

EPILOGUE FOR LANGUAGE TEACHERS

Having reached the end of the book – together with those long-suffering readers who have made it this far – I feel it may be beneficial to take an overall look at the various claims and proposals I have made in the preceding chapters, and pull together some ways in which the ideas of ecological, semiotic, and educational linguistics can be of practical value to the language teacher and the language learner.

I started out the book by talking about educational linguistics, and it is appropriate to close with another look at it, from the vantage point of the intervening chapters. I began by arguing for a close connection between language and education, at the theoretical level between linguistics and educational theory, and at the practical level between language teaching and pedagogy. I argued that these close connections do not currently exist but that they should, because all education – indeed all learning, as Halliday (1993) asserts – is permeated by language. What I have been trying to promote here is an ecological educational linguistics.

The study of language use and language learning and their role in educational success are important whether one takes an ecological or sociocultural perspective or not (for a range of perspectives, see Trappes-Lomax & Ferguson, 2002). However, I suggest that the ecological and sociocultural perspectives on various aspects of language in education taken in this book can be of particular benefit for current and future teachers, especially language teachers of course, but not only language teachers. Below, I will point to some of these benefits using some of the main concepts that recur throughout the book.

A first set of key concepts is *action/perception, interaction, relation, environment*. Just observe any natural object in the environment, whether it is a rock, a stream, a tree, a bug, a bird or anything else. How does this object relate to the environment? Does it perceive and act (ecologically speaking, if it perceives, it acts, and if it acts, it perceives)? Translating this set of concepts in classroom terms, we can draw a number of inferences that affect the ways in which we think about teaching and learning. The first is that perception is tied to action.

The importance of perception in language learning (after a long period of neglect) is increasingly recognized. It is prominent in the ideas of noticing, attention, and focusing (e.g., focusing on form, see Long, 1996). The ecological perspective adds the role of direct perception, that is, the immediate noticing of certain characteristics of speech (including gestures, tone of voice, and so on), as first-level affordance. Assessment of relevance in interactional contexts is often direct and immediate, not requiring prior cognitive inferencing or processing. Social and cognitive processes in fact usually kick in *after* initial relevance is established, and if there are no initial affordances it may actually be difficult to establish meaning from scratch. Affordances are relationships, they signal connections between learner and environment, and they are the basis for further action, interaction and cognition.

For the classroom this means that language must be richly contextualized and semiotically interconnected with all available meaning making systems, and synchronized with learners' activity patterns. The unit of learning is therefore the learner in action in a learnable environment, appropriating meaning (and linguistic forms) in action, and jointly with others building structures of effective functioning. Learners must be engaged, so that the learning emanates from them, rather than being delivered to them.

The most natural curriculum from an ecological perspective is a project-based one. Carefully structured projects are clear about goals and procedures, but at the same time allow for learners' interests and creativity to develop. They also allow for learners to work together and learn from one another. However, there are situations in which project-based work might appear difficult if not impossible to realize. For example, flexible seating arrangements (tables in circles, work stations, etc.) maybe be impossible in large classes where desks may be attached to the floor. High stakes tests may put pressure on classroom time to be spent on drills and test practice. In foreign language settings resources on which student can draw for their projects may be less than abundant. In addition, when all students speak the same native language, how can authentic foreign language work be promoted? All these questions and constraints have been noted by many teachers, and they need serious consideration, or else the ecological perspective runs the risk of being restricted to elite second language and academic language contexts (Holliday, 1994; Coleman, 1996; Canagaraja, 1999).

In spite of the difficulties noted, it should be possible to apply ecological ideas in any work context. It must be reiterated that ecology is not some method or theory, but a world view and a particular way of working. The connections between perception, action and context can be kept in mind in any context, and the importance of engagement and attunement can similarly always be recognized.

Even cramped classes with large numbers of students can become environments for linguistic exploration through language play, as Sullivan (2000) shows. Similarly, even disconnected sentences constructed for grammar practice can become jumping off points for interesting exchanges that explore learner initiative (Butzkamm, 1980; van Lier, 1988; Holliday, 1994). Mechanical tasks from commercial computer programs can lead to exploratory learning when learners work together side by side, sharing a computer screen (Wegerif & Scrimshaw, 1997). The use of the first language does not have to be a negative influence; in fact it can mediate second-language use in important ways (Brooks, Donato & McGlone, 1997).

Without ignoring or wishing away the very real and often debilitating constraints that adhere in many institutional settings, a teacher who keeps a clear view of the basic ecological principles can ignite sparks of interest that in turn can set in motion perceptual, social and cognitive processes that instigate learning. Having observed countless classes and videos of classes, the difference between an engaged classroom community, and one that is just going through passive motions of receiving instruction, is startling. Of course, it is difficult to quantify in terms of percentage scores or instructional objects, but it is abundantly visible (and thus *documentable*, in ethnographic terms, and in the indicators suggested in

Bronfenbrenner, 1993, as discussed above) in terms of perceptual and postural orientation and intensity, interpersonal engagement, and in the initiative employed by the learners (van Lier, 1988).

This first set of concerns can be put together under the umbrella of *action*, the idea of the learner as an agent of his or her own learning, and all the consequences that flow from taking such a view. The other side of the coin are the kinds of *assistance* that can be provided for the active learner. In earlier philosophies of language learning it has been assumed that language *use* must be sharply distinguished from language *learning*. This has been particularly true of audiolingual (i.e., behavioristic) and cognitive approaches to language learning (skill-getting before skill-using, Rivers & Temperly, 1978)⁵, but it is even true of many current practices, including content-based or task-based learning, and many approaches to academic language development. From an ecological perspective, however, the distinction must be rejected forcefully.

Let me briefly use some ecological ideas to tease apart the false use-learning dichotomy. First, the skill-getting and skill-using distinction should be seen as dynamic interplay, not an either-or choice. Second, the ecological perspective regards teaching as *assisted use*. Third, learning is *situated*, that is, it occurs in the context of meaningful activity. Language practice of the skill-getting kind is part of a bigger picture of language learning: in order to achieve more effective functioning in some aspect of language, learners may need to engage in practice. For example, if learners need to record an introduction to a computer-based presentation they are making, they may want to practice their delivery a number of times to get it right. The crucial idea here is that practice occurs in the context of meaningful purposes and goals; it has a specific reason. Practice that occurs outside such a specific motivation, such as grammatical practice just in order to follow a book or test program, may end up as the sort of inert knowledge that Whitehead (1929) decried almost a century ago.

Language is not a system of communication that occurs in a vacuum. On the contrary, it is an integral part of many connected meaning-making systems, in other words, it's part of semiotics. In Chapter 2 I presented a diagram of concentric circles that shows how important gestures, intonation, social and cultural knowledge of various kinds, and so on, are. Meaning-making processes draw on all those systems and clues, in interpretive processes of complex kinds. As I suggested above, the first level of interpretation is often through affordances, and these also carry the emotional aspects of communicative action that are just as important as the cognitive aspects.

An ecological approach sees the learner as a whole person, not a grammar production unit. This involves having meaningful things to do and say, being taken seriously, being given responsibility, and being encouraged to tackle challenging projects, to think critically, and to take control of one's own learning. The teacher provides assistance, but only just enough and just in time (in the form of

⁵ To give due justice to Rivers and Temperly, they argue that a key issue is how to relate skill-getting and skill-using in meaningful ways. The points they raise are still very relevant to a consideration of the role of practice in any meaning-based approach.

pedagogical scaffolding), taking the learner's developing skills and interests as the true driving force of the curriculum.

In sum, then, ecology is presented here as a way of thinking about teaching and learning that should be applicable in all situations, and as a way of working that takes the engaged and active learner as a starting point. It is not a finished system or theory, nor is it a method of teaching. It is just a way of thinking about teaching and learning in all its complexity, a way of looking at language as a tool of many uses, and as a key component of all human meaning-making activity. It envisions classrooms as busy workshops with lots of activity and learners who have things they want to accomplish, and who, with the help of teachers, fellow learners, and other sources of assistance, find the tools they need to achieve their goals.

REFERENCES

- Abrams, D. (1996). The mechanical and the organic: Epistemological consequences of the Gaia hypothesis. In P. Bunyard (Ed.), *Gaia in action: Science of the living earth* (pp. 234-247). Edinburgh: Floris Books.
- Agar, M. (1994). *Language shock: Understanding the culture of conversation*. New York: William Morrow.
- Alexander, N. (2002). Linguistic rights, language planning and democracy in post-apartheid South Africa. In S. Baker (Ed.), *Language policy: Lessons from global models* (pp. 116-129). Monterey, CA: Monterey Institute of International Studies.
- Allen, T.F.H. & Hoekstra, T.W. (1992). *Toward a unified ecology*. New York: Columbia University Press.
- Anderson, B. (1991). *Imagined communities* (Second Edition). London: Verso.
- Apel, K-O. (1981). *Charles S. Peirce: From pragmatism to pragmatism*. Amherst, MA: University of Massachusetts Press.
- Argyle, M. (1991). *Cooperation*. London: Routledge.
- Arndt, H. & Janney, R. W. (1983). The duck-rabbit phenomenon: Notes on the disambiguation of ambiguous utterances. In W. Enninger & L. M. Haynes (Eds.), *Studies in language ecology* (pp. 94-115). Wiesbaden: Franz Steiner Verlag.
- Arnold, J. (Ed.). (1999). *Affect in language learning*. Cambridge: Cambridge University Press
- Auer, P. (Ed.). (1998). *Code-switching in conversation: Language, interaction and identity*. New York: Routledge.
- Auyang, S. A. (2000). *Mind in everyday life and cognitive science*. Cambridge, MA: MIT. ;
- Bailey, K. M. & Nunan, D. (Eds.).(1996). *Voices from the language classroom*. Cambridge: Cambridge University Press.
- Bakhtin, M. (1981). *The dialogical imagination*. Austin: University of Texas Press.
- Bakhurst, D. (1991). *Consciousness and revolution in Soviet philosophy*. Cambridge: Cambridge University Press.
- Bakhurst, D. & Sypnowich, C. (Eds.). (1995). *The social self*. London: Sage Publications.
- Barker, R. (1978). *Ecological psychology*. Stanford, CA: Stanford University Press.
- Bates, E. Elman, J., Johnson, M., Karmiloff-Smith, A., Parisi, D., & Plunkett, K. (1998). Innateness and emergentism. In W. Bechtel and G. Graham (Eds.), *A Companion to Cognitive Science*. Oxford: Basil Blackwell. Available online at <http://crl.ucsd.edu/~elman/>.
- Bates, E. & Goodman, J. C. (1999). On the emergence of grammar from the lexicon. In B. MacWhinney (Ed.), *The emergence of language* (pp. 29-80). Mahwah, NJ: Erlbaum.
- Bateson, G. (1936). *Naven*. London: Wildwood House.
- Bateson, G. (1973). *Steps to an ecology of mind*. London: Granada.
- Bateson, G. (1979). *Mind and nature: A necessary unity*. London: Fontana.
- Beaugrande, R. de (1991). *Linguistic theory: The discourse of fundamental works*. London: Longman.
- Bernstein, B. (2000). *Pedagogy, symbolic control and identity: Theory, research, critique* (revised edition). Lanham, MD: Rowman & Littlefield.
- Bhabha, H. K. (1992). Post-colonial authority and post-modern guilt. In L. Grossberg, P. Nelson & P. Treichler (Eds.), *Cultural studies*. London: Routledge.
- Bhaskar, R. (1989). *Reclaiming reality: A critical introduction to contemporary philosophy*. London: Verso.

- Birk, D. (1972). You never speak a dead language. An informal account of the origins and some applications of functional theory. In G. Thornton, D. Birk, & R. A. Hudson (Eds.), *Language at work* (pp. 25-56). London: Longman for The Schools Council.
- Bloomfield, L. (1933). *Language*. Chicago: University of Chicago Press.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste*. Cambridge: Cambridge University Press.
- Bourdieu, P. (1988). *Homo Academicus*. Stanford, CA: Stanford University Press.
- Bourdieu, P. (1991). *Language and symbolic power*. Cambridge, MA: Harvard University Press.
- Bourdieu, P. & Wacquant, L. (1992). *An invitation to reflexive sociology*. Chicago: University of Chicago Press.
- Bowerman, M. & Levinson, S. C. (Eds.). (2001). *Language acquisition and conceptual development*. Cambridge: Cambridge University Press.
- Bowers, C. A. (1993). *Critical essays on education, modernity, and the recovery of the ecological imperative*. New York: Teachers College Press.
- Bowers, C. A. (2000). *Let them eat data: How computers affect education, cultural diversity, and the prospects of ecological sustainability*. Athens, GA: University of Georgia Press.
- Bowers, C.A. & Flinders, D.J. (1990). *Responsive teaching: An ecological approach to classroom patterns of language, culture, and thought*. New York: Teachers College Press.
- Bowers, R. (1990). Mountains are not cones: What can we learn from chaos? In *Georgetown University Round Table on Languages and Linguistics 1990* (pp. 123-135). Washington, DC: Georgetown University Press.
- Bransford, J. D., Sherwood, R. D., Hasselbring, T. S., Kinzer, C. K., & Williams, S. M. (1990). Anchored instruction: Why we need it and how technology can help. In D. Nix & R. Spiro (Eds.), *Cognition, education, and multimedia: Exploring ideas in high technology* (pp. 115-141). Hillsdale, NJ: Erlbaum.
- Bråten, S. (1992). The virtual other in infants' minds and social feelings. In A. H. Wold (Ed.), *The dialogical alternative: Towards a theory of language and mind* (pp. 77-97). Oslo: Scandinavian University Press (Distr. OUP).
- Bråten, S. (Ed.). (1998). *Intersubjective communication and emotion in early ontogeny*. Cambridge: Cambridge University Press.
- Brent, J. (1993). *Charles Sanders Peirce: A life*. Bloomington, IN: Indiana University Press.
- Broeder, P. & Extra, G. (1997). *Immigrant minority languages in primary and secondary education. A comparative study of six European Union countries*. Tilburg, NL: Research Group on Language and Minorities, University.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In Wozniak, R. H. & Fischer, K. W. (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 3-44). Hillsdale, NJ: Erlbaum.
- Bronfenbrenner, U. & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101, 568-586.
- Brooks, F.B., Donato, R. & McGlone, J. V. (1997). When are they going to say "it" right? Understanding learner talk during pair-work activity. *Foreign Language Annals*, 30, 524-541.
- Brown, A.L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of the Learning Sciences*, 2, 141-178.
- Brown, R. (1973). *A first language: The early stages*. Cambridge, MA: Harvard University Press.
- Brumfit, C. (1997). The teacher as educational linguist. In L. van Lier & D. Corson (Eds.), *Encyclopedia of Language and Education, Volume 6: Knowledge about language* (pp. 163-172). Dordrecht: Kluwer Academic.
- Burner, J. (1983). *Child's talk*. New York: Norton.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Bruner, J.S. & Sherwood, V. (1975). Peekaboo and the learning of rule structures. In J.S. Bruner, A. Jolly & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 277-85). Harmondsworth: Penguin Books.
- Brunswik, E. (1943). Organismic achievement and environmental probability. *The Psychological Review*, 50, 255-272.

- Butler, S. (1872/1967). *Erewhon*. New York: Airmont Publishing.
- Butterworth, G. (1999). A developmental-ecological perspective on Strawson's "The Self". In Gallagher, S. & Shear, J. (Eds.), *Models of the self* (pp. 203-11). Thorverton, UK: Imprint Academic.
- Butzkamm, W. (1980). Verbal play and pattern practice. In Felix, S. (Ed.) *Second language development: Trends and issues* (pp. 233-248). Tübingen: GüntherNarr.
- Büchler, J. (1955). *Philosophical writings of Peirce*. New York: Dover Books.
- Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Clevedon, UK: Multilingual Matters.
- Canagarajah, A. S. (1999). *Resisting linguistic imperialism in English teaching*. Oxford: Oxford University Press.
- Canagarajah, A. S. (2001). Critical ethnography of a Sri Lankan classroom: Ambiguities in student opposition to reproduction through ESOL. In C. N. Candlin & N. Mercer (Eds.), *English language teaching in its social context* (pp. 208-226). London: Routledge.
- Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor Books.
- Cazden, C. B. (1992). *Whole language plus: Essays on literacy in the United States and New Zealand*. New York: Teachers College.
- Checkland, P. (1981). *Systems thinking, systems practice*. New York: Wiley.
- Chomsky, N. (1959). Review of B. F. Skinner: Verbal behavior. *Language*, 35, 26-58.
- Chomsky, N. (1986). *Knowledge of Language*. Cambridge, MA: MIT.
- Chomsky, N. (2000). *New horizons in the study of language and mind*. Cambridge: Cambridge University Press.
- Cilliers, P. (1998). *Complexity and postmodernism: Understanding complex systems*. London: Routledge.
- Clandinin, D. J. & Connelly, F. M. (1995). *Teachers' professional knowledge landscapes*. New York: Teachers College Press.
- Clark, H. (1996). *Using language*. Cambridge: Cambridge University Press.
- Clay, M.M. & Cazden, C.B. (1992). A Vygotskian interpretation of reading recovery. In C. B. Cazden, *Whole language plus: Essays on literacy in the United States and New Zealand* (pp. 114-35). New York: Teachers College.
- Clifford, J. (1986). Introduction: Partial truths. In J. Clifford & G. E. Marcus, *Writing culture: The poetics and politics of ethnography* (pp. 1-26). Berkeley, CA: University of California Press.
- Clifford, J. & Marcus, G.E. (1986). *Writing culture: The poetics and politics of ethnography*. Berkeley, CA: University of California Press.
- Cobley, P. (2001). *The Routledge companion to semiotics and linguistics*. London: Routledge.
- Colapietro, V. M. (1989). *Peirce's approach to the self: A semiotic perspective on human subjectivity*. Albany, NY: State University of New York Press.
- Cole, M. (1995). Socio-cultural-historical psychology: Some general remarks and a proposal for a new kind of cultural-genetic methodology. In J. V. Wertsch, P. Del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 187-214). Cambridge: Cambridge University Press.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- Cole, M. (1999). Ecological validity. In R. A. Wilson & F. C. Keil (Eds.), *The MIT encyclopedia of the cognitive sciences* (pp. 257-259). Cambridge, MA: MIT.
- Cole, M., Hood, L. & McDermott, R. (1997). Concepts of ecological validity: Their differing implications for comparative cognitive research. In M. Cole, Y. Engeström, & O. Vasquez (Eds.), *Mind, culture and activity* (pp. 49-56). Cambridge: Cambridge University Press.
- Coleman, H. (1996). *Society and the language classroom*. Cambridge: Cambridge University Press.
- Collins, A. (1992). Towards a design science of education. In E. Scanlon & T. O'Shea (Eds.), *New directions in educational technology*. New York: Springer Verlag.
- Cook, V. J. (2002). Language teaching methodology and the L2 user perspective. In V. J. Cook (Ed.), *Portraits of the L2 user* (pp. 327-343). Clevedon, UK: Multilingual Matters.
- Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics*, 5, 161-9.
- Coupland, N. & Jaworski, A. (1997). *Sociolinguistics: A reader*. New York: St. Martin's Press.
- Crawford, J. (1991). *Bilingual education: History, politics, theory and practice* (second edition). Los Angeles, CA: Bilingual Educational Services.
- Crichton, M. (1991). *Jurassic park*. New York, NY: Knopf.

- Crook, C. (1994). *Computers and the collaborative experience of learning*. London: Routledge.
- Cuban, L. (1993). *How teachers taught: Constancy and change in American classrooms, 1890-1990*. New York: Teachers College Press.
- Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Cambridge, MA: Harvard University Press.
- Dakin, J. (1974). *The language laboratory and language teaching*. London: Longman.
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Damasio, A. (2003). *Looking for Spinoza: Joy, sorrow and the feeling brain*. Orlando, FL: Harcourt.
- Davidson, D. (1986). A nice derangement of epitaphs. In E. Lepore (Ed.), *Truth and interpretation: Perspectives on the philosophy of Donald Davidson* (pp. 433-446). Oxford: Basil Blackwell.
- Deci, E. & Flaste, R. (1995). *Why we do what we do: The dynamics of personal autonomy*. New York: Putnam's Sons.
- Deely, J. (1990). *Basics of semiotics*. Bloomington: Indiana University Press.
- Dennett, D. (1991). *Consciousness explained*. Boston: Little, Brown and Company.
- Dewey, J. (1904). *The relation of theory to practice in education*. *Third Yearbook*, Part 1 (pp. 9-30). Bloomington, IL: National Society for the Study of Education.
- Dewey, J. (1938). *Experience and education*. London: Collier Books.
- Dittmar, N. (Ed.). (1992). Grammaticalization in second language acquisition. *Studies in Second Language Acquisition*, 14, 3 (Thematic Issue).
- Donato, R. (1994). Collective scaffolding. In J. P. Lantolf and G. Appel. (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Norwood, NJ: Ablex.
- Dornyei, Z. (2001). Motivation and second language acquisition. In Z. Dornyei and R. Schmidt (Eds.), *Motivation and second language acquisition*. Honolulu: University of Hawaii Press, Second Language Teaching and Curriculum Center.
- Drew, P. & Heritage, J. (Eds.). (1992). *Talk at work: Interaction in institutional settings*. Cambridge: Cambridge University Press.
- Dunn, W.E. & Lantolf, J. P. (1998). Vygotsky's Zone of Proximal Development and Krashen's *i + 1*: Incommensurable constructs, incommensurable theories. *Language Learning*, 48, 3, 411- 422.
- Duranti, A. & Goodwin, C. (Eds.). (1992). *Rethinking context: Language as an interactive phenomenon*. Cambridge: Cambridge University Press.
- Durkheim, E. (1964[1895]). *The rules of sociological method*. London: Collier-Macmillan.
- Eco, U. (2000). *Kant and the platypus: Essays on language and cognition*. New York: Harcourt Brace.
- Edge, J. (1993). The dance of Shiva and the linguistics of relativity. *Applied Linguistics*, 14, 43-55.
- Edwards, D. (1997). *Discourse and cognition*. London: Sage.
- Elliott, G. (many editions) *Middlemarch*. London: Penguin Classics. (Orig. publ. 1871-2).
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (2003). *Task-Based Language Learning and Teaching*. Oxford: Oxford University Press.
- Elman, J., Bates, E.A., Johnson, M. H., Karmiloff-Smith, A., Parisi, D. & Plunkett, K. (1996). *Rethinking Innatism: A connectionist perspective on development*. Cambridge, MA: MIT.
- Engeström, Y. (1999). Innovative learning in work teams: Analyzing cycles of knowledge creation in practice. In Engeström, Y., Miettinen, R. & Punamäki, R-L (Eds.), *Perspectives on activity theory* (377-404). Cambridge: Cambridge University Press.
- Engeström, Y., Miettinen, R. & Punamäki, R-L (Eds.). (1999). *Perspectives on activity theory*. Cambridge: Cambridge University Press.
- Feyerabend, P. (1975). *Against method: Outline of an anarchistic theory of knowledge*. London: Verso.
- Fill, A. & Mühlhäusler, P. (Eds.). (2001). *The ecolinguistics reader: Language, ecology and environment*. London: Continuum.
- Firth, A. & Wagner, J. (1997). On discourse, communication and (some) fundamental concepts in SLA research. *Modern Language Journal*, 81, 285-300.
- Flynn, P. J. (1991). *The ethnomethodological movement: Sociosemiotic interpretations*. Berlin: Mouton de Gruyter.
- Fodor, J. (1998). *Concepts: Where cognitive science went wrong*. Oxford: Clarendon Press.
- Forrester, M. (1999). Conversation and instruction within apprenticeship: Affordances for learning. In Ainley, P. & Rainbird, H. (Eds.), *Apprenticeship: Towards a new paradigm of learning* (pp. 86-97). London: Kogan Page.
- Foucault, M. (1977). *Discipline and punish: The birth of the prison*. New York: Pantheon.

- Freire, P. (1972). *Pedagogy of the oppressed*. New York: Herder and Herder.
- Gallagher, S. & Shear, J. (Eds.) (1999). *Models of the self*. Thorverton, UK: Imprint Academic.
- Gardner, H. (1985). *The mind's new science*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory into practice*. New York: Basic Books.
- Garfinkel, H. & Sacks, H. (1970). On formal structures of practical actions. In J. C. McKinney & E. A. Tiryakian (Eds.), *Theoretical sociology* (pp. 338-366). New York: Appleton Century Crofts.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Genesee, F. (2002). Portrait of the bilingual child. In Cook, V. (Ed.) *Portraits of the second language user* (pp. 170-196). Clevedon, UK: Multilingual Matters.
- Gibbons, P. (2002). *Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom*. Portsmouth, NH: Heinemann.
- Gibson, E. J. (Ed.). (1991). *An odyssey in learning and perception*. Cambridge, MA: MIT Press.
- Gibson, J. J. (1979). *The ecological approach to visual perception*. Hillsdale, NJ: Erlbaum.
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford, CA: Stanford University Press.
- Gimson, A. C. (1970). *An introduction to the pronunciation of English*. London: Edward Arnold.
- Glachan, M. & Light, P. (1982). Peer interaction and learning: Can two wrongs make a right? In G. Butterworth & P. Light (Eds.), *Social cognition*. Brighton: Harvester Press.
- Glausiusz, J. (2001). The ecology of language: Link between rainfall and language diversity. In A. Fill & P. Mühlhäusler (Eds.), *The ecolinguistics reader: Language, ecology and environment* (pp. 165-166). London: Continuum.
- Gleick, J. (1987). *Chaos: Making a new science*. New York: Penguin Books.
- Goatly, A. (2001). Green grammar and grammatical metaphor, or language and myth of power, or metaphors we die by. In A. Fill & P. Mühlhäusler (Eds.), *The ecolinguistics reader: Language, ecology and environment* (pp. 203-225). London: Continuum.
- Goffman, E. (1981). *Forms of talk*. Oxford: Basil Blackell.
- Goldsmith, E. (1998). *The way: An ecological world view* (second edition). Athens: University of Georgia Press.
- Gomes de Matos, F. (2002). Second language learners' rights. In V. J. Cook (Ed.), *Portraits of the L2 user* (pp. 305-323). Clevedon, UK: Multilingual Matters.
- Gould S. J. (1993) *Eight Little Piggies*. New York: Norton.
- Granott, N. (1993). Patterns of interaction in the co-construction of knowledge: Separate minds, joint effort, and weird creatures. In R. H. Wozniak & K. W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 183-207). Hillsdale, NJ: Erlbaum.
- Greeno, J. G. (1994). Gibson's affordances. *Psychological Review*, 101, 336-342.
- Greeno, J. G. (1997). On claims that answer the wrong questions. *Educational Researcher*, 26, 5-17.
- Grice, H. P. (1975) Logic and conversation. In P. Cole & J. L. Morgan (Eds.), *Speech acts. Syntax and Semantics*, 3 (41-58). New York: Academic Press.
- Grossberg, S. (1980). Direct perception or adaptive resonance? In S. Ullman, Against direct perception (385-6). *The Behavioral and Brain Sciences* (1980), 3.
- Guerrero, M. C. M. de. (1994). Form and functions of inner speech in adult second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 83-115). Norwood, NJ: Ablex.
- Gumperz, J. & Hymes, D. (Eds.) (1972). *Directions in sociolinguistics: The ethnography of communication*. New York: Holt, Rinehart & Winston.
- Hacking, I. (1975). *Why does language matter to philosophy?* Cambridge: Cambridge University Press.
- Haeckel, E. (1866). *Allgemeine Anatomie der Organismen*. Berlin.
- Halliday, M.A.K. (1975). *Learning how to mean*. London: Arnold.
- Halliday, M.A.K. (1978). *Language as social semiotic*. London: Arnold.
- Halliday, M.A.K. (1993). Towards a language-based theory of learning. *Linguistics and Education*, 5, 93-116.
- Halliday, M.A.K. (2001). New ways of meaning: The challenge to applied linguistics. In E. Fill & P. Mühlhäusler (Eds.), *The ecolinguistics reader* (pp. 175-202). London: Continuum.
- Halliday, M.A.K. & Martin, J. (1993). *Writing science: Literacy and discursive power*. Pittsburgh: University of Pittsburgh Press.
- Hanks, W. F. (1995). *Language and communicative practices*. Boulder, CO: Westview Press.
- Hargreaves, A. (1994). *Changing teachers, changing times*. New York: Teachers College Press.

- Harré, R. (1983). *Personal being: A theory for individual psychology*. Oxford: Blackwell.
- Harre, R. & Gillett, G. (1994). *The discursive mind*. Thousand Oaks, CA: Sage Publications.
- Harris, R. (1990). *Language, Saussure and Wittgenstein: How to play games with words*. London: Routledge.
- Harris, R. (1996). *Signs, language and communication*. London: Routledge.
- Harris, R. (1997). From an integrational point of view. In G. Wolf & N. Love (Eds.), *Linguistics inside out: Roy Harris and his critics* (pp. 229-310). Amsterdam: John Benjamins.
- Harter, S. (1993) Visions of the self: Beyond the me in the mirror. In J. E. Jacobs (Ed.), *Developmental perspectives on motivation*. Nebraska Symposium on Motivation, Vol. 40, 1992 (pp. 99-144). Lincoln, NE: University of Nebraska Press.
- Hassanpour, A. (2000). The politics of a-political linguistics: Linguists and linguisticide. In A. Fill & P. Mühlhäusler (Eds.), *The ecolinguistics reader: Language, ecology and environment* (pp. 33-34). London: Continuum.
- Haugen, E. (1972). *The ecology of language: Essays by Einar Haugen* (Edited by Anwar S. Dil). Stanford, CA: Stanford University Press.
- Heath, S. B. (1983). *Ways with words*. Cambridge: Cambridge University Press.
- Heath, S. B. (2000). Seeing our way into learning. *Cambridge Journal of Education*, 30, 121-132.
- Hebb, D. O. (1953). Heredity and environment in mammalian behavior. *British Journal of Animal Behavior*, 1, 43-47.
- Heisenberg, W. (1965). The role of modern physics in the development of human thinking. In F.T. Severin (Ed.), *Humanistic viewpoints in psychology*. New York: McGraw-Hill.
- Heritage, J. (1987). Ethnomethodology. In A. Giddens & A. Turner (Eds.), *Social theory today* (pp. 224-272). Stanford, CA: Stanford University Press.
- Herrnstein, R. & Murray, C. (1994). *The bell curve: Intelligence and class structure in American life*. New York: Free Press.
- Hinton, L. & Hale, K. (2001). *The green book of language revitalization in practice*. New York: Academic Press.
- Hockett, C. (1968). *The state of the art*. The Hague: Mouton.
- Hoffman, E. (1989). *Lost in translation: A life in a new language*. New York, NY: Dutton.
- Holliday, A. (1994). *Appropriate methodology and social context*. Cambridge: Cambridge University Press.
- hooks, b. (1989). *Talking back: Thinking feminist, thinking black*. Boston: South End Press.
- Hopper, P. J. (1998). Emergent grammar. In M. Tomasello (Ed.), *The new psychology of language: Cognitive and functional approaches to language structure*. Mahwah, NJ: Erlbaum.
- Hornberger, N. (2001). Educational linguistics as a field: A view from Penn's program as it approaches its 25th anniversary. In R. Cooper, E. Shohamy, & J. Walters (Eds.), *New perspectives and issues in educational language policy: A volume in honor of Bernard Dov Spolsky* (pp. 271-296). Philadelphia: John Benjamins.
- Hornberger, N. H. (2002). Multilingual language policies and the continua of biliteracy: An ecological approach. *Language Policy*, 1, 27-51.
- Humphrey, N. (1992). *A history of the mind*. London: Chatto & Windus.
- Hymes, D. (1974). *Foundations of sociolinguistics: An ethnographic approach*. Philadelphia, PA: University of Pennsylvania Press.
- James, C. (1998). *Errors in language learning and use: Exploring error analysis*. New York: Longman.
- Jaworski, A. & Coupland, N. (Eds.). (1999). *The discourse reader*. London: Routledge.
- Johansen, J.D. (1993). *Dialogic semiosis: An essay on signs and meaning*. Bloomington, IN: Indiana University Press.
- Johnson, S. (2001). *Emergence: The connected lives of ants, brains, cities, and software*. New York: Scribner.
- Kant, I. (1934 [1787]). *Critique of pure reason*. London: Dent.
- Keller, R. (1998). *A theory of linguistic signs*. Oxford: Oxford University Press.
- Ketner, K. L. (Ed.). (1995). *Peirce and contemporary thought: Philosophical inquiries*. New York: Fordham University Press.
- Kirkpatrick, H. & Cuban, L (1998). Computers make kids smarter – right? *TECHNOS Quarterly for Education and Technology*, 7. (http://www.technos.net/tq_07/2cuban.htm), Downloaded July 20, 2000).

- Kohonen, V. (2001). Towards experiential foreign language education. In V. Kohonen, R. Jaatinen, P. Kaikkonen, & J. Lehtovaara (Eds.), *Experiential learning in foreign language education* (pp. 8-60). London: Longman.
- Kohonen, V., Jaatinen, R., Kaikkonen, P., & Lehtovaara, J. (Eds.). (2001). *Experiential learning in foreign language education*. London: Longman.
- Kozulin, A. (1986). Introduction. In L.S. Vygotsky, *Thought and language*. (Transl. A Kozulin). Cambridge, MA: MIT.
- Kozulin, A. (1990). *Vygotsky's psychology: A biography of ideas*. New York: Harvester Wheatsheaf.
- Kramersch, C. (1993). *Context and culture in language teaching*. Oxford: Oxford University Press.
- Kramersch, C. (1998). *Language and culture*. Oxford: Oxford University Press.
- Kramersch, C. (2000). Social discursive constructions of self in L2 learning. In J. Lantolf (Ed.), *Sociocultural theory in language learning* (pp. 133-154). Oxford: Oxford University Press.
- Kramersch, C. (Ed.). (2002). *Language acquisition and language socialization: Ecological perspectives*. London: Continuum.
- Krashen, S. (1985). *The input hypothesis*. London: Longman.
- Kroeber, A. L. & Kluckhohn, C. (1952). *Culture: A critical review of concepts and definitions*. New York: Vintage Books.
- Kuhn, T. (1970). *The structure of scientific revolutions*. Chicago: The University of Chicago Press.
- Labov, W. (1972). *Sociolinguistic Patterns*. Oxford: Basil Blackwell.
- Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lam, W. S. E. & Kramersch, C. (2003). The ecology of an SLA community in a computer-mediated environment. In J. Leather & J. van Dam (Eds.), *Ecology of language acquisition* (pp. 141-158). Dordrecht: Kluwer Academic.
- Langacker, R.W. *Foundations of Cognitive Grammar, volume 1: Theoretical Prerequisites*. Stanford, CA: Stanford University Press.
- Langer, E. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.
- Lantolf, J. (Ed.). (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Lantolf, J., & Thorne, S. (forthcoming). *The sociogenesis of second language development*. Oxford: Oxford University Press.
- Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18, 141-165.
- Larsen-Freeman, (2002). Language acquisition and language use from a chaos/complexity perspective. In C. Kramersch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 33-46). London: Continuum.
- Larsen-Freeman, D. (2003). *Teaching language: From grammar to grammaring*. Boston, MA: Heinle and Heinle.
- Larsen-Freeman, D. & Long, M. H. (1991). *An introduction to second language acquisition research*. London: Longman.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Layder, D. (1990). *The realist image in social science*. London: Macmillan.
- Leather, J. & van Dam, J. (2003). Towards an ecology of language acquisition. In J. Leather & J. van Dam (Eds.), *The ecology of language acquisition* (pp. 1-29). Dordrecht: Kluwer Academic Publishers.
- Lee, P. (1996). *The Whorf theory complex: A critical reconstruction*. Amsterdam: John Benjamins.
- Lemke, J. (2002). Language development and identity: Multiple timescales in the social ecology of learning. In C. Kramersch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 68-87). London: Continuum.
- Leontiev, A.N. (1981). The problem of activity in psychology. In J. V. Wertsch (Ed.). *The problem of activity in contemporary psychology* (pp. 37-71). Armonk, NY: M.E. Sharpe.
- Leontiev, A. N. (1997). On Vygotsky's creative development. In Vygotsky, L.S. *The collected works of L. S. Vygotsky, Volume 3. Problems of the theory and history of psychology* (pp. 9-32). New York: Plenum Press.
- Levinson, S. (1983). *Pragmatics*. Cambridge: Cambridge University Press.
- Lewin, K. (1943). Defining the 'field at a given time.' *Psychological Review*, 50, 292-310.

- Lewin, R. (1993). *Complexity: Life at the edge of chaos*. London: Phoenix.
- Liddicoat, A. (1997). Interaction, social structure, and second language use: A response to Firth and Wagner. *The Modern Language Journal*, 81, 313-317.
- Lightfoot, D. (1982). *The language lottery: Toward a biology of grammars*. Cambridge, MA: MIT Press.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413 – 468). San Diego: Academic Press.
- Lorenz, K. (1990). *On life and living*. London: St. Martin's Press.
- Lovelock, J. (1979). *Gaia*. Oxford: Oxford University Press.
- MacIntyre, A. (1981). *After virtue*. London: Duckworth.
- MacWhinney, B. (Ed.). (1987). *Mechanisms of language acquisition*. Hillsdale, NJ: Erlbaum.
- MacWhinney, B. (Ed.). (1999). *Emergence of language*. Mahwah, NJ: Erlbaum.
- Maffi, L. (2000). Linguistic and biological diversity: The inextricable link. In R. Phillipson (Ed.), *Rights to language: Equity, power, and education* (pp. 17-22). Mahwah, NJ: Erlbaum.
- Magnuson, P. (2003). The interplay between Minnesota's accountability system and adolescent English Language Learners with limited formal schooling. Unpublished Ph.D. Thesis, University of Minnesota.
- Makkai, A. (1993). *Ecolinguistics. ¿Toward a new **paradigm** for the science of language?* London: Pinter Publishers.
- Makoni, S. (2003). From misinvention to disinvention of language: Multilingualism and the South African constitution. In S. Makoni, G. Smitherman, A. Ball, & A. Spears (Eds.), *Black linguistics: Language, society, and politics in Africa and the Americas* (pp. 132-152). New York: Routledge.
- Malinowski, B. (1967). *A diary in the strict sense of the term*. London: Routledge & Kegan Paul.
- Markus, H. R., Mullally, P. R. & Kitayama, S. (1997). Selfways: Diversity in modes of cultural participation. In U. Neisser & D. A. Jopling (Eds.), *The conceptual self in context: Culture, experience, self-understanding* (pp. 13-61). Cambridge: Cambridge University Press.
- Maturana, H. R. & Varela, F. J. (1992). *The tree of knowledge: The biological roots of human understanding*. Boston: Shambala.
- May, S. (2001). *Language and minority rights: Ethnicity, nationalism and the politics of language*. London: Longman.
- Maybin, J. (1994). Children's voices: Talk, knowledge and identity. In D. Graddol, J. Maybin & B. Stierer (Eds.), *Researching language and literacy in social context* (pp. 131-150). Clevedon: Multilingual Matters.
- McArthur, L. Z. & Baron, R. M. (1983). Toward an ecological theory of social perception. *Psychological Review*, 90, 215-238.
- McCafferty, S. (2002). Gesture and creating zones of proximal development for second language learning. *The Modern Language Journal*, 86, 192-203.
- McKay, S. L. & Hornberger, N. H. (1996). *Sociolinguistics and language teaching*. New York: St. Martin's Press.
- McLaren, P. (1998). *Life in schools: An introduction to critical pedagogy in the foundations of education*. New York: Addison Wesley Longman.
- McLaughlin, B. (1987). *Theories of second language learning*. London: Edward Arnold.
- McNeill, D. (Ed.). (2000). *Language and gesture*. Cambridge: Cambridge University Press.
- McNiff, J. (1993). *Teaching as learning: An action research approach*. London: Routledge.
- Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.
- Medawar, P. B. (1967). *The art of the soluble*. London: Methuen.
- Meltzoff, A. N. & Prinz, W. (Eds.). (2002). *The imitative mind: Development, evolution and brain bases*. Cambridge: Cambridge University Press.
- Menand, L. (2001). *The metaphysical club: A story of ideas in America*. New York: Farrar, Straus and Giroux.
- Mercer, N. (1995). *The guided construction of knowledge: Talk between teachers and learners in the classroom*. Clevedon: Multilingual Matters.
- Merleau-Ponty, M. (1962). *Phenomenology of perception*. London: Routledge & Kegan Paul.
- Merrell, F. (1997a). *Peirce, signs, and meaning*. Toronto: University of Toronto Press.
- Merrell, F. (1997b). Do we really need Peirce's whole decalogue of signs? *Semiotica*, 114, 193-286.
- Merrell, F. (1998). *Sensing semiosis: Toward the possibility of complementary cultural "logics."* Basingstoke, UK: Macmillan Press.

- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage Publications.
- Müller, H. (1963). *Black spring*. New York: Grove Press.
- Miramontes, O. B., Nadeau, A., & Commins, N. L. (1997). *Restructuring schools for linguistic diversity: Linking decision making to effective programs*. New York: Teachers College Press.
- Montessori, M. (1917/1965). *Spontaneous activity in education*. New York: Schocken.
- Mühlhäusler, P. (1996). *Linguistic ecology: Language change and linguistic imperialism in the Pacific Region*. New York: Routledge.
- Naess, A. (1989). *Ecology, community and lifestyle*. Translated and edited by D. Rothenberg. Cambridge: Cambridge University Press.
- Nakahama, Y., Tyler, A. & van Lier, L. (2001). Negotiation of meaning in conversations and tasks: A comparative discourse analysis. *TESOL Quarterly*, 35, 377-405.
- Natsoulas, T. (1993). Perceiving, its component stream of perceptual experience, and Gibson's ecological approach. *Psychological Research*, 55, 248-257.
- Neisser, U. (1987). From direct perception to conceptual structure. In U. Neisser (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorization*. Cambridge: Cambridge University Press.
- Neisser, U. (1988). Five kinds of self-knowledge. *Philosophical Psychology*, 1, 35-59.
- Neisser, U. (1992) Two themes in the study of cognition. In H. L. Pick, P. van den Broek, & D. C. Knill (Eds.), *Cognition: Conceptual and methodological issues*. Washington, D.C.: American Psychological Association.
- Neisser, U. (Ed.). (1993). *The perceived self: Ecological and interpersonal sources of self-knowledge*. Cambridge: Cambridge University Press.
- Neisser, U. & Fivush, R. (Eds.). (1994). *The remembering self: Construction and accuracy in the self-narrative*. Cambridge: Cambridge University Press.
- Neisser, U. & Jopling, D. A. (Eds.). (1997). *The conceptual self in context: Culture, experience, self-understanding*. Cambridge: Cambridge University Press.
- Nietzsche, F. (1954). On truth and lie in an extra-moral sense. In W. Kaufmann (Ed.), *The Viking Portable Nietzsche* (pp. 46-7).
- Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.
- Norman, D. A. (no date) *Affordance, conventions and design*. Retrieved on 5-10-2002 from: <http://www.jnd.org/dn.mss/affordances-interactions.html>
- Norton Peirce, B. (1995). Social identity, investment, and language learning. *TESOL Quarterly*, 29, 9-31.
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. New York: Longman.
- Nöth, W. (1995). *Handbook of semiotics*. Bloomington, IN: Indiana University Press.
- Nystrand, M. (1992). Social interactionism versus social constructionism. In A. H. Wold (Ed.), *The dialogical alternative: Towards a theory of language and mind* (pp. 157-174). Oslo: Scandinavian University Press.
- Ochs, E. (2002). Becoming a speaker of culture. In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 99-120). London: Continuum.
- Ogbu, J. U. (1991). Immigrant and involuntary minorities in comparative perspective. In M. A. Gibson and J. U. Ogbu (Eds.), *Minority status and schooling: A comparative study of immigrant and voluntary minorities* (pp. 3-33). New York: Garland Publishing.
- Ogden, C. K. & Richards, I. A. ([1923] 1985). *The meaning of meaning*. London: Routledge.
- Ohta, A. S. (2001). *Second language acquisition processes in the classroom: Learning Japanese*. Mahwah, NJ: Erlbaum.
- Oyama, S. (2000). *Evolution's eye: A systems view of the biology-culture divide*. Durham, NC: Duke University Press.
- Paikeday, T. (1985). *The native speaker is dead!* Toronto: Paikeday Publishing.
- Palincsar, A., David, I. & Brown, A. (1992). Using reciprocal teaching in the classroom: A guide for teachers. Unpublished manuscript: The Brown/Campione Research Group.
- Passmore, J. (1978). *Science and its critics*. London: Duckworth.
- Pavlenko, A & Lantolf, J. (2000). Second language learning as participation and the (re)construction of selves. In Lantolf, J. (Ed.) *Sociocultural theory in language learning* (pp. 155-178). Oxford: Oxford University Press.

- Peirce, C. S. (1992 and 1998): *Selected Philosophical Writings*, Vols. 1 and 2. Bloomington, IN: Indiana University Press. Vol. 1: Edited by Nathan Houser and Christian Kloesel, 1992; Vol. 2, Edited by The Peirce Edition Project, 1998.
- Pennycook, A. (1995). English in the world/ The world in English. In J. W. Tollefson (Ed.), *Power and inequality in language education* (pp. 34-58). Cambridge: Cambridge University Press.
- Pennycook, A. (2001). *Critical applied linguistics*. Mahwah, NJ: Erlbaum.
- Pennycook, A. (forthcoming). Critical applied linguistics. To appear in A. Davies & C. Elder (Eds.), *Handbook of Applied Linguistics*. Oxford: Blackwell.
- Phelan, P. & Davidson, A. L. (Eds.). (1993). *Renegotiating cultural diversity in American schools*. New York: Teachers College Press.
- Phillipson, R. (Ed.). (2000). *Rights to language: Equity, power, and education*. Mahwah, NJ: Erlbaum.
- Piaget, J. (1928). *Judgement and reasoning in the child*. London: Routledge and Kegan Paul.
- Piaget, J. (1978). *Success and understanding*. Cambridge, MA: Harvard University Press.
- Pica, T. (1992). The textual outcomes of native speaker-non-native speaker negotiation: What do they reveal about second language learning? In C. Kramsch and S. McConnell-Ginet (Eds.), *Text and Context Cross-Disciplinary Perspectives on Language Study*. Lexington, MA: D.C. Heath.
- Pienemann, M. (1998). *Language processing and second language development: Processability theory*. Philadelphia: John Benjamins.
- Pinker, S. (1994). *The language instinct*. New York: William Morrow.
- Poster, M. (1993). Foucault and the problem of self-constitution. In J. Caputo & M. Youny (Eds.), *Foucault and the critique of institutions* (pp. 63-80). University Park, PA: The Pennsylvania State University Press.
- Postman, N. (1988). *Conscientious objections: Stirring up trouble about language, technology, and education*. New York: Vintage Books.
- Postman, N. (1993). *Technopoly: The surrender of culture to technology*. New York: Vintage Books.
- Potter, J. & Wetherell, M. (1987). *Discourse and social psychology: Beyond attitudes and behaviour*. London: Sage Publications.
- Price, H. H. (1969). *Thinking and experience*. London: Hutchinson.
- Prigogine, I. & Stengers, I. (1984). *Order out of chaos: Man's new dialogue with nature*. New York: Bantam Books.
- Pullum, G. (1991). *The great Eskimo vocabulary hoax and other irreverent essays on the study of language*. Chicago: The University of Chicago Press.
- Rampton, B. (2002). Ritual and foreign language practices at school. *LPI Working Paper No. 9*. Albany, Antwerp, Gent, London and Toronto: Working Papers on Language, Power & Identity.
- Reddy, M. (1979). The conduit metaphor. In R. Ortony (Ed.), *Metaphor and thought*. Cambridge: Cambridge University Press.
- Reed, E. S. (1988). *James J. Gibson and the psychology of perception*. New Haven, CT: Yale University Press.
- Reed, E. S. (1996). *Encountering the world: Toward an ecological psychology*. New York: Oxford University Press.
- Riggins, S.H. (1997). The rhetoric of othering. In S. H. Riggins (Ed.), *The language and politics of exclusion: Others in discourse* (pp. 1-30). Thousand Oaks, CA: Sage Publications.
- Rivers, W. M. & Temperley, M. S. (1978). *A practical guide to the teaching of English as a second language*. New York: Oxford University Press.
- Rodriguez, R. (1981). *Hunger of memory*. Boston, MA: D.R. Godine.
- Rogoff, B. (1993). Children's guided participation and participatory appropriation in sociocultural activity. In R. H. Wozniak & K. W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 121-153). Hillsdale, NJ: Erlbaum.
- Rogoff, B. (1995). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. Del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139-164). Cambridge: Cambridge University Press.
- Rogoff, B. & Gardner, W. (1984). Adult guidance in cognitive development. In B. Rogoff & J. Lave (Eds.), *Everyday cognition: Its development in social contexts*. Cambridge, MA: Harvard University Press.
- Rommetveit, R. (1974). *On message structure*. New York: Wiley.

- Rommetveit, R. (1998). Intersubjective attunement and linguistically mediated meaning in discourse. In S. Bråten (Ed.), *Intersubjective communication and emotion in early ontogeny* (pp. 354-371). Cambridge: Cambridge University Press.
- Rosch, E. (1997). Mindfulness meditation and the private (?) self. In U. Neisser & D. A. Jopling (Eds.), *The conceptual self in context: Culture, experience, self-understanding* (pp. 185-202). Cambridge: Cambridge University Press.
- Rosen, H. (1986). The importance of story. *Language Arts*, 63 (3), 226-237.
- Rossi-Landi, F. (1992). *Between signs and non-signs*. Amsterdam: John Benjamins.
- Rutherford, W. E. (1987). *Second language grammar: Teaching and learning*. London: Longman.
- Ruthrof, H. (2000). *The body in language*. London: Cassell.
- Sacks, H. (1963). Sociological description. *Berkeley Journal of Sociology*, 8, 1-16.
- Sacks, O. (1984). *A leg to stand on*. New York: Harper.
- Sartre, J. P. (1957). *Being and nothingness*. London: Methuen.
- Sato, C. (1988). Origins of complex syntax in interlanguage development. *Studies in Second Language Acquisition*, 10, 3, 371-395.
- Saussure, F. (de) (1907/1983). *Course in general linguistics*. La Salle, IL: Open Court.
- Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. *Revue de l'AILA/AILA Review*, 11, 11-26.
- Schmidt, R. & Frota, S. (1986). Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R. Day (Ed.), *'Talking to learn': Conversation in second language acquisition* (pp. 237-326). Rowley, MA: Newbury House.
- Schumann, J. (1978). Social and psychological factors in second language acquisition. In J. Richards (Ed.), *Understanding second and foreign language learning* (pp. 163-78). Rowley, MA: Newbury House.
- Schumann, J. (1990). The role of the amygdala as a mediator of acculturation and cognition in second language acquisition. In *Georgetown University Round Table on Languages and Linguistics 1990* (pp. 169-176). Washington, D.C.: Georgetown University Press.
- Scollon, R. (1976). *Conversations with a one-year old*. Hawaii: University of Hawaii Press.
- Sebeok, T. A. (1994). *Signs: An introduction to semiotics*. Toronto: University of Toronto Press.
- Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27, 4-13.
- Shorter, J. (1984). *Social accountability and selfhood*. London: Blackwell.
- Shelter, J. (1993). *Conversational realities: Constructing life through language*. London: Sage.
- Shelter, J. and Newson, J. (1982). An ecological approach to cognitive development: Implicate orders, joint action and intentionality. In G. Butterworth and P. Light (Eds.), *Social Cognition: Studies of the Development of Understanding*. Sussex: Harvester Press.
- Skutnabb-Kangas, T. (2000). *Linguistic genocide in education, or worldwide diversity and human rights?* Mahwah, NJ: Erlbaum.
- Skutnabb-Kangas, T. & Phillipson, R. (Eds.). (1995). *Linguistic human rights: Overcoming linguistic discrimination*. Berlin: Mouton.
- Slavin, R. E. (1983). *Student team learning: An overview and practical guide*. Washington, D.C.: National Education Association.
- Sperber, D. & Wilson, D. (1986). *Relevance: Communication and cognition*. Oxford: Basil Blackwell.
- Stenhouse, L. (1975). *An introduction to curriculum research and development*. London: Heinemann.
- Stephens, J. (1912). *The crock of gold*. London: Macmillan.
- Stewart, I. (1989). *Does God play dice? The mathematics of chaos*. Oxford: Basil Blackwell.
- Sullivan, P. N. (2000). Playfulness as mediation in communicative language teaching in a Vietnamese classroom. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 115-131). Oxford: Oxford University Press.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97 – 114). Oxford: Oxford University Press.
- Swain, M. & Lapkin, S. (2000). Task-based second language learning: The uses of the first language. *Language Teaching Research*, 4, 251-274.
- Thibault, P. J. (1997). *Re-reading Saussure: The dynamics of signs in social life*. London: Routledge.

- Thorne, S. L. (2000a). Second language acquisition theory and the truth(s) about relativity. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 219-244). Oxford: Oxford University Press.
- Thorne, S. L. (2000b). Beyond bounded activity systems: Heterogeneous cultures in instructional uses of persistent conversation. Proceedings of the Thirty-Third Annual Hawaii International Conference on System Sciences (CD-ROM), IEEE Computer Society, Los Alamitos, CA.
- Todorov, T. (1984). *Mikhail Bakhtin: The dialogical principle*, (translated by Wlad Godzich). Minneapolis: University of Minnesota Press.
- Tomasello, M. (2001). *Cultural origins of human cognition*. Cambridge, MA: Harvard University Press.
- Tornberg, U. (2000). On foreign language teaching and learning in a discursive space. English summary of Ph.D. Dissertation, University of Örebro, Sweden.
- Toulmin, S. (1982) The genealogy of 'consciousness.' In P.F. Secord (Ed.), *Explaining human behavior: Consciousness, human action, and social structure* (pp. 53-70). Beverly Hills: Sage.
- Trappes-Lomax, H. & Ferguson, G. (Eds.). (2002). *Language in language teacher education*. Amsterdam: John Benjamins.
- Trevarthen, C. (1990). Signs before speech. In T. Sebeok & Sebeok-Umiker, J. (Eds.), *The semiotic web* (pp. 689-755). The Hague: Mouton.
- Trevarthen, C. (1998). The concept and foundations of infant intersubjectivity. In S. Bråten (Ed.), *Intersubjective communication and emotion in early ontogeny* (pp. 15-46). Cambridge: Cambridge University Press.
- Trim, J. L. M. (1959). Historical, descriptive and dynamic linguistics. *Language and Speech*, 2, 9-25.
- Tudge, J. (1990). Vygotsky, the zone of proximal development, and peer collaboration: Implications for classroom practice. In L. C. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology* (pp. 155-172). Cambridge: Cambridge University Press.
- Turner, J. (1988). *A theory of social interaction*. Stanford: Stanford University Press.
- Turvey, M. (1992). Ecological foundations of cognition: Invariants of perception and action. In H. L. Pick, Jr., P. van den Broek & D. C. Knill (Eds.), *Cognition: Conceptual and methodological issues* (pp. 85-117). Washington, D. C.: American Psychological Association.
- Ullman, S. (1980). Against direct perception. *The Behavioral and Brain Sciences*, 3, 373-415.
- Valsiner, J. & van der Veer, R. (2000). *The social mind: Construction of the idea*. Cambridge: Cambridge University Press.
- van Dam, J. (2002). Ritual, face, and play in a first English lesson: Bootstrapping a classroom culture. In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 237-265). London: Continuum.
- van Lier, L. (1988). *The classroom and the language learner*. London: Longman.
- van Lier, L. (1994a). Educational linguistics: Field and project. In J. Alatis (Ed.), *Georgetown University Round Table on Languages and Linguistics 1994* (pp. 199-209). Washington, D.C.: Georgetown University Press.
- van Lier, L. (1994b). Forks and hope: Pursuing understanding in different ways. *Applied Linguistics*, 15, 328-46.
- van Lier, L. (1994c). Some features of a theory of practice. *TESOL Journal*, 4, 6-10.
- van Lier, L. (1995). *Introducing language awareness*. London: Penguin UK. See also http://maxkade.mii.edu/Faculty_Pages/lvanlier/
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. London: Longman.
- van Lier, L. (1998). The relationship between consciousness, interaction and language learning. *Language Awareness*, 7, 128-145.
- van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J.P. Lantolf (Ed.), *Sociocultural theory and second language learning: Recent advances* (pp. 245-259). Oxford: Oxford University Press.
- van Lier, L. (2002). An ecological-semiotic perspective on language and linguistics. In C. Kramsch (Ed.), *Language Acquisition and Language Socialization. Ecological perspectives* (pp. 140-164). London: Continuum.
- van Lier, L. (2003). A tale of two computer classrooms: The ecology of project-based language learning. In J. Leather & J. van Dam (Eds.), *Ecology of language acquisition* (pp. 49-63). Dordrecht: Kluwer Academic.

- van Lier, L. & Matsuo, N. (2000). Varieties of conversational experience: Looking for learning opportunities. *Applied Language Learning*, 10, 2.
- van Maanen, J. (1988). *Tales of the field*. Chicago, IL: University of Chicago Press.
- van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. New York: SUNY Press.
- van Manen, M. (1991). *The tact of teaching*. Albany, NY: SUNY Press.
- van der Veer, R. & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Oxford: Basil Blackwell.
- Varela, F. J., Thompson, E. and Rosen, E. (1991). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: The MIT Press.
- Verhoeven, L. (1990). Language variation and learning to read. In P. Reitsma and L. Verhoeven (Eds.), *Acquisition of reading in Dutch* (pp. 105-120). Dordrecht: Foris.
- Volosinov, V. N. (1973). *Marxism and the philosophy of language*. Cambridge, MA: Harvard University Press.
- von Bertalanffy, L. (1968). *General system theory*. New York: Braziller.
- Vonnegut, K. (1990). *Hocus pocus*. New York: Putnam Press.
- Vygotskaia, G. L. (1995). Remembering father. *Educational Psychologist*, 30, 57-59.
- Vygotsky, L.S. (1962). *Thought and language*. (Transl. E. Hanfmann & G. Vakar). Cambridge, MA: MIT.
- Vygotsky, L. S. (1978). *Mind in society*. Cambridge: Cambridge University Press.
- Vygotsky, L. S. (1986). *Thought and language*. (Transl. A Kozulin). Cambridge, MA: MIT.
- Vygotsky, L. S. (1987). *Thinking and speech*. (Transl. N. Minick). In The Collected Works of L. S. Vygotsky, Volume 1: Problems of general psychology. New York: Plenum Press.
- Vygotsky, L. S. (1993). The collected works of L. S. Vygotsky, Volume 2: *The fundamentals of defectology*. New York: Plenum Press.
- Vygotsky, L. S. & Luria, A. (1994). Tool and symbol in child development. In R. van der Veer & J. Valsiner (Eds.), *The Vygotsky reader* (pp. 99 – 174). Oxford: Basil Blackwell.
- Waldrop, M. M. (1992). *Complexity: The emerging science at the edge of order and chaos*. New York: Simon & Schuster.
- Walqui, A. (2000). *Access and engagement*. Washington, D.C.: Center for Applied Linguistics and Delta Systems.
- Warschauer, M. (1998). *Electronic literacies: literacies, language, culture, and power in online education*. Mahwah, NJ: Erlbaum.
- Wegerif, R. & Scrimshaw, P. (Eds.). (1997). *Computers and talk in the primary classroom*. Clevedon, England: Multilingual Matters.
- Wells, G. (1986). *The meaning makers: Children learning language and using language to learn*. Portsmouth, NH: Heinemann.
- Wells, G. (1999). *Dialogic inquiry: Towards a sociocultural practice and theory of education*. Cambridge: Cambridge University Press.
- Wells, G. (2000). Dialogue in activity theory. Unpublished paper, based on a presentation at AAAL, Vancouver, March 2000.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
- Werner, H. (1956). Microgenesis and aphasia. *Journal of Abnormal and Social Psychology*, 52, 347-353.
- Werker, J. F. & Tees, R. C. (1984). Cross-language speech perception: Evidence for perceptual reorganization during the first year of life. *Infant Behavior and Development*, 7, 49-63.
- Wertsch, J. V. (1985). *Vygotsky and the social formation of mind*. Cambridge, MA: Harvard University Press.
- Wertsch, J. V., Del Rio, P., & Alvarez, A. (Eds.). (1995). *Sociocultural studies of mind*. Cambridge: Cambridge University Press.
- Whitehead, A. N. (1929). *The aims of education*. New York: The Free Press.
- Wiener, N. (1948). *Cybernetics*. Cambridge, MA: MIT.
- Wiley, N. (1994). *The semiotic self*. Chicago, IL: University of Chicago Press.
- Wilson, R. A. & Keil, F. C. (Eds.). (1999). *The MIT encyclopedia of the cognitive sciences*. Cambridge, MA: MIT.
- Winnips, J. C. (2001). Scaffolding-by-Design: A model for WWW based learner support. Dissertation. Enschede: University of Twente. Online: <http://scaffolding.edte.utwente.nl/>

- Wittgenstein, L. (1974). *Philosophical grammar*. Berkeley: University of California Press.
- Wittgenstein, L. (1980). *Culture and value*. Chicago, IL: University of Chicago Press.
- Wolf, G. & Love, N. (Eds.). (1997). *Linguistics inside out: Roy Harris and his critics*. Amsterdam: John Benjamins.
- Wood, D. (1988). *How children think and learn*. Oxford: Basil Blackwell.
- Wood, D., Bruner, J. & Ross, G. (1976). The role of tutoring in problem-solving. *Journal of Child Psychology and Child Psychiatry*, 17, 89-100.
- Worham, S. (1994). *Acting out participant examples in the classroom*. Amsterdam: John Benjamins.
- Worham, S. (2001). *Narratives in action: A strategy for research and analysis*. New York: Teachers College Press.

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