11 Place, pace, and meaning: Multimedia chronotopes

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We make meaning along our lives' traversals: across real and virtual spaces, across multiple institutions, genres, media and semiotic systems. We do so in real time, across multiple timescales of action and activity, from the blink of an eye to the work of a lifetime. But how do we succeed in coherently integrating the meaning of a moment into the meanings of minutes, days, months, and lifetimes? How do momentary actions come to be seen as situated activities and social practices.

In this chapter, I develop a conceptual framework within which to give accounts of how the prior coherence of places and of the discursive imaginaries of multi-scale projects help us constitute meaning through time. I use Bakhtin's notion of the *chronotope* (Bakhtin, 1981b) to represent culturally typical movements and pacings along trajectories of activity, and combine this with my own development of the principle of *heterochrony*, according to which meaningful activities are linked across timescales by our use of discursive-semiotic artifacts (Lemke, 2000a).

To make these issues more concrete, I illustrate meaning-making across both real and virtual environments, by focusing on how temporal and spatial coherence is achieved in the interactive, immersive, multimedia environment of a computer gameworld.

Theory as toolkit

I began my intellectual and academic life as a theoretical physicist, so I have a profound regard for the value of theory, but also a considerable skepticism about the excessive claims sometimes made for it. Theories are not meant to be "master discourses" providing the keys to the kingdom. They do not consist of universal and timeless or culture-free objective truths. They are simply assemblages of intellectual tools. In the case of well-developed theories these tools have long been found to work well together, complementing and extending one another in doing the work of some paradigm of inquiry. There is a continuum, and usually a historical continuity in theory development, from bricolage to paradigmatic theory, but the stuff of theory remains merely an assemblage of tools, not truths.

In a sense, this view of theory as assemblage of tools is entirely parallel to R.

Scollon's (2001a) notion of a *nexus of practices* insofar as an intellectual tool is

nothing at all apart from the practices in which we use it, and the kind of

assemblage a theory represents is indeed a nexus in Scollon's sense: an emergent

system of interdependent practices, discursive and non-discursive, always

material, organized around some recognizable activity (here the activity of theory-

based inquiry), and the product of a specific history. Indeed it is the product of

history on short timescales and long ones, from the interpretative instantiation of

the theory in the course of a specific "application" of it, to our own biographical

and educational ontogenesis as users of the theory, to the socio-cultural history of

the development of theory in the context of a variety of long-lived social

institutions. I put "application" in quotes because I do not believe that theory

remains unchanged when we bring it to use in a particular inquiry. The practices

of tool-using necessarily enter into the mediated action of an inquiry in ways that

require them to be modified and adapted as they are co-ordinated with other

practices to get something done. They are differently adapted in each case, though

we can of course construct some invariants and similarities from case to case to

imagine a certain stability to our tools or cultural practices. *Tool* and *practice* are

nouns, but nouns I want to use for naming processes, not things; they have a

different sort of identity and stability from things, despite grammar and its

sometimes misleading semantic connotations. A *theory*, as an assemblage of

tools-for-practice, an abstract system of imagined relationships among classes of partial similarities of observable processes or actions, is about as little like a *thing* you can have, know, or believe in as I can imagine.

Certainly we need a serviceable semiotics of discursive and non-discursive meaning-making as action: a multimedia semiotics, a multi-modal semiotics, a semiotics of action. I tend to make my own tools of this kind (Lemke, 1995, 1999, 2002b) but their historical roots lie in the linguistic social semiotics of Michael Halliday (1978) with some borrowings from C.S. Peirce (1998) and M.M. Bakhtin (1981a, 1981b). Extending them to a semiotics of action and multimodality, including visual semiotics and the semiotics of sound has been the work of a large community which shares these roots (Kress & van Leeuwen, 1996, 2001; Thibault, 2000; van Leeuwen, 1999).

We also need a phenomenology of space and time, which may not yet be a theory of how time, space, and movement are used as semiotic resources, but which alerts us to how our experience of time and space play a role in what is meaningful to us (Merleau-Ponty 19xx, Husserl 19.., Heidegger 19...). Bourdieu (1972, 1990), especially his critique of Claude Levi-Strauss' structuralism

regarding the importance of pacing and timing is very important here. The contrast between the view of space and time in modern physics and the phenomenological view, particularly of time, and the development of models of social space and place in postmodern social geography (Crang & Thrift, 2000; LeFebvre, 1991; Thrift, 1996) opens up many possibilities for conceptualizing timing, pacing, duration, built space, abstract space, felt space, etc.

Finally, we need some sort of social ecology, a theory of the complex ecological systems that human societies and our artifacts form as integral parts of larger "natural" ecologies (Gunderson & Holling, 2002; Salthe, 1993). This, too, is not quite a theory as yet, but we need from it: concepts such as interdependence, organizational hierarchies (which are not the same as power or control hierarchies), emergence, and most importantly *timescales*. When our fundamental tools, and our objects of inquiry, are processes rather than things or persons as such, it is not just spatial-extensional scales from small constituents to large aggregations that matter, but how processes that occur on short timescales become embedded in and potentially cumulative towards longer timescale processes (Lemke, 2000a).

How *do* they? My basic theoretical tools for posing and answering this question are the concepts of *heterochrony* and *semiotic artifact*. In the general theory of complex systems which are organized across multiple scales (e.g. molecules within organelles within cells within tissues within organs within organisms within ecosystems …), the laws of physics and chemistry (themselves tools, of course, embedded in practices) more or less require that processes on vastly different timescales be independent of one another (basically because they can't efficiently transfer energy, and so information, back and forth). But in human eco-social systems the addition of semiotic artifacts, such as material texts or architectural blueprints, means that events distant in time can become indirectly coupled to one another (e.g. design and construction) and so events on short timescales (which happen quickly) such as drawing a blueprint or reading one, and processes that take place slowly, over much longer timescales (like building a cathedral) become coupled or linked. In an ecosocial systems with material meaning-carriers (signifiers, signs), processes on very different timescales do exchange information (this is *heterochrony*), not via direct energy-coupling but through the indirect means of sign-users (writers and readers who are also enactors of other sorts of material action) interacting with semiotic artifacts (material structures that can carry meaning for us) that, as things (not processes, or at least not for present purposes) persist across timescales that are long compared to the timescale of "writing" or "reading" them.

Here, too, the notion of a *nexus of practices* is useful. For it helps us to understand how discursive processes (which are essentially semiotic processes in my terms, generalizing from discourse and language to all semiotic modalities) come to be interdependent in activity with other material processes (like holding the pencil, or tearing on the dotted line), so that the use of semiotic artifacts can "guide" material activities like placing a stone in building a cathedral. (Of course the cathedral itself is a semiotic artifact no less than the blueprint for its construction, but the nexus of practices in building it from the blueprint is different from that of, say, reading the cathedral as a historical "document.") We often use one semiotic artifact in the practices of constructing another, and this is in fact a direct generalization of the principle of intertextuality.

How do our tools work together as a theory? Imagine yourself walking down the nave of a gothic cathedral. You feel the space and its complexity phenomenologically even as you "read" its architectural plan semiotically and combine those meanings with the ones you make by reading the visual images of its stained glass windows and the textual inscriptions on gravestones underfoot. You are engaged in an activity, in a whole set of activities on different timescales, from a glance down to a step forward, from walking to "touring the cathedral" to

"seeing the town" to "being on vacation." You are doing all these things in every moment, not one now and the others later.

You are moving at a certain pace, and rushing down the nave full-tilt would vastly change your experience of the space, the meanings you could make of images and texts, and the meaning for you of the activity itself. Not to mention that you would be behaving in a culturally inappropriate manner for the type of place you are in. Around you other people are engaging in the whole range of typical and appropriate activities for a cathedral setting, and for a particular time of day and day in the year. You could read their activities as signs, just as they could read yours. You can sign the visitor's book and leave a semiotic-material trace that can be read hundreds of years from now, as we read such signs from times past. Reading the material signs in the cathedral, some created a very long time ago, influences our present behavior, and our present behavior thus becomes in some small part a moment in long-term processes of social continuity and cultural change.

As we move through our tourist day, we are producing a trajectory that traverses across settings and activities. In seeing the town we are now in the cathedral and

now in the park or the museum, we are at lunch in the café on the square or

resting on a bench by the river. In each setting there are different expectations,

different affordances, things it's possible to do and things it's culturally

appropriate to do. There are different semiotic artifacts available, cueing us in to

actions we can perform with them (ordering from the menu, seeing the museum

piece in light of the accompanying description, re-experiencing the square

overlaid with a performance in *son et lumiere*). We move from setting to setting,

from institution to institution, from genre to genre of semiotic artifact, from

activity to activity. And they are not, for us, at the time, or retrospectively,

disconnected. They are experienced with a continuity, they can be coherently

narrated, the trajectory as a whole has a meaning for us, even if it may not be

easily rendered in words. I use the concept of *traversal* (Lemke, 2002a, 2003) to

foreground continuity across difference: across different media, settings,

institutional expectations, activities, etc. I appropriate from Mikhail Bakhtin the

notion of a *chronotope* for the culturally typical movements from place to place,

each with its own characteristic timing and pacing, that characterize complex

extended human activity every bit as much as they do the spatio-temporal

organization of action in a novel (Bakhtin, 1981b).

Space and Time in *The Sims*

The Sims [Deluxe Edition; Maxis, 2002] has been called by its principal designer,

Will Wright, more of a 'software toy' than a game. It is regarded as an innovative

and pioneering game largely because prior popular games were mainly about

achieving hard-programmed puzzle-solving or foe-vanquishing goals whereas *The*

Sims has no such goals or criteria of winning or losing, and the use of artificial

intelligence (AI) programming techniques in its design makes for surprisingly

life-like behavior by the simulated characters in the game.

Wright and his company came to *The Sims* from prior experience developing their

equally pioneering *SimCity* series [Maxis 1989, 2003], in which the player-user

could build model cities and their infrastructures and manage them dynamically in

response to the needs of their imaginary populations.

The *SimCity* heritage is most evident in *The Sims* in the tools provided to the

player-user for building homes or remodeling existing ones. What is new is the

ability to create individual inhabitants, or import them 'off the shelf.' They have

assignable personality traits, rather like characters in familiar role-playing fantasy

games (e.g. *Baldur's Gate, Everquest*), but they also have 'moods:' degrees of

happiness or need (hunger, sleep/energy, socializing, calls of nature, etc.). You can create a household group of one to six 'sims' (simulated persons) and move them into a pre-fab or purpose-built house. Once in the house, they begin to 'live' by moving around, talking to one another (in a language that has recognizable intonation and attitude, but nonsense vocabulary), using the toilet, demanding food or sleep, etc.

The initial point of the game is to make them happy (or torment them, if you so choose). In addition to the basic 'Living' mode, you can put their lives on hold while you Build (re-model the house) or simply Buy (and place purchased furnishings in the rooms of the house). You are a voyeur in their lives, seeing their actions, interpreting their desires, and monitoring their needs by means of a graphic display of mood and other state variables. You can intervene in their on-going activity by issuing commands for them to interact with objects in the house: use the toilet, make coffee, go to bed, change clothes at the dresser, etc. [1]

My initial concern here is to sketch out something of the role of space and time, place and pace, in *The Sims*, and then go on to show how conceptual tools such as

chronotopes, traversals, and heterochrony can be applied in making sense of the development of meaningful action across sites, media and timescales.

Consider first the semiotics and phenomenology of space and place. In the spirit of an action-centered or processual approach, let us not ask what the spaces and places of *The Sims* are, but rather how we know them through what we do. If we simply start the game, we can observe the inhabitants going about the business of their lives, and this includes seeing them walk from room to room, climb stairs from level to level, and walk around tables and other objects. We see the spaces of this place as they are defined by actions undertaken within them. But we can also change our own viewpoint on the household, by altering the angle of our isometric perspective and shifting view between upstairs and downstairs. We can also zoom in and zoom out, changing the scale of images relative to the viewing screen.

The Sims does not allow us to actually see the gameworld as if through the eyes of a character in it (first-person perspective), which some other games do (e.g. *Doom, Quake*). But it does allow us to get to know space and place in two other, very powerful ways. One is an affordance of the 'Buy' mode, in which having

purchased an item of furnishing from a menu we can position and place this item

somewhere in the house *where it fits*. With the kinesthetic sense of moving the

mouse, integrated with a visual display of locations and pre-existing objects, we

maneuver the new item to a position where it is not in conflict with other objects.

Just as in real life, we come to know space and place through such actions, and

not simply by passive observation or by watching the actions of others. In the

Build mode, we can go further and create or delete sections of walls, and we can

re-surface the floors. In these ways, too, we come to know the spaces and places

of the gameworld. We also are forced by the logic of the game and of

architectural form to consider relationships of interior and exterior views, and of

walls that define spaces and rooms above and below on different floors.

I should say here that I use both the term *space* and the term *place* because the

former connotes the abstract, available geometric volume, while the latter reminds

us that real (or virtual) spaces are always also places, defined by what they

contain and by the actions we perform in them. How then are space and place

used as semiotic and phenomenological resources in *The Sims*?

Spatial resources can be used to separate scenes and places, at various distances, and to create multi-scale assemblages of items, from the artifacts and appliances in a kitchen, to the rooms of a house, to the houses of a neighborhood (all visible in *The Sims*). Walls can separate and so can lawns, outdoor spaces, rivers, highways, etc. Conversely, spatial resources can be used to connect: as doors connect rooms or interior and exterior spaces, and walks or paths (indoor and outdoor) connect locations. Even windows connect; in *The Sims* you can really see through a window to the actual scene outside or inside. Movement itself can connect as our viewpoint moves from place to place in the house (or to the pool outside) or as we observe a sim move in these ways. In 'Buy' and 'Position' mode, we usually avoid placing an object so as to block a doorway, enacting our knowledge of connection and separation. In Build mode, we create doorways and align vistas and pathways, as well as create separating walls and thinking about where the window and door should be placed in a bathroom.

The topology and topography of place in the gameworld affects the action: how far is it to the nearest toilet when a Sim has an urgent need? Is the television that needs to be turned off before collapsing on the bed to rest *en route* to the bed or in a different direction? You can't maintain a conversation, or propose a kiss,

between characters unless they find themselves in the same room at the same time.

Separation and connection, placement and distance are not just enabling and constraining facts of life regarding action, they are also resources for expressive meaning-making. Interior design layout and placement, architectural organization of spaces and places afford expressive semiotic potential for the player-user, and in fact the sims themselves respond to room design as a factor in their happiness.

Artifacts are not considered part of a space, but they are certainly part of a place, if we define place (or occupied space) in terms of what can be done there. Much of the structural organization that defines a place depends on the relative positioning of artifacts within it (as a room is given its character by the arrangement of its furnishings). If the sofa in front of the television faces away from it, rather than towards it, affordances for action change.

The dynamics of space and place makes an immediate connection to time and pace, and these too are semiotic and phenomenological resources. When we

experience space, whether by walking through it, using objects in it, positioning its moveable elements, or re-modeling its "fixed" elements, we do so on some timescale. The aspects of time (and *aspect*, with its formal grammatical sense, is a particularly apt term here) are relevant for all action: duration, rate or pace, repetition and cycles or rhythms, acceleration and deceleration, incipience and termination. 'Timing' can mean the punctual moment in time when something happens, and it can also mean the relative rates at which processes take place. Timescales are the characteristic times or rates of processes: the time for a process to complete, the time for a full cycle to return to any point. Phenomenologically, we can feel that an activity has a leisurely pace or a hurried, pressured pace of varying degree. We might also judge, semiotically, that an event happened at just the right moment (Gr. *kairos*), or too soon, or too late (by degree). We may feel phenomenologically that events are taking place much too slowly (bored) or much too quickly (frantic). Some actions are materially or semantically on-going or completed and completable or not, repeatable or not, and interruptible/resumable or not. Some actions are also reversible or not, not just in their outcomes, but also in their processes.

This view of temporality provides a rich repertory of conceptual tools for analyzing how time plays a role in action and meaning. Consider some aspects of temporality in *The Sims*.

There is a clock that runs in the Living mode, visible on screen in a control panel area superimposed at the bottom of the household scene. User-players can change the rate of the clock, and the associated actions of the sims and other game events to fast and ultra-fast settings. Normal time in *The Sims* runs much faster than in life outside the gameworld (24 hours passes in about 30 minutes). You cannot slow down gametime, but you can pause the game and stop the clock, by command, or automatically when you leave Living mode for Buy, Build, or other mode options. This creates a complex relationship between time as experienced by and relevant to the sims in the game and time for the user-player.

Activities, which are discrete routines (prepare breakfast, read a book, take a nap or a bath), have in some cases inherent fixed durations that may be relatively longer or shorter. In other cases duration may be variable depending on need (e.g. a longer nap when more rest is needed). Some routines may be interrupted and others not, some can be instantly terminated and others will run on for a while

after you try to terminate them. Activities can usually not be resumed, or only

from some specified point. There are cyclic activities, from frequent bladder relief

to once-a-day breakfasts, trips to work, etc. There are timescales in the game from

the short ones of specific menu-commanded activities, to the longer ones

(multiple days) that it takes to develop a friendship or relationship by repeated

positive social interactions or to move up a career ladder (often by acquiring more

friends and business contacts, and so on a timescale one order of magnitude

longer than that for developing friends).

But how do activities on shorter timescales cumulate to forward projects on

longer timescales? For this we turn to other conceptual tools: chronotopes and

heterochrony.

Chronotopes and heterochrony in *The Sims*

Chronotopes are typical movements from place to place with their associated

times of passage and pacings of events. In Bakhtin they are associated with the

spatio-temporal organization of narratives, and represent the first insight that

space and time were themselves narrative, and so semiotic, resources which could

be flexibly and creatively manipulated and deployed, and were not simply givens,

backdrops to plot and action. There need not in principle be any chronotopes in *The Sims*: every day could be different, time spent in any given place could be different from one occasion to the next, the next place we go from here might only randomly be the same as the last time. The pacing of events might have no relationship to place. Chronotopes represent a kind of routinization of life on longer timescales than individual events or activities. They provide a measure of predictability and a sense of expectation about how long we should spend somewhere, how fast events should take place in this setting vs. that one, what should come next.

For the sims themselves, there are some default chronotopes. They have a cultural routine for the day: getting up, using the toilet and shower, getting dressed, having breakfast, greeting other members of the household, going to work, coming home, eating dinner, using the toilet again, watching television or talking with friends and family, going to bed. There are typical places associated with these activities, and typical timings of events. We move from bedroom to bathroom to kitchen; events pass slowly in the bedroom (sleep, dreams), less so in the bathroom (long soaks in the tub to quick relief), and in the kitchen may include a hurried breakfast to be on time for the carpool (it doesn't wait long, and if you miss it you may be fired). But the joy of playing the game comes from altering these default routines,

sending the sims to swim in the pool, read a book, dance with each other, get romantically involved. Players create chronotopes in organizing narrative meaning in the daily life of their sims. We work with and against the default chronotopes of the game (which tend to emerge from a hierarchy of needs, so they are not strict: a sim may decide to play a video game before breakfast). Other games have much more predictable chronotopes (e.g. in role-playing fantasy games, we often find slow-paced travel, preparation against attack, fast-paced fighting, slow healing after the fight, more travel and finally rest as a typical chronotope, with each element happening in its own typical time and setting and with its own typical pace of events).

User-players of course also have chronotopes in relation to their activity of playing the game. These can differ significantly from those created for their in-game characters' lives. The user comes to the game in the Neighborhood screen, where time does not pass, and events are generated by our own actions. We then usually enter a household and observe the mood-state of our sims, perhaps pausing the game on our arrival, if we had not done so before we quit the game. We can leisurely interpret the graphic displays for time, degree of rest, hunger, need for fun and socializing, etc. We can plan out what each of our sims is going to do for the first hours of the coming day. We unpause the game and the action

begins, the sims following our instructions, but sometimes deviating for their own needs, or when unforeseen events occur (a visitor at the door, the phone rings). The pacing of our experience in the Living household is much faster than in our reading of the mood displays while the action is paused. We can also switch into Buy mode or Build mode, and each of these has its own typical activities and pace: Buying and placing are fast, Building is slow; each involves phases of planning, acting, and amending. The house we see, as a virtual space of potential actions, is a different place in Living (paused vs. running), Buying, and Building modes. In each of these virtual places there are different activities and pacings. And we enact a traversal across these spaces in playing the game.

Our player trajectory constitutes a *traversal* insofar as it moves across spaces with different affordances for activity, different media and semiotic artifacts. It instantiates a *chronotope* to the extent that it is culturally typical and repeated, with definite expectations. But whether typical or not, how do we cumulate meaning and longer-term activities, agendas, or projects along such traversals?

Heterochrony is the mixing of timescales, the coupling and interdependence of processes that occur very quickly, on short timescales, and those which take place

over much longer periods of time. Perhaps the most important aspect of heterochrony is the coupling of short-term meaningful action with long-term projects, persistence, and cumulation over time. The persistence of a type of action is enabled by the persistence of the *actants* (Latour, 1987) which participate in it. *Actant* is Latour's borrowing from Greimas' semiotics of narrative as a term to stand for both human and nonhuman participants, for agents, patients and instruments in a process or activity. For all that process as such is characterized by energy and dynamics, it is matter which provides inertia for the persistence of structure in time, and so for the persistence of the signs that an interpreting agency can read as information some long time after, or at least long compared to the timescale of inscribing the information in matter or interpreting its traces there as meaningful. Every process is in this sense a *nexus*, not only of practices but of practitioners and what they practice with and upon (*cf.* Halliday's (1976) analysis of the semantics of participants in material process clauses in language). As Peirce points out, a sign is not functional as a sign until the *representamen*, the material signifier, is joined to its *object*, the signified, by the action of creating the *interpretant* which links them, i.e. by the action of some material system that does the work of interpretation, the work of semiosis (Lemke, 2000b; Peirce, 1998). So, in all sign-mediated activity we need the material signifiers and interpreters, and in all activity that participates in heterochrony, it is their material persistence that enables them to participate at the

same time in short-term practices and long-term processes, continuing to enable

homologous interpreting practices to re-occur even at great distance in time.

Any trace of action left in matter can be read as, at the least, an indexical sign of

the occurrence of that action in the past. Our actions in every present moment are

only possible because of the affordances of material artifacts and conditions, each

of which potentially influences the shape of our actions not just through its

material form and properties, but also through the meaning it may have for us.

The semiotically mediated bearing of the traces of the past on present events

creates heterochrony, an interdependence of short-term events and long-term

trends and projects.

In *The Sims*, there are many ways in which virtual material persistence (i.e. the

material memory of the computer translated into observable images and actions)

affords cumulation of activity and meaning over longer timescales. The built

architectural space of the house itself can function as an environmental memory,

enabling persistent affordances for some kinds of action and not others. The

inventory and spatial placement of the furnishings of the house also does so. The

character of the individual sims persists from their creation and their original

basic traits (degree of neatness, playfulness, etc.) persist unchanged and do influence behavior in each moment. The continuing material persistence of each sim as such provides affordances for momentary actions (e.g. conversation, renewal of friendship previously established).

Much of what persists also changes, on some specific timescale. The skill levels of each sim, reported in the graphical display of the game state, slowly increase with learning and practice (e.g. cooking skill by reading cookbooks). The state of friendships and other relationships advances or retreats with successful or unsuccessful interactions and the passage of time (friendships must be maintained or they erode). Career ladder advancement depends partly on skills and partly on social contacts and changes much more slowly. Moods on their various dimensions change with passing time (bladders fill, energy wanes) and with activities (drinking coffee, taking a nap) much more quickly than relationships, skills, or careers develop. But in all these cases there is cumulation of the consequences of momentary activities in these longer term cumulative indices, and the indices in turn are 'read' by the game program in each cycle and influence short-term sim behavior.

Player-users also read these indices as they are graphically displayed, and we too adjust our instructions to the sims accordingly. If we are promoting a friendship or a courtship, we notice eroding relationship indices and move to strengthen these bonds. We cannot write notes to ourselves within the game, to be read later as reminders of projects in progress, though we can create a chronological "photo album" of snapshots that might serve a similar function, or set the game to automatically export webpages depicting our evolving households. (The new *Sims2* will also support making 'home movies.') Most of the cumulation of information across events is tracked and displayed by the program itself, automatically. Still, I often write myself notes and reminders of what is needed for the next play session. I have created neighbors as prospective friends for my original sims. The very existence of their occupied house in the Neighborhood screen, and the existence of these new sims serves as a material reminder of my long term friendship-building project, even as it makes it materially possible in the game.

Ed Hutchins, Chuck Goodwin, Ron Scollon and other analysts of situated or distributed cognition and mediated cultural activity have shown in great detail how meaningful activity is mediated by artifacts, documents, and persistently available other persons in related roles (Goodwin, 2000, 2002; Hutchins, 1995; R.

Scollon, 2001a). An analysis in terms of chronotopes and heterochrony extends this perspective to longer timescales and longer-term projects that entrain many specific activities in different times and places.

I have only sketched here the beginnings of such an analysis for the role of space, place, time, pace, and material semiotic artifacts and actants across a range of extensional and temporal scales for one virtual gameworld. I believe however that such simplified worlds are now complex enough to embody the key elements and strategies shared with the far richer repertoires of sign-mediated activity in our own lifeworlds. Certainly they are a good deal easier to study.

Further Steps

What I have provided here is only an outline and a prospectus for the much larger project of doing an activity-centered analysis of the semiotics and phenomenology of heterochrony in gameworlds. I have not mentioned the specific role of text and discourse as such, nor issues of how we integrate meanings across verbal and visual modalities. These are also central to my research interests. Analyses also need to be made across a range of different gameworld genres, because each

simplified gameworld will foreground only some of the key principles and strategies at work in making meaning through space and across time.

Meanings made within gameworlds also connect to meanings made across the constructed boundaries between gameworlds and lifeworlds. We need to understand traversals that construct meaning as we enter and leave the gameworld, and as we find the themes and images of the gameworld re-presented to us in other media elsewhere in our lives. As I go about the routine matters of my own daily life at home, I now find my experience in The Sims overlaid on its meanings for me as I remark how game-like aspects of my life are. And there is a real possibility that my lifeworld choices and actions, as well as these reflective meanings, will change as a result of my gameworld experiences.

On a larger scale, as I have discussed elsewhere (Lemke, 2004), many gameworlds today are part of transmedia "franchises" that show themselves to us in many guises across time, space, settings, and media. Gameworlds associated with the *Lord of the Rings* franchise present themes and images, philosophies and ideologies, that we re-encounter in films, books, toys, other games, and a vast array of commercial merchandise. How do we make meaning across these instantiations of the franchise? How do we critique and critically analyze the power of these post-modern media to continue to influence us even as our new

traversal lifestyles (Lemke, 2002a, 2003) begin to give us some freedom from

individual insititutions, genres, and media?

From analysis within gameworlds we need to look outward, beyond individual

texts, traversals, and genres to begin to more fundamentally and more

comprehensively understand how we make meaning, and how we are oftentimes

led to make meaning, not only across media, but across the places and moments

of our lives.

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[1] To get a better sense of the game, you can view still photos of game scenes or demonstration videos [http://www.gamespot.com/pc/strategy/sims/index.html?q=sims or http://thesims.ea.com/us/index.html?menu=about&content=about/index.html], but really you need to play it yourself (neither difficult nor expensive).