneously composed as a game for the viewer. Having adopted the role of a foreign photographer suddenly exposed to the underhand practices of an, as yet, anonymous gang, players must not only find their way about a strange city, but also discover that, if they want to understand the plot they must first find out a few things about Berlin's turbulent post-war history. The game provides for this purpose a (fictional) special edition of a daily newspaper celebrating the spectacular fall of the Berlin Wall. With articles, documentary video clips, radio recordings and photographs for different periods, it recounts key events in the divided city's history after 1945. As well as being generally instructive, this information ultimately assists the course of the plot, which occasionally refers to the background of the ever more dubious and gripping East-West story into which the viewer stumbles as an innocent bystander.

While the author of a classical linear narrative has the task of shaping these plot lines in a way which is dynamic, entertaining and smooth, the user of an interactive game has to decide where cuts and leaps take place. Until now, it was left to the author's intuition to sense the effect of his linear narrative art on his audience, and on this basis provide for the appropriate degree of dynamism. Whereas, in the case of the interactive recipient's non-linear and, above all, unpredictable 'movement' through the offered spaces of action, it is possible neither to stage nor to guarantee such a fluid dramatic structure.

'Here, the task of writing resembles that of composing a piece of music for a number of different instruments,' says Janet H. Murray, a US academic and leading authority on interactive storytelling.

Every element must sound perfect on its own and equally good in unison with the others. The difference from music is that in a computer game like Baldur's Gate 2 it is the player, not the notes, who determines which elements are combined, and when this happens...
THE MAIN THING IS TO NOTICEABLY AND EFFECTIVELY ADVANCE THE STORY

At all events, the most important thing is to efficiently and perceptibly drive forward the actual plot. However, many details (or 'plot points') of a substory the reader or viewer may have picked up over a period of time, whatever knowledge the 'clicking player' may have already acquired, every plot needs 'nodal points' at various places and times. These points bundle together and analyse the findings gained so far, meaning the players can then act on a new level – faster, more wisely, or perhaps even more confusedly. No matter how linear or how interactive the ultimate form of presentation, a story's central concern remains the resolution of the (main) conflict described at the beginning, be it a crime, unhappy love story, an aspect of society that needs to be changed.

As described above, the first person narrative perspective often makes it necessary for players to experience every plot point directly, and to respond with an intervention. The interactive narrative scaffold must therefore use nodes to link up all the plot points, whether they are associated with locations or persons, and these nodes must initially be invisible to the player.

The scheme runs approximately as follows: plot points deliver important items of information for a story, and simultaneously contain one or more nodes in the form of a question or puzzle. Every node has its equivalent – in the form of an answer – in a different plot point.

Not unlike the popular game 'Memory', questions and answers constitute an invisible carpet that is laid out over the plot points of the game story. Both linear and non-linear links are conceivable. Sometimes merely intersections that speed up the plot exist between individual plot points, sometimes one plot point harbours both question and answer, sometimes different plot points have to be visited several times over in order to investigate certain connections and to make a new plot point accessible or even to allow its manipulation. Finally, by creating a link between two nodes it is possible to close other plot points that have already been 'passed through'. In this regard, the internal narrative structure probably differs most impressively from the linear structures of novels and films.

THE INTERNAL AND EXTERNAL NARRATIVE STRUCTURE

Furthermore, some narrative materials possess an internal structure in regard to the plot, and particularly so in terms of economy. This applies to cases where the active player is able to explore all the plot points, meaning re-usage of the same backdrops is desirable for economic reasons – in order to keep production costs below that of making a film.

One good example is the CD-ROM adventure The Last Express, which plays in the Orient Express on the eve of World War I. The action takes place exclusively in the wagons of the famous train travelling between Paris and Istanbul. The player assumes the role of a passenger, has to move through the compartments, eavesdrop on other passengers and build up a picture of the mysterious circumstances. Obviously, a player cannot be in all the wagons at once. This problem is solved by a clock that enables players to leap backwards and forwards on the timescale at will (which is analogous with the route of the train), in order to find out when and how known and unknown passengers boarded and alighted.
Time becomes a supplementary means of adding pressure, since failure to obtain results within a set interval of time causes the player to be thrown out of the game and literally, off the train. The skilfully interwoven parallel storylines result in a gripping and lucid plot motif whose internal structure is at the same time economically grounded. Such temporal spatial interdependencies can very much be a further regulating construction for spaces of inter-active action that, on closer inspection, need be neither over-contrived nor too limiting for the plot itself.

THE 'HYPERMEDIA STAGE' – THE GRAPHICAL INTERFACE AS A HYPERMEDIATED NARRATIVE REALM

In the view of the Berlin-based multimedia designer, Andreas Kraft, the monitor must to some degree still tell a story, even if a player does nothing at all. His opinion reflects an important credo that says it is necessary to build up the equivalent of a stage, as opposed to that of a playing field. While in the brainstorming phase the motifs and rules of a plot are still rough, diffuse and modifiable, they continuously assume more concrete shape during the process of development, until the time comes for the visual presentation to be tried out and reviewed. Functional and visual attributes exist for the ‘user interface’ that are mandatory in implementing the complexity of the interactive narrative, and, at the same time, represent an external narrative structure. Special attention must be paid to the visually networked identification of sub-plots and useful background information (far exceeding the familiar scope of the boards and cards of conventional games). Here again, the best way of illustrating the vast staging potential of the graphical interface of the computer monitor is to describe specific examples.

The handling of movement and navigation to various plot points in Bad Mojo is wholly distinct from the frequently used maps and layout plans. The space is subdivided into grid squares that, as single screens, allow only an objective view of a section of the entire playing area. While this allows unusual insights and views of routine items of furniture – the underside of a table complete with legs, a discarded blob of chewing-gum or similar surprises, for example – it also demands good powers of three-dimensional imagination on the part of the player in order to establish the relationships between the nodes thus identified.

In Berlin Connection, it is a matter of acquiring basic historical (background) information on the fall of the Wall by closely studying the special newspaper edition mentioned earlier. Newspaper reports, photos and documentary footage are packaged in a kind of multimedia historical excursion, with a special role being played by the integrated journeys through time. The post-war black market, for instance, is by no means merely an instructive documentary-game, but demands that players (inter)actively take part in the dealings and truly interact with the vendors and customers.
Operation Teddybar imparts historical information through the vehicle of an interactive comic strip depicting the Allied Forces' landing in Normandy in 1944. At the same time, the hypermedia stage opens up to reveal a documentary section that both leads away from and back to the comic strip. So compelling is the staging that it is difficult to choose between the comic book story and the documentary, meaning the player inevitably ends up visiting the plot points of the comic pages several times over.

A STORY TOLD INTERACTIVELY CAN PRODUCE FEEDBACK – MORE ELEGANTLY AND SUBTLY THAN ANY PREVIOUS GAME FORMS

The failure to register information or make a discovery when following a linear narrative 'merely' makes it more difficult to grasp the connections established by the next node. With some interactive stories, however, viewers may have to obtain specific information, 'experience' certain occurrences, or carry out specific actions before they can even proceed to the next node. Players of Berlin Connection, for instance, have to swap certain items on the black market, and, to arrive at the story's solution, must demonstrate powers of deduction and sleuthing akin to those of a detective.

Just as in the children's game 'Blind Man's Buff', where the players assist the blindfolded child by crying 'hot' or 'cold', an interactively-narrated story can produce appropriate feedback – ultimately with far greater elegance and subtlety than any prior form. I mean by this the actual alteration of the mediated background. The background music gets more sinister or soporific; the light fades or brightens: the pace of certain peripheral events noticeably speeds up or slows down. Berlin Connection feeds back its reactions by altering the behaviour of people and locations. Thus, a player who gives a wrong answer at some point finds, on returning to the same situation, that informants have suddenly become taciturn or shops have closed. The player might initially react with confusion, but the message is clear.

INTERACTIVE STORYTELLING IS A STYLISTIC DEVICE – AND THEREFORE ALSO A QUESTION OF TASTE

The crucial role played by the graphical-navigational interface in interactive structures is becoming clear. Every image is characterised by the interplay between the user's interactive freedom of choice and the spatio-temporal limitations of his doings. As in a labyrinth (not for nothing is the latter a popular stylistic device in computer games), it is a matter of finding the exits, often within a given period. Players, unable to interactively contribute to the progress of the story, face the threat of the sudden appearance of a new protagonist, a change of scene, an unexpected occurrence or
even, at worst, the announcement that the game is over.

Experience shows that frustrations of this nature should not set in too fast or too frequently. The tasks, in other words, should not be too difficult – just as the plot of a thriller should not be over-intricate, otherwise many viewers will be unable to follow and ‘turn off’ inwardly. If writers of interactive stories want to involve players in their plots, they need to provide them with ways of moving forward, to keep open a ‘side-door’ for times when all else fails – so that the game remains fun and players can identify with the product.

What is indisputable, is that in order to enjoy interactively narrated stories, people need a certain affinity with the narrative technique. Interactive stories are certainly ideal for people who like thinking about how to resolve a conflict (in thrillers or courtroom films, for instance), or for people who are not just good listeners, but also like posing investigative questions. On the other hand, interactive presentation can also be a good means of presenting material and subjects to audiences tired of traditional media such as books or television.

Seen from this angle, the emergent genre of ‘interactive storytelling’ is playing its part in bringing about the renaissance of narration in the original sense. Just as the storytellers of old made what when and how much they told, conditional upon the audience’s ‘good listening’, in order to heighten the tension, entertainment value and level of mental participation; so now interactive stories solicit audience participation in the story and thus help them to more intensively internalise the material.

Translated by Tom Morrison

Notes
2. Ibid., p. 196.