

Space as a resource for studying multilingual language and literacy practices

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Introduction

In this article, I use social semiotic theory within a Community of Practice (CoP) framework to explain how the use of environmental resources such as space and materials can be seen to co-construct the meanings of language and literacy in a multilingual classroom (Lave & Wenger 1991; Wenger 1998). Such a model is needed to enrich models for planning, describing, and evaluating bilingual or immersion educational practices beyond simple dimensions such as the amount of time allocated to a particular language and the separation of languages. Time is only one of many environmental resources which participants can and do draw upon in teaching, learning, and using languages. A focus on and exaltation of language separation also detracts attention from the myriad ways languages are creatively and usefully mixed and switched in social interaction.

The education of young children as an institutional project, what Wenger refers to as the design of learning, can be seen as an attempt to alter the practices and identities of children or young people, i.e. their participation, including their movement, use of language and literacy, and ways of thinking.¹ Even if the motive is transformation or empowerment, schools by definition are places designed to change, if not control, their students' learning. Further, a fundamental way schools attempt to influence the learning of students is through the power of what Foucault calls "discipline", i.e. regulating the environmental resources present within their borders, such as time, space, tools, materials, and bodies (Foucault: 1995).

In an officially monolingual school, the attempt to regulate language use involves a

¹ I will refer to my participants in this study as adults/children, parents/children, and teachers/students, with the understanding that these relationships and identities are socially constructed rather than essential or necessarily biological.

struggle over the registers, varieties, and practices within one language and a resistance to the intrusion of other registers, varieties, or languages. In bilingual education, where the aim is to produce certain kinds of language use rather than simply accommodate the language use already present in the community, not only is each language and literacy regulated internally as to register, appropriateness, variety, and so on, but the two languages and literacy practices must be structured in relation to each other, and again, one of the fundamental ways of accomplishing this is through the regulation of language use, including the separation and mixing of the languages and scripts available, in regards to not only time, but also space, materials, and bodies.

In transitional bilingual programs in the U.S., for example, the aim is to increase the child's proficiency of the dominant societal language, English, by offering greater minority language support and simplified dominant language support at the beginning and then gradually phasing the support out (Freeman 1998). Thus, in a U.S. public school, for instance, a newcomer might start by spending most of the day studying in special ESL (English as a Second Language) classes with more or less minority language support, and after a certain amount of time, be "mainstreamed" into the regular school classes. We can see in this common example the intersection of the environmental structuring of time, space, materials, and bodies and the attempt to influence the use of two languages and literacies. In this case, the student's body is regulated by being separated in space and time from other children his or her own age in the mainstream classroom. He or she is placed in a different classroom environment with a different sort of teacher—one who is also physically separated from the mainstream class, who is presumably bilingual or able to use simplified registers of the dominant language in order to communicate with the "Limited English Proficiency" (LEP) student. The policy of the school, the policy of the instructor, and the presence or absence of a common language among participants will influence the amount of "English Only" vs. minority language used as well as the patterns of and attitudes toward code-switching. This classroom probably has different sorts of materials from the mainstream one; some of them might be bilingual or in the minority language, most if in the dominant language are presumably more visual and linguistically simplified than those used in the mainstream class. It is also inhabited by the bodies of other students who similarly are labeled as "LEP" and who may come to share or be forced to share a common social identity through being thrown together in this way, regardless of their different backgrounds (see Kanno 2003 for an ethnographic study of the social identities of language minority students related to placement in ESL programs).

The above example represents a case of government policy, where the dominant majority aims at getting linguistic minorities to adopt its language use and practices, and little value is

attached to the language minority child retaining his or her language, nor to the language majority child learning a minority language. However, even when a minority language is seen as a resource, as a valuable second language for the majority, and attempts are made to give both languages equal weight within a school, the same relation exists between influencing language use, including language mixing or separation, and structuring the environment and its resources. As Crawford defines dual immersion or two-way bilingual programs:

A national directory compiled by CLEAR in 1987 lists thirty two-way programs, strictly defined. That is, all feature immersion in both English and a second language; English is used no more than 50 percent of the time; lessons are provided in a single language, without translation; and English speakers and non-English speakers are integrated for content instruction...All curricula are provided in Spanish and English, with two exceptions: Arabic-English in Hamtramck, Michigan, and Greek-English in Long Island City, New York (p. 165).

In this summary of key features, we can again see the regulation of time (50% in one language and 50% in another); the regulation of bodies in space and speakers used to embody the presence of languages (language minority and majority students integrated this time instead of separated, because of the positive value given to the minority language for majority language speakers); the implication, by the mention of the importance of curricula in two languages, of the intersection of language use goals with the materials and tools in the environment; and the interesting caveat that in spite of integrating bodies, materials, and space, each lesson should be taught in a single language, without translation. In other words, equality of language use is supposed to be enforced through regulating the quality of language use in certain blocks of time, with translation or mixing of two languages assumed to diminish one or both of them.

Even or perhaps even especially in cases where bilingual programs are the result of community activism, such as the attempt by language minority parents to wrest control of their children's education away from the government and language majority, teachers, administrators, and researchers are vigilant in patrolling the use of school resources as a way to raise the status of and increase the use of the minority language. Such programs are just more explicit about their ideological aims. The Oyster Bilingual School, for example, is honest about its goal of changing students' language behavior as well as attitudes toward language: "...educators are working together to promote social change by elevating the status of Spanish and Spanish speakers in particular and of minority languages and minority populations more generally throughout the school" (Freeman 1998: 233). Oyster Bilingual School is unusual in its allocation of bodies/languages: not only are language minority and majority students integrated in all

classes, there are also always two teachers, one Spanish dominant and one English dominant, in every classroom. Still, the goal is complete equality of language use and proficiency, and this is aimed at by making the two teachers equal in status to each other, having them take the lead in teaching school subjects in 50% of each language at a time, and providing equal amounts of materials in both languages. The teachers were also discouraged from code-switching: the Spanish-medium teacher is to be addressed and reply only in Spanish, the English in English.

Freeman discovered “leakage” between the ideal plan and its actual implementation, i.e. a greater amount of code-switching into English than into Spanish; she speculated that this was due to the Spanish teachers being bilingual and thus able to code-switch and the English teachers being monolingual, as well as the fact that standardized tests were administered only in English. In response to her findings, the Oyster educators moved to enhance the status of Spanish further by requiring standardized tests in both Spanish and English instead of only in English, and to require that all new employees be bilingual, although it is not clear how or if this meant a change in the code-switching policy (1996, 1998: 246-7). In other words, the adults in charge attempted to influence their own and their students’ language and attitudes by further regulating the environmental resources- in this case, the test materials and the staff who by their physical presence are assumed to embody both languages.

The tendency, then, is to describe and study bilingual and immersion programs in terms of the percentage of instruction conducted in a particular language, with the assumption that language use should reflect a monolingual ideal rather than the multilingual practices of participants. In regards to code-switching in particular, there is a surprising gap between the ideologies underlying immersion education approaches and sociolinguistic research on actual language use. Instead of being a resource, for example, the use of students’ “stronger” language is seen as dangerous, encouraging them to tune-out rather than more greatly engage in the classroom interaction:

...studies of bilingual education indicate that it may be preferable to separate languages in instruction rather than to mix them during a single lesson...It tends to be regarded as preferable that one language is used for one set of subjects; the other language for a separate set. When there is language mixing inside a lesson, students may wait for the explanation in their stronger language. Such students may simply switch off when transmission is in their weaker language. Sustained periods of monolingual instruction will require students to attend to the language of instruction, thus both improving their language competences and acquiring subject matter simultaneously (Baker 1996: 332).

Code-switching in its myriad forms has been found to be a persistent and normal feature of naturally-occurring talk and writing among bilingual or multilingual people and is a common pedagogic strategy in all bilingual or multilingual settings including classrooms. But when it comes to language immersion educational planning or evaluation, an ideology favoring the separation of languages prevails. Teachers are cautioned against code-switching and frequent use of any language other than the target one is often used as evidence of failure to implement the ideal plan for bilingual or immersion education.

Particularly in the early years, 100% immersion in the target language is supposed to be ideal, the reverse of what is recommended for language minorities. A reluctance on the part of students to eventually speak in the target language, particularly to each other, is also often pointed to as proof of lack of program effectiveness. On the one hand, "Immersion teachers do not force children to use French until they are naturally willing to do so" while on the other hand, "Over the first two years, immersion children develop an understanding of French and then begin to speak French, particularly to the teacher" (Baker 1996: 335). The implication is that there does come a time, after two years of immersion, when children spontaneously desire to speak in the target language, and if they do not, something is wrong or unnatural. There is also the implication that it is particularly harmful to force children to speak in a target language, as opposed to forcing them to listen to it, read it, and write in it all day: "Early insistence on French may inhibit children and develop negative attitudes to the French language and to education in general" (Baker 1996: 335). What if children refuse to ever speak the target language, or insist on code-switching mainly into their first languages? The blame is laid on a variety of factors, such as a lack of teacher training, faulty instructional methods, a lack of time, space, materials allocated to the target language, or sociopolitical factors such as the linguistic environment or societal attitudes. But what school does not have to contend with such restraints?

There is a need for more research comparing ideal plans for bilingual/multilingual education and the ongoing "reality" as it is negotiated on a day to day basis in an actual school setting. In particular, there is a need for ethnographic research that can give the emic view, that is, describing and explaining practices from the diverse and conflicting viewpoints of the various participants without necessarily trying to evaluate or reconcile them. Freeman argues, for instance, that the greater the difference between the desired school environment and the home, workplace, and other environments inhabited by the participants, the more "slippage" and emotional tension there will be between the ideals of the school and its actual practices (1988). I take these gaps as evidence of how participants modify, resist and create policies. Here I define language policies as rules for language use, and in a multilingual environment in particular for

separating and mixing languages, which are implemented in micro-level interactions of the school. I don't mean to necessarily imply a hegemonic situation between those who create school policies and those who must implement them; even those in charge can come to reject or modify rules regarding the use of time, space, materials, tools, language, and bodies. In other words, participants can come to feel oppressed by their own regulations, or feel a conflict between the regulations of the school and their experiences and beliefs. This may be particularly true when prescriptive models are imported from other very different settings. As Kenner notes, "Theories of language are historically located, both arising from and describing particular social contexts" (2004: 44). For instance, in my context, if a school has a policy of allowing participants in a classroom to speak only in the target language, a teacher may feel dishonest pretending not to understand Japanese in an attempt to get students to speak to her in Portuguese, especially when her ability to understand Japanese is in fact crucial to her dealing with her students' parents. The monolingual Japanese environment surrounding the school, the lack of bilingual Japanese parents, puts monolingual immersion teachers at a disadvantage and to pretend to be monolingual belies the efforts of the teachers to become fluent in Japanese and interact competently with parents. Or a parent may initially agree to her child studying in Portuguese two days a week at school, in exchange for her child also have the opportunity to study two days in English, but become upset when her child actually begins speaking in Portuguese or performing Brazilian dances at home. To understand the resistance to Portuguese and Brazilian culture, it is necessary to take into account the language attitudes of Japanese parents at a particular point in time, when it is widely accepted that English is naturally the most useful, modern and international language in the world, but that Brazilian Portuguese speakers as economic immigrants are somehow "behind" or "below" the Japanese.

Thus, rather than seeing slippage, gaps, or conflicts as a sign of failure, of something that needs necessarily to be corrected, a sign of where the school went wrong, I see the discrepancies as signs of fine-tuning, of the adjustments the school makes to survive in the language ideological climate in which it is located. And so at the same time, these adjustments paint a vivid picture of the language attitudes and ideologies held by and surrounding participants. It is therefore this very process of modification and the creation of new ways to explain the policy-new ideologies- that we need to know more about in order to offer more realistic advice to immersion education planners and administrators, who at this very moment are naively expecting Japanese children in English immersion programs to spontaneously begin to converse in English to each other.

In the day to day interaction in a school, on the other hand, we can see the actual effect

of the institution on the individual and the individual on the institution rather than the intended effect, or the design-learning taking place on all levels- institutional learning, teacher learning, student learning, parental learning. As Dyson paraphrases Wartofsky (1983): "...if adults were successful and children simply did as they were told, no learning would happen" (2002: 572). The same thing holds true for adults, who may see themselves involved in a one- way process of "educating" children, but in the broader sense of being told to do one thing/telling themselves to do one thing and often doing another are every bit as involved in the negotiation of language practices, attitudes, and policies. What they are actually doing may violate the ideal plan on the one hand, and on the other hand be a good deal more complex, more adapted to the actual people and resources present in the environment, and in that sense, be actually more sophisticated than the plan; when it is finally articulated and recognized by participants, actual practice may become the basis for modifying the plan.

In this view, then, practice is the messy thing that emerges in spite of the rules and regulations, as opposed to the design for learning which can never reach the ideal (Wenger 1998). What a CoP framework can bring to the study of bilingual and immersion education, then, is a perspective that is not evaluative but ethnographic- the description of a passionate and ongoing struggle to create and control a specific environment, an attempt that exposes gaps, breaks rules, changes spaces, converts some, alienates others, but deserves study as a real space, with real people, engaging in a community of practice day by day.

An approach to studying language and literacy practices through observing the spatial and material engagement of participants

Using the word "engagement" in practices is meant to emphasize the physical and spatial aspects of participants' interaction in school, in preference to other common terms such learning, acquisition, socialization, or even participation. "Engagement" includes learning, acquisition and socialization in the sense that it is evidence in the moment of making use of and hence sense of the resources available in the classroom environment in a purposeful, agentive, but also importantly, playful and creative way (see Dyson 2002 for a developmental account of literacy that foregrounds childhood playfulness). Engagement includes but is broader than participation, as participation is often judged according to some notions of a desirable group culture, with corollaries of appropriateness, marginality, centrality, etc. All that is necessary to be engaged in the environment is to be physical present and alive in a particular bounded space; a child could be sitting in a chair, not responding to a question, just observing, hiding in the closet or being

chastised by the group and even so learning and participating equally with all others in that particular environment. This broad notion of learning and participation is particularly important in institutional sites such as schools for young children where the participant has been physically placed there by someone else such as a parent and is subject to physical monitoring by others such as teachers once there. As Dyson notes, "School brings many children together in one space. And those children develop social bonds and playful practices linked to, but not controlled by, adults (2002: 549).

Practices are likewise not always controlled by other children and the desire to become part of a peer group, however. Children in schools shouldn't be assumed to be positively motivated to become part of a group of their own volition; any groups or group cultures that form are a by-product of being physically and regularly thrown together in a certain space and finding ways- drawing on resources-to make the time and space more interesting. Here, I am drawing on Kress's notion of "interest" as motivated action arising from a conjunction of the individual and the social:

...we see the world from our own place, and that place differs from that of our neighbor" ... Interest is a composite of my experience; but it is also a reflection of my present place, and an assessment of my present environment....all these together are the source of my making of signs in communication-not simply what has come into my head, because what has come into my head has come from prior cultural social places; and then, on the other hand, is it neither simply what society, convention, power, constraint tells me I must do, because I act transformatively in my making of signs (1997: 90-91).

In keeping with this view, it can be assumed that children will work with all the resources at hand to take as much control as they can over the institution and away from its adult governors. In this view, children come to school already possessing "something"- they come to school with their own experiences and knowledge of other domains, and are motivated by their own interests that may be aligned with or at odds with their teachers or peers; in other words, children possess agency and the power to transform their environments. As Barton says, "The child is not repeating or recapitulating the adult's world, but creating a world anew" (1994: 134).

The approach I have outlined so far is an ethnographic approach to studying education which has been applied in other studies of schools in general and bilingual or multilingual schools in particular. Plans for separating or mixing languages in bilingual or immersion education, however, tend to focus on the use of time to the exclusion of other factors; so many days or subjects a week in such and such a language, such and such a percentage of this

language compared to that. As I mentioned this has the advantage of being easy to understand, but the disadvantage of misleading researchers and participants as to the complex ways in which environmental resources, of which time is but one, are integral to the practices in specific sites of multilingual education.

My purpose in calling for the ethnographic study of specific sites is not to generate yet another prescriptive model, however complex, but to suggest ways of looking, ways of seeing, that can help to illuminate the actual and potential practices in a particular case. It may be that these particular practices are similar enough to others as to be generalisable; it may be that it is the way of seeing, the theoretical and analytical frame itself which can be adapted fruitfully to other sites. What I propose then is that rich linguistic and educational ethnographies will result from explicitly integrating social semiotic theories of multimodal literacy and talk around literacy into social geographic theories of space in general and children in particular.

Let me turn to an explanation of how space is a resource for linguistic and literacy-related reification and participation. Briefly, I see space as both physical and social, with social including language. Space has three important dimensions that are sites of linguistic and literacy-related mediation and engagement and hence sites for observing language practices, attitudes, and policies. One is the space of participants' bodies as they move and embody language use. Another is institutional space as a bounded environment marked off from yet continually permeated and challenged by the outside society and internally divided into smaller spaces each with their own rules of behavior, materials, tools, times, and language uses. A third are the spaces of inscription, layout or physical texture in the literacy artifacts created by participants, in a sense spatial products created out of the interaction between bodies and the environment. In other words, I am including the physical and material aspects of literacy artifacts as they have been discussed in research on early literacy and social semiotics here as a subset of space as a resource for mediating language use in education.

Let me go into these three dimensions of space in a bit more detail. First of all, bodies can be seen as humans' bounded and physical occupation of space, as the most intimate and personal sites in which social identities and language uses are produced/inscribed. As Adrienne Rich wrote in "Notes toward a politics of location," "I need to understand how a place on the map is also a place in history within which as a woman, a Jew, a lesbian, a feminist I am created and trying to create" (1984: 212). She urges that an analysis of these intersections of gender, race, sexuality and politics in place begins with an analysis of 'the geography closest in the body. Here at least, I exist' (1984: 212). "To locate myself in my body means more than understanding what it has meant to me to have a vulva and clitoris and uterus and breasts. It means recognizing

this white skin, the places it has taken me, the places it has not let me go.” (1984: 215-16).

As bodily sites where social identity and language use is inscribed, or reified, people are more than participants- they are embodied linguistic resources. In my research setting, individual speakers vividly embody languages, in the sense that it is their physical presence which brings the language into existence in the everyday life of the school; without speakers, or users of a language, it doesn't exist as an actual resource. For example, Gunma Prefecture, where I live, is overwhelmingly Japanese; out of a prefectural population of 2 million, there may be between 8,000 and 14,000 speakers of Portuguese and less than 200 permanent resident speakers of English. To create a multilingual school in this setting means bringing speakers of the three school languages together to work and study. The amount of the language present and the ways it is used are related to not only the numbers of its speakers but the extent to which each speaker uses it. Although this is especially true for the teachers' and students' embodiment of their native languages, it is also true for their gradual embodiment of their second and third languages, so that each participant is involved in a dynamic process of taking on more and more ownership of the school languages. The relation of language use to the physical presence and numbers of people is something that seems to me to be taken for granted in studies of languages in monolingual settings, where the dominant language is so pervasive that it appears to be everywhere, apart from living people, like the air. Languages are not abstract, arbitrary or interchangeable, then, but are embodied resources through whom the project of multilingual education is filtered.

Second, an examination of the spaces within school grounds and buildings and the movement of participants within these spaces, i.e. their spatial trajectories, is also useful in understanding how languages are regulated not only in regard to time but to space in a multilingual school setting. Central to this is the insight that space and place are not only geographic but social constructs that are key to understanding human society. Space reflects, constructs, and can be used to resist social inequalities, including power differences related to age. Actual place, subjective sense of place, and access to place (the ability to move within space, spatial trajectory) are indicators of social identities and power (Pain et al 2001).

Most ethnographic studies of children and language touch on the importance of space and place in children's language and literacy learning, however indirectly, by differentiating their findings according to geographic domains, such as home, school, church, and so on. The fact that the domain is specified at least as an element of "setting" or "context" indicates that the researcher thinks the location in which linguistic data was gathered is important, although how or why it is important often seems to be taken for granted. Two fields of research which use

ethnographic methods are particularly relevant. In practice accounts of literacy, place is highlighted as a key element in distinguishing different types of literacy or describing literacy events. As Barton says, "There are different places in life where people act differently and use language differently...The physical spaces-buildings, etc. are typically different and time is broken up differently" (Barton 1994: 39). Heath notes: "Patterns of using reading and writing in each community are interdependent with ways of using space...and using time" (1983: 234).

The intersection of time, space, and so on with language use is also increasingly highlighted in studies of multilingual literacies. Kenner observes of a child in a nursery school where multilingual writing is encouraged: "Thus she had identified a conjunction of language with place (the writing table), people (me) and writing materials (glittery pen)-the elements of a potential literacy practice involving "Chinese" at school (2000: 144). This brief observation hints at a theory of space and materiality related to (trilingual) language use.

In ethnographic studies of language socialization, data related to space also turns out to be valuable in looking at classroom practices and participation. Seating arrangements are a way to structure space and interaction through controlling the movement or spatial trajectories of students. Although she does not explicitly tie seating arrangements into her analysis of classroom discourse, Duff asserts that "identity and difference in this class were constituted by seating arrangements as well as by other classroom practices" (2002: 299). Willet shows how the seating arrangements imposed by a teacher were influenced by and influenced the construction of gender and participation in classroom discourse by L2 students (1995). In a study of how L2 students are differentiated from Anglophones in a Grade 1 classroom in Canada, Toohey pays great attention to the layout of the classroom, seating arrangements, the positioning of the bodies, the ability of whom to move where, and the management of materials as evidence of linguistic and social engineering. As she notes. "I became even more acutely aware that a classroom's spatial arrangements affect the movement and activity (and thus the knowledge) of participants who are not legitimately or physically able to move with ease and to choose freely their physical location with respect to others" (1998: 66). She sees an implicit connection between the allocation of literacy tools, social identities, and languages: "In the same way that some children may have more or fewer crayons in their desks than others, these practices contribute to children's being seen by the whole community as having more or less English, literacy, mathematics, or whatever" (1998: 80). As she concludes: "Looking at furniture, crayons, and copying will be only the beginning" (1998: 83).

The above studies concern institutional spaces where the dominant or preferred language and the social identities of speakers seem to be fairly clearly established, as indicated by such

terms as “L2,” “Anglophone,” “English,” and so on. In many contexts, however, it is difficult to decide who is a legitimate speaker of a certain language, or what the legitimate use of that language is. Many people live in bilingual homes and/or have been schooled in two or three languages from a young age. Theories of space and identity are also useful here in conceptualizing multilingual practices. Bhabha has written about the social identities of multicultural youth in terms of “thirdspace:” (1994): Identity is produced through (in)between spaces which provide the “terrain for elaborating strategies of self hood-singular or communal- that initiate new signs of identity, and innovative sites of collaboration and contestation (1994: 1). Using this idea of “thirdspace,” then, we can also examine how multicultural identities and places are also intimately bound up with particular trilingual language and literacy practices.

Using the concepts for analysing institutional space in social geography may yield rich data about the construction of languages in multilingual settings as well. One such conceptual intersection is talk that occurs at spatial/material/physical boundaries and/or talk about boundaries: “If these boundaries are to some extent permeable to children, they have a chance to build their own geographies, to reorder the space to their own desires and in effect create a dimension parallel to that of the adult space, which itself continues to function” (Jones 2000: 40). Schools and classrooms are also finely divided into bounded spaces with different potentials for students to create their own social geographies including their own language practices and attitudes. One such common boundary is between the classroom and the corridor. As Jaffe recounts,

Once, I was in a class and we were forced to move classrooms. Almost all of the light chatter (“Where are we going?” “Is it this room?”) that accompanied the activity was in French; this was true of other instances when students were out of the “front region” of the classroom (1999: 202-3). The physical movement out of the classroom into the hallway seems to be a shift of symbolic space: in these marginal areas they are relieved of the “requirement” to speak in Corsican (1999: 7).

Another intersection involves the concept of human agency in the use of both language and space. One way children exercise agency is to opportunistically exploit situations (if they have the spatial freedom, and if sanctioned by adults): “by creating structures within the club which were physically too small for adults to inhabit, children were able to exert some ownership of part of the spatial environment.” (Smith and Barker 2000: 249). In my own research, I found that the classroom closet was such a space exploited by children for initiating and controlling their own discourse and play.

Human geographers have examined what kind of spaces are more or less conducive to

colonization by children and why; based on this, it may be possible to also look at how language use differs according to the kind of space. The following terms, while derived from Jones' 2000 study of village life, are also useful in understanding the use of and reification of spaces in a school setting:

- 1) Disordered spaces= where "adults cannot completely eradicate disorder, particularly given children's often small-scale, fine-grained relationship to space" Examples are: overgrown, abandoned, derelict, disused, silent spaces (37).
- 2) Polymorphic spaces= "spaces in use within adult structures but which can also accommodate subordinate 'other' uses. Polymorphic spaces can have strong, clear boundaries" (38).
- 3) Variable and manipulable spaces= Spaces that present opportunities and/or loose materials that allow children to design and modify their environments. Examples are: puddles, ice, mud, dandelions, sticks, stones, grass- not restricted from use due to adult needs or curfews (39).

In a classroom setting, this typology of space can be used to analyse the social construction of the rearrangement and use of furniture, the location of literacy artifact production within the classroom, forays for clean-up and rewards made into other areas of the classroom and school, the positioning and movement of the students' and teachers' bodies within this space, and the spaces where artifacts are displayed. These spaces are important building blocks in structuring and giving meaning to the kind of talk and interaction that can happen for the various participants and languages at various times throughout the day.

One last way in which social geographic theories of space can enrich the study of language and literacy is through broadening our notions of literacy to include the visual and material aspects, or social semiotics, of texts, including the ability to manipulate such spatial aspects of inscription as directionality, layout, and texture. As Kress says, "the page...is a space that needs to be designed, managed. It is also a space which, like the room in the house, can be transformed" into various genres of texts (1997: 98). Children's three-dimensional projects can also be viewed as artifacts that are embedded in (or in a CoP framework, reified in) social interaction, or literacy events; and cultural and social discourses, or literacy practices, can be inferred from texts and events (Barton 1994, Barton & Hamilton 1998).

In describing the simultaneous textual and physical aspects of children's school projects, Ormerod and Ivanic refer to such projects as multi-modal literacy artifacts, and they analyse both the physical characteristics of project work and the practices associated with its physical production in order to understand the intentions and understandings of the "author" or child (2000). "Multi-modal literacy text" originated in Kress and van Leeuwen's 1996 definition of "multi-modal texts" as combining semiotic resources-verbal/visual modes of representation,

materials-surfaces, substances and tools, and technologies. In keeping with the notion of such texts as “artifacts,” Ormerod and Ivanic expand Kress and van Leeuwen’s typology to include visible traces left on the work by the process of creation, the impact or passage of time, accidental damage and how the damage was or was not mended or incorporated into the work, as well as inferences as to how the author of the text expects it to be read in a physical sense and handled as a material object (2000: 96).

Much can be “read” about the author’s understandings and intentions just by examining the physical characteristics of such artifacts. At the same time, observations of and interviews regarding the literacy events of creating and handling literacy artifacts can give additional insight into the process of imagination and reification. As Wenger says, “Reification can provide tools of imagination- maps, visualization, stories, simulations- tools to see patterns in time and space that are not perceivable through local engagement” (1998: 186). When class projects are planned and implemented, in a sense “authored” by the teachers and finished in the classroom under teacher supervision, individual differences in each child’s understandings and intentions are very subtle. Certainly physical transformations occur in the process of copying the model and following the teachers’ directions, and these transformations reveal participants’ understandings of artifacts as well as their intentions for their own creations. Given the group nature of such projects, however, the meaning of these transformations can also be observed as they occur, in the discursive and spatial engagement of the participants.

I’d like to go a bit more into how this aspect of space in the analysis of multi- modal artifacts, of imagined (community) spaces and sense of belonging, relates to the theme of social identity. The notion of geographic sense of belonging in relation to the places of imagined community is useful in describing how participants create identities for themselves, others, and the community (Gal 1978, Norton 2000). Similarly, social identities of the self and the community are situated in the anticipated future uses and academic discourses of children’s project work or multi- modal literacy artifacts. These include the selective creation of mental images and maps based on personal experiences, naming, location, situation, distance, environment, movement, and political geography (Rubenstein 1994; Lowe and Pederson 1983). Not all of these aspects can be seen just by looking at children’s artifacts themselves. Wenger talks about the imagination involved in creating a sense of belonging and social identity as “the creative process of producing new ‘images’ and of generating new relations through time and space that become constitutive of the self” (1998: 177). He goes on to talk specifically of globes as a reification of this process:

I remember once standing with my children around a globe and pointing proudly:

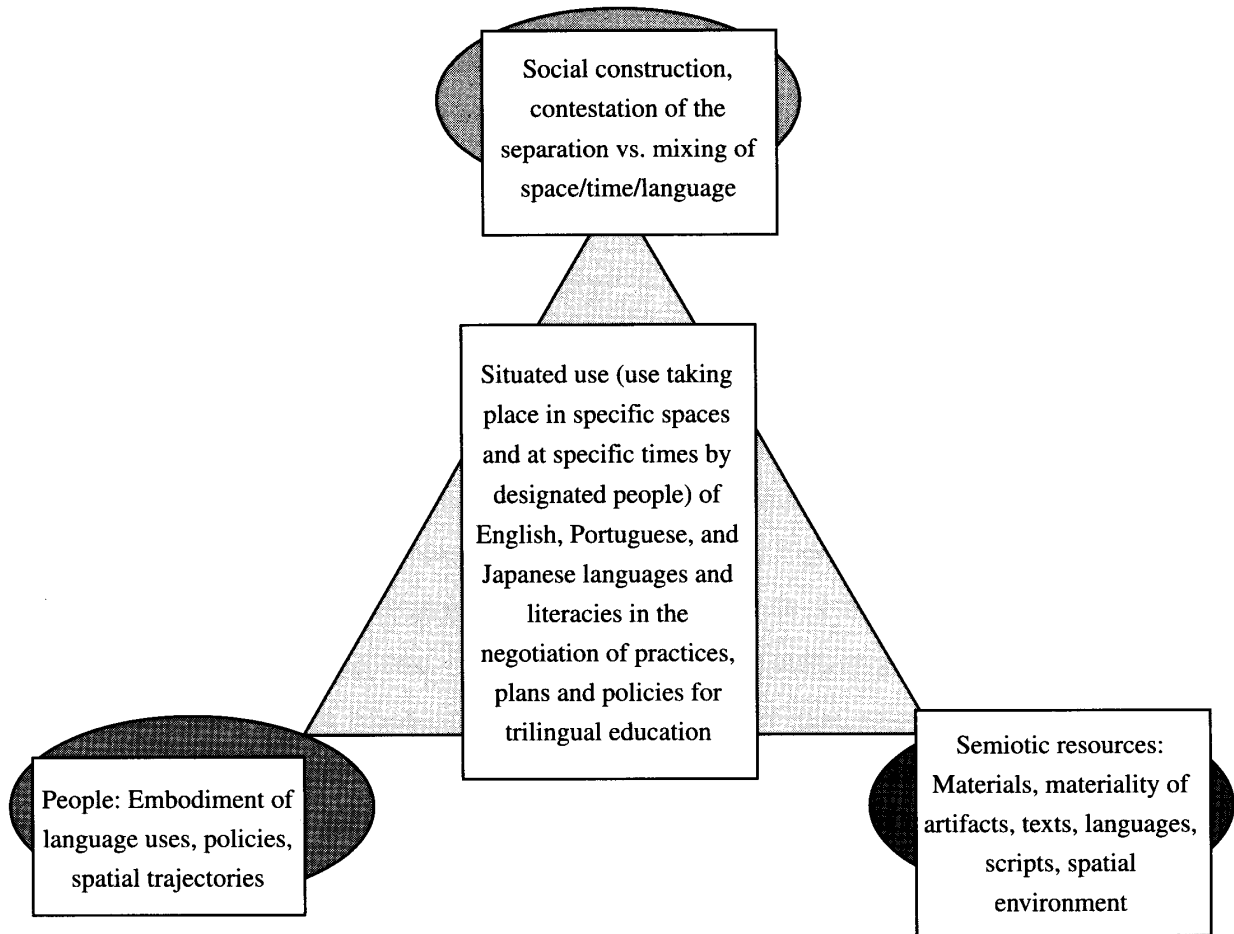
“This is where we live,” They were duly impressed- not for a moment doubtful, yet a little puzzled- and I started to reflect on the kind of process by which it made sense to indicate a point on a globe and claim it is where we live. It involved a kind of fantasy. It was the work of imagination, not in the pejorative sense of a fantasy but in the sense of creating a picture that was not obviously there. It was very different from entering a house and saying “we live here” (1998: 177).

Children also indicate in their talk about their literacy artifacts imagined uses that are yet unincorporated, including visual representations of their personal interests, senses of belonging, ancestral and future places, and social identities. In other words, both social identities and a certain picture of the world become materially and discursively represented and “owned” by the students in the process of transforming school-owned raw materials into student-owned artifacts.

In addition, literacy artifacts can reveal aspects of *multilingual* literacy and thus shed light on language practices in a multilingual context. Languages in this framework can be regarded as meaning-making resources which are qualitatively and quantitatively different from each other. In much the same way as physical substances and spaces in the classroom are used differentially by participants, each language and its script is handled and used differently from each other, giving rise to the observation that participants are dealing with materials that are more or less available, preferable, plentiful, useful, time-consuming, or required. Put another way, language is a semiotic and auditory material and writing systems are semiotic and visual tools.

In conclusion, then, a CoP ethnographic approach can bring a much-needed descriptive perspective to the social semiotic study of language and literacy practices in multilingual classrooms. Further, infusing this approach with many of the key conceptual categories from social geography, including space, spatial trajectory, and material artifact, can be a fruitful way of examining how those shared ideas “out there” in society, including worldviews, cultures, ideologies, discourses, and voices, are co-constructed in practices. These “discourses,” as in the discourse of globalism, of bilingual education, of skill-based literacy, of the phonics approach, of childhood, and so on are not static nor unitary, but shorthand ways of referring to particular constellations of beliefs associated with particular ways of using language. As Gee explains, discourses are: “socially accepted associations among ways of using language, of thinking, valuing, acting, and interacting, in the “right” places and at the “right” times with the “right” objects (1999: 17). Paying more attention to not only the times, but the places and objects in which different languages are used, can reveal how participants, particularly children, think about and value those languages.

Figure 1: The integration of “space” into studies of situated literacy and language use



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