Multimedia Genres and Traversals

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Abstract

Genres are not what they used to be. They are both more and less. More in the sense that today many genres of interest are increasingly multimodal, making their meanings through the co-deployment of resources from both language and other semiotic systems. Less in the sense that as people cross institutional and genre boundaries on shorter and shorter timescales (surfing across television channels from genre to genre, across websites from institution to institution, and living their lives between as well as within multiple jobs, tasks, and institutions), we increasingly not only hybridize formerly insulated genres, but we now also make meaning along our traversals across traditional genres. Genres are becoming units, raw material, for flexible trans-generic constructions: resources for meaning in a new, externally-oriented sense. Looking at genre from these contemporary viewpoints provides insights into the phenomenon of genre from new functional perspectives.

1. Multimedia Genres

Every written genre has always been multimodal, deploying not only the signs of the linguistic system but also those of the visual-spatial meaning systems associated with orthography, typography, and page layout. These visual-spatial dimensions of written genres frequently index the syntagmatic units of a genre (e.g. titles, section headers, the characteristic typography and layout of the References or Affiliation sections of an academic paper, etc.). In more complex genres, such as textbooks or Talmudic commentaries, sidebars, columns, and spatially arrayed subsections of text index organizational meaning relations. Typographic conventions such as boldface and italic fonts typically index attitudinal-evaluation meanings such as importance, as well as metalinguistic ones such as glossing of new technical terms. In edited documents, blue-pencil, red strikeouts, yellow highlighting, interlinear corrections, marginal corrections, etc. also follow highly genre-specific conventions that are entirely para-textual. All this leaves aside extra-textual visual elements such as tables, figures, images, etc.

One can argue that images or graphical figures are always optional in primarily textual genres, but it is nonetheless the case that the inclusion of such elements is so highly probable as to be typical, and certainly constrained by genre-specific conventions, in many genres, such as the well-documented case of

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print published scientific research articles and reports (Lemke 1998, Roth et al. 1999). In such genres it is often the case that essential elements of meaning are conveyed *only* through the graphs, tables, charts, maps, diagrams, photographs, and other image elements, or only through their combinations with text, and not redundantly by the text alone.

These are old, well-established, and among the most highly respected academic intellectual text genres. To them we can certainly add many of the genres of popular mass culture from the 19th and 20th centuries: popular magazines, which included drawings and engravings, and later photographs, throughout their history; comic books, where one can argue that we see for the first time a print genre in which organization is determined primarily by image sequence and it is the textual elements which are ancillary; as well as newspapers and particularly newspaper advertisements. The printed advertisement is a genre that we might argue obligatorily includes an image as well as a text that has a full organizational structure of its own (as opposed to being merely a labelling or gloss on an image). Closely related is the political cartoon, which normally had some caption or title as well as text glosses of image elements or characters' presumed speech (Lemke 1999).

My principal concern here, however, is with emerging genres of importance for the future. Widespread computer text and image capabilities have taken the conventions of technical and popular textual-graphical genres and extended them to near-ubiquity in the genres to be found on CD-ROMs, in educational software, in webpages and websites, and most recently in the emerging genres of video and computer games (e.g. Gee 2003, Rouse 2001).

How can we extend and enhance genre theory to include our growing recognition of the importance of visual-spatial meaning elements and conventions in all genres, and particularly in those where graphical image elements, or conventions of visual semiotic resource systems, are essential to the expression of meaning?

I take as given that today our most sophisticated views of textual genres provide accounts not only of their obligatory and optional elements, sequencing, and the functions of these elements, but also of their relative conditional and transitional probabilities across typical contexts of their production, circulation, and use. (Conditional probabilities describe the relative frequency of occurrence of some optional text feature across its various co-textual and contextual environments; transitional probabilities describe the relative frequencies of the various possible next-unit successors in the linear sequence of a text for given options taken up to that point in the development of the text thus far.) A genre is maintained by the conventions of a community, and in most cases serves specific functions within the system of practices of particular institutions of that community. The forms which a given genre takes as text are the traces of

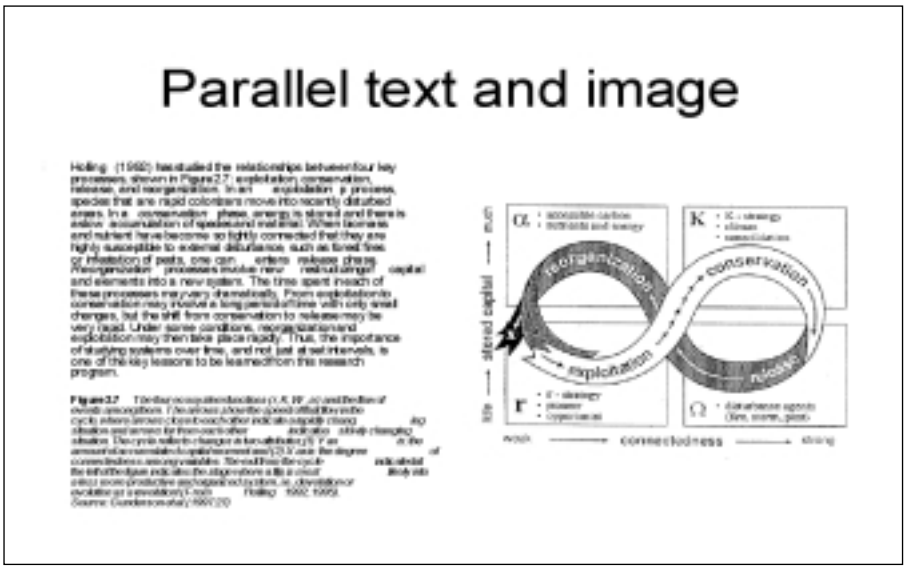
social signifying practices in some community in some institutional, or at least recognized and regularly recurring situational context. This is the sophisticated notion of genre from which I begin.

The same functional model should hold when we take into account the visual-spatial meaning resources and conventions of a genre, whether strictly typographical or also including graphical images of one kind or another. We ought to be able to specify both the unconditional probabilities for various visual forms to occur in a specific genre, and their conditional probabilities as a function of the presence or absence of particular textual forms. We ought to be able to say *when* a textual genre is most likely to include an image, and what the function of that image will be in relation to textual meaning and to the sequential development of the text as a whole. Functionally, we want to be able to specify how, typically, such visual-graphical elements contribute to ideational-presentational meaning, interpersonal-orientational-attitudinal meaning, and organizational-textural-structural meaning.

Here we begin to encounter some of the genuine challenges to our existing models of textual genres that multimodal genres present. Models of purely textual genres have made use of the convention that texts are mono-sequential ("linear" or "unicursal") in presentation. This is of course not quite true in the sense that even a traditional text that has a marginal annotation or sidebar loses strictly unique sequentiality. The main text and sidebar make meaning in parallel, not in strict serial sequence. There is no necessity to attend to the sidebar to follow the cohesive semantic development of the main text, or vice versa. There is no particular point in the sequence of either when we realize that by now we were supposed to have read the other. And yet the meanings of each do influence our interpretation of the other.

How much more so this is true of the image inserted into a text, regardless of where it breaks the flow of text, or even if it does not do so at all (as in the case where text flows down the page alongside and in parallel with an inset image, as in the Figure). Add to that image its title and its caption, as well as any textual glosses it may contain within its frame, and we entirely lose unique sequencing for a text. As just illustrated, we do have conventions to indicate to a reader (or compositor) of the main text when an image or figure becomes relevant. We do so because we need to indicate this; the image is not otherwise part of the flow of the verbal text according to its own internal conventions.

So much of traditional genre theory, however, depends on sequencing conventions. Nevertheless, we have always known that text is far from "linear" as a meaning-making technology. The different themes of a text and its different organizational phases, structural syntagmatic units, and cohesion chains and clusters of semantically linked chains (cf. Hasan's *cohesive harmony*, 1984; or Lemke 1988, 1995) run along in parallel with one another, and their boundaries



do not in general exactly coincide. They are more like the staves of a musical score, showing the parallel tracks of various instruments in the overall textual symphony. Genre analysis has rarely reached this level of delicacy, perhaps because there are relatively few strict conventions about how such textual symphonies must be orchestrated that are genre-specific. (An approach to genre using "phasal analysis" would give this level of delicacy of description, see Malcolm, this volume.)

But if we are to extend genre theory to include multimodal genres even as simple as those that are mainly textual-graphical, we will need to develop models of multi-linear or multi-cursal parallelism, or functional meaning relations among elements that may constrain the sequence of viewing and interpreting (e.g. how far apart text and related image can be), but do not strictly sequence them. My own work on hypertext semantics and organization (Lemke 1998b, 2002a, 2002b) suggests that representations of branching options in flowchart models of speech genres (Ventola 1987 and this volume) offer one direction for dealing with the organizational parallelism of multimodal genres.

In a reading of a hypertext (a traversal or trajectory through the text), sequence is only loosely constrained. There are many branching points, possibilities of returns and closed loops, and the option of following more than one line of development in parallel. Do we wish to say that therefore such texts do not follow genre conventions? That they are not textual instances of genre types? I would hope not. So how then will we characterize such multi-sequential genres? As I have already suggested, one approach is by identifying the relative probabilities of various features in each linked textual unit, the probabilities of

transitions or sequences on to the next such unit, and so forth. Some of these probabilities are set or influenced by the genre, some by the author (e.g. offering a link or not, "steering" or guiding the reader to follow a particular link even though others are offered, etc.), and some are idiosyncratic to readers (though there may be tendencies which are characteristic of types of readers, of reading communities, etc.).

Another direction in analyzing multimodal genres, which so far as I know has not yet been developed, is to ask such key questions as:

- What syntagmatic units of the text are projected by the appearance and themes of the images or figures? That is, to what elements in the text are elements of the image or graphical figure specifically relevant, or relevant to some variable degree, and according to what meaning relations? We can imagine a unit of the text, whether continuous or not, to be defined, perhaps with fuzzy boundaries, by its relevance specifically to a particular image, or portion of an image.
- What are the organizational and thematic units of the image or graphical figure which are projected by the text? For each connected stretch of text we can ask to what, if any, image or portion of the image, is our attention potentially directed? And with what implied meaning relation? And with what degree of relevance or salience?
- What are the features within a text, or within an image, that enable us to make links of particular kinds to particular elements of images or text, with certain degrees of probability? This is a variant of the traditional strategy of intertextual analysis within a connected text, looking for the same kinds of meaning relations between elements within a text that we often see between texts and looking for the same kinds of textual pointers or cues that afford such connections. We can look cross-modally in the same way.

This gets to be even more interesting when we add the complication that for both images and text there are not simply the usual structural syntagmatic units, but also the more cohesion-chain-like "textural" kinds of organizing strands (Halliday & Hasan 1976, 1989). An image may highlight a particular element wherever it appears in an accompanying text, or a particular salient textual meaning may enable us to group together across a spatial domain many otherwise visually disparate elements in an image. Texts and images in genuinely multimodal genres are mutually organizing.

If we are following a cohesion chain through the lexis of a text, looking for specific semantic ties, we have to ask whether visual elements in the images or figures belong to such chains or not? If it is an identity chain for a named person, and a photograph of that person is given, is that image not a part of the identity

chain? And particularly so if the text refers to some visible feature (a mustache, a scar), or even presupposes the reader's knowledge of it from the photo? This is in fact a particularly common instance in scientific text where patterns in graphs of data may be referred to as presupposed from the visual information on the page. So also with similarity chains and all other forms of cohesion.

Indeed cohesion may be induced, or strengthened, as when there are several potential co-hyponyms in a verbal text, but with no explicit superordinate term, and yet that superordinate term is pictured. This is much the same effect as when the superordinate term is mentioned in a subsection title, where we do include it normally in a cohesion chain, even though titles are in another sense not cohesive with the texts they head.

We may have not gone far enough in traditional genre theory in developing accounts of "textural" as opposed to "structural" regularities. Genres hold together not just through the functional complementarity of their structural syntagmatic units (multi-variate unity), but also, as with templates for any text, through the thematic continuity across structural-unit boundaries of their cohesive chains (and semantically or grammatically inter-connected sets of such chains) in a co-variate unity (cf. Lemke 1988, 1995; Hasan 1984). Insofar as image, or more generally graphical-figural, organization shares with text this double articulation (structural and textural-cohesive), this would seem a useful strategy for adding to our repertoire of ways to analyze their semiotic interaction in multimodal genres.

To carry out such a program, we need of course to have a theory of internal cohesion for images, to complement well-known compositional theories that segment the picture surface into regions having spatial and figural-functional relationships to each other (e.g. parts of a human body, or of a house; foreground and background, etc.). Such cohesive devices in painting, for instance, make use of such resources as color palettes, and draw together disjoint regions of the image through their identical or closely related colors. The notion of dynamic vectors in images (Arnheim 1956) also provides a sense of the visual cues which direct the movement of the eye across the image, thus also producing a kind of non-segmental cohesion.

So far I have moved our consideration only a short distance from traditional printed text genres. Multimedia genres can include not only text and graphical images, but also dynamic media such as animations, audio streams, and full-motion video. Text itself can be animated, not just for amusement, but as a scrolling or running stream of written words moving in some definite time relationship with an animation or moving image. Spoken language perhaps more easily and naturally narrates verbally the presentation of an animated or video image stream, synchronizing with it in time. Music and various sound effects add to the meaning of many webpages and software program presentations.

How are we to analyze such composite genres which embed verbal genres, image genres, film genres, music genres in *integrated* ways? Surely not every such text is *sui generis*? There are clearly genres and recognizable, repeated patterns of selection of meaning options, with definite conventions of organization, if not of strict linear sequence. What does film theory (e.g. Eisenstein 1943) have to tell us about speech-image-music genres? Even if we simply begin from the film script, combined with a storyboard of planned images, we face the same issues raised earlier. When we add the temporal dimensions, we find added resources for integration (e.g. synchronization, syncopation, etc.), and these are often genre-specific (e.g. acceleration of time in action genre climaxes).

There are many new, emergent genres that are taking advantage of such multimodal affordances of new media. They are attempting to synthesize and integrate the older conventions of the printed text-and-image page and the dynamic image-and-sound streams of film, video, and animation. One of the newest and fastest developing are the genres of video- or computer-games (e.g. Rouse 2001): role-playing games, real-time and turn-based strategy games, first-person shooters, action-adventure games, etc. While these are genre categories based on the form of gameplay, subgenres within them appear to have considerable predictability regarding many semantic features and sequences (or at least options regarding branching or parallel sequences). There are typical trajectories of gameplay as there are typical traversals through a hypertext environment. We should aim to be able to capture that typicality in genre theory.

Add to this the general capability of hypertext to offer the user multiple choice points and multiple pathways through and among websites (or in the future, among games), and we face major challenges to stimulate the future development of the concept of genre.

2. Traversals as Trans-generic

When we surf the web, as earlier we channel-surfed the manifold offerings of cable television, or even spun the radio dial among snippets of different programming stations, we become accustomed to moving on very short timescales from news to talk to comedy to music, from one institutional site to another, one genre to another. And increasingly we have learned to make these traversals meaningful in themselves. Meaning is no longer internal to genres and institutions. It is also made across and between them, as we juxtapose, catenate, and traverse not just websites or television channels, but, on longer timescales, the sites and roles of our days, weeks, and lives (Lemke 2002a, 2002c, 2003).

I have proposed and argued elsewhere (Lemke 2002c, 2003) that the privileged *avant garde* of our culture, especially the young, are increasingly making their lives in more post-institutional ways: not abandoning participation in social institutions, as the radical 1960s culture proposed, but decoupling the signifi-

cance of our lives from the affordances specific to particular institutions, and learning to live in, through, and across institutions. Hardly anyone in today's university or pre-university student generation expects to live their lives in a single career or field, and certainly not in a single company or other institution. Even as we pursue one primary career-of-the-moment, we do not give up other serious pursuits in other institutions. The have-it-all "career woman" of the 1970s and 1980s, who did double duty as wife/mother and career professional, has morphed into a norm for all succeeding generations, regardless of gender, to live in families, friendship networks, primary jobs, serious ancillary pursuits, preparations for future jobs, etc. "Fast capitalism" needs an unprecedently flexible labor force, and some segments of recent generations are taking this more as a liberation from institutional dependence than as a deprivation of the job security so desired by generations before them.

Without arguing here for the wider social significance of this post- or trans-institutional shift, or even for the possible general implications for new kinds of textuality (see Lemke 2003), I want to consider the specific implications for the concept of genre of the paradigm case of such textuality: hypertext.

Hypertext is not, strictly speaking, text at all. It is a medium and a technology which encourages and affords ease of constructing sequences of textual units that are not uniquely determined by, or even in many cases anticipated by, the authors or designers of a particular hypertext web (for fuller discussion see Aarseth 1997, Lemke 2002a). A hypertext web is a resource for making textual sequences, i.e. texts at a larger scale than the minimal textual units (typically a paragraph to a page, and sometimes called "lexias", cf. Landow 1997) provided by the authors. Hypertext semantics is very much like intertextual semantics (Lemke 1985), but operates at the short text-scale of the lexia. The units which are source and target of a hypertext link may be a single word, a phrase, a paragraph, or a whole page. Accordingly, some critical resources for text-building on longer textscales are no longer available to authors/designers. It is not so easy anymore to build extended arguments or persuasions. Instead one tries to offer readers/users opportunities to make meanings of their own, to come to their own conclusions, based on the web of related elements provided, which may be combined and sequenced, logically, temporally, or experientially in many different ways.

Hypertext webs do appear to have some incipient text types that might be called hypertext genres. There are hypertext narratives, there are informational webs, there is even a kind of hypertext poetry. But these modes of text are not genres in the strict sense of genre theory. They are broader text types. Genres have traditionally been defined by their conventions of sequencing of functional units, but such sequencing does not exist as such in hypertext webs. The hypertext web is not even truly a text in the basic sense of being a semantic unit,

or at least a well-defined semantic potential. It is only a specific user-made traversal through a hypertext web which corresponds to a text in this more precise sense.

Do traversals, then, fall into genres? My sense is that they "try to", in the sense that as we construct meaning along a traversal, dynamically, as we move from lexia to lexia, we are trying to build meaningful sequences that conform to the templates of familiar, or at least imaginable genres. We do not always strictly succeed, primarily because hypertext links are largely "blind"; they do not tell us very much about what we will find at the other end. And even when they are more standardly typed in greater detail (i.e. at greater semantic delicacy, perhaps by XML or some other SGML markup conventions), they will still not necessarily be perfect guides. But we can imagine familiar genres to be like dynamic attractors in the space of all possible meanings that can be made by traversing the hypertext web, with users correcting and searching, and even backing up, in their traversals, trying to make meaningful sequences at longer textscales; sequences that are meaningful in part precisely because they do match some recognizable genre sequence.

Hypertext, especially open-ended hypertext such as the WorldWideWeb, affords great opportunity for the emergence of new genres. If meanings are made which do not correspond to familiar genres, but which are nonetheless interesting or satisfying, and also somehow recognizable in their principles of formation, we are likely to begin trying to use them as templates for new traversals. Genre evolution has been slow in the past largely because (a) whole genres have had to change, and (b) genres have been conserved (because of their social-institutional functions) to change not much faster than the institutions themselves. In the hypertext era, or more generally the traversal era, the textscales are shorter, the timescales for meaning-making along traversals may be briefer, and the linkages of particular traversal-types to institutions may be non-existent. Genre evolution, or at least the emergence of new genres, is likely to occur much more quickly under these conditions.

Genre theory needs to be prepared to recognize these new emergent genres, or quasi-genres ("semi-genres" ?) as they occur. We need to have a sense of what sorts of patterns of meaning sequences and relations will recur in them from one instance to another. I propose that a good way to start doing this is by recording our own trajectories across the web and systematically analyzing the kinds of sequences of meaning-links that we make, or that we find satisfying (discounting, or classifying separately, false jumps and returns, though this serendipity may retrospectively turn out to be unexpectedly meaningful in some cases). We need to look at the most frequent meaning relations (in other work I have suggested that various kinds of expansion and projection in Halliday's terms are quite common meaning relations from one webpage to another; Lemke 1998,

2002a), and then at the most frequently recurring sequences of such relations, and so on as far as we can get in a hierarchy of semantic-functional units and sequences. Obviously we also want to be looking at the traversals made by others, especially by members of the generations that have grown up with the web and known this kind of "surfing" as a primary experience coeval with, or even antecedent to, their experience of many classic text genres.

In addition to hypertext, the notion of traversal also applies, I believe, to analyses of how we increasingly cycle our attention among various immediate and virtual worlds. Whether talking on the cellphone while driving a car, doing our email or sending an SMS (short text message service on mobile phones) during a meeting, or carrying on internet Chat, web-surfing, or even mobile gaming intermittently in the course of other activities, we are creating traversals among various attentional spaces. Our sense of the pacing of activities, and of the hours of our days, depends on such multi-tasking. In using computers, on the desktop or increasingly mobile units, as information and communication appliances, we are performing a kind of living hypertext traversal among various attentional spaces. Along these traversals meanings are made and feelings experienced which are becoming increasingly important to the lives of many people. These are trans-generic, trans-institutional, trans-situational meanings. Not in the sense that they lie outside any genres, institutions, or situations, but in the sense that meanings afforded within each of these are cumulated, juggled, aggregated, and in some degree synthesized into overall meanings and feelings that characterize our lives whether on the timescale of mere minutes, or of large fractions of our days.

Genre theory grew up just at the end of the modernist era when we had the luxury of describing and analyzing relatively settled and stable genres, corresponding to relatively settled, if not entirely stable, institutions. Now I think we are well across the threshold into a successor era in which the primary task of genre theory will be to identify and describe emergent new quasi- or semi-genres that will be more protean in their functions and less tied to institutional requirements. They may be more like partial templates for scaffolding coherent meaning across significant jumps in thematic content, attitudes, viewpoints, or organizational structure. They may be rubrics for extending sequences of examples, cumulating without culminating. They may in fact look a bit more like cohesion chains than like multivariate structures, or most likely they will be a bit of both, but with more features of the former than our classic notion of genre has needed in the past.

I would like, finally, to contrast this picture with the now familiar notions of genre hybridity and the general intertextuality of the dialogical aspects of all texts. A text may show some features of two or more classic genres for many reasons, from artistic dynamism and creativity, to dual institutional functioning. But

in these cases, there are still whole genres, familiar ones, as points of reference, and the text does not need to make its cohesive meaning on-the-fly – authors can perfectly well edit a well-defined text to match its sequencing of meanings to the conventions of cohesion and generic structure, whether of one or more than one recognizable genre. Equally, every text animates the ghosts or echoes of other texts, perhaps of different genres, in the course of making its own meanings, and so it may in some way allude to or index the genre of another text, even by incorporating some fragment or feature of that genre, or otherwise evoking it for us. Here the meaning effect depends very much on our familiarity with the typical genre being evoked or echoed. We are perhaps imagining that genre on-the-fly, dynamically, from some particular point in the text, but only transiently (i.e. its relevance to the whole of the present text may not be sustained). But we are still imagining a whole genre, or even if we are only imagining one functional unit of such a genre as relevant at some point in the present text, the meaning of that unit depends on its place in the whole genre.

The quasi-genres or semi-genres of traversal meaning are not like either of these cases. There may still be one or more "whole genres" in reference, so far as the constituent meanings are concerned *across which* the traversal makes its higher-order meaning. But what is important for traversals is only the sequence of such cross-genre meaning relations that is found repeatably useful or satisfying in making some kind of larger textscale meaning along the traversal. It is of course possible that such proto-genres might in time become stand-alone genres, might even become writable outside hypertext. But if those are the only cases that genre analysis is prepared to recognize, then I think it will have failed to remake itself into the very valuable tool it ought to become in the age of hypertext and traversal meaning.

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