
MacIntyre responds

On Seeing the Forest and the Trees: A Rejoinder to Sparks and Ganschow

PETER D. MACINTYRE

Department of Psychology

University College of Cape Breton

Sydney, Nova Scotia, Canada B1P 6L2

Email: pmacinty@sparc.uccb.ns.ca

IN DEVELOPING THEIR LINGUISTIC CODING Deficit/Difference Hypothesis (LCDH), Sparks and Ganschow (1991, 1993a, 1993b, 1995) have stated repeatedly that deficits (or differences) in the ability to encode the native language are primarily responsible for observed individual differences in second language achievement. In doing so they have questioned the usefulness of affective variables as explanations for these individual differences, casting it as an either/or position. Further, they have suggested that affective reactions to language learning, anxiety, motivation, attitudes, etc., are based primarily on differences among learners in the ability to encode native language input. In a critique of this approach, MacIntyre (1995) challenged the basis on which affective variables in general, and language anxiety in particular, were being dismissed as potential causal factors. This critique prompted Sparks and Ganschow's (1995) response in this issue of the *MLJ*.

Debate such as this is highly useful in stimulating interest in the area, sharpening thought on both "sides," and hopefully inspiring empirical research to further knowledge about the issues. Unfortunately, the limited space avail-

able here precludes fully examining all of the issues raised by Sparks and Ganschow (1995).

The overriding criticism of Sparks and Ganschow's LCDH is that it ignores the context in which language learning occurs; with it, we can't see the forest for the trees. Language learning is more than acquiring the technical skill necessary to encode and reproduce sounds. It is the act of learning a new communication system, of opening doors to new experiences through travel and interaction with other groups of people. It is the act of inheriting someone else's language and culture (Scovel, 1978) with the corresponding threats to one's ethnic identity and self-concept (Clément, 1980, 1987). The LCDH is so focused on the learning of the sound system of language, that it ignores these other types of influences. While phonetic encoding may be a necessary condition for language acquisition, it is not a sufficient condition. As Gardner and Lambert (1972) noted, when second language communication is necessary, for example when the social situation requires proficiency in more than one language, almost everybody learns those languages, regardless of differences in aptitude.

Let us address some specific potential misconceptions arising from Sparks and Ganschow's (1995) article. First, they suggest that "anxiety about FL learning is likely to be related to anxiety about native language learning" (p. 240). This is an argument that simply has not been supported in our studies (MacIntyre &

Gardner, 1989, 1991, 1994b). Further, those studies found that language anxiety correlates significantly with foreign language tasks but not those same tasks performed in the native language. If the Sparks and Ganschow model is appropriate, correlations between language anxiety and native language tasks would be expected.

The second issue relates to the arguments against language learning strategy research. Strategies are typically defined as steps taken to facilitate the language learning process. Sparks and Ganschow (1995) issue two arguments against strategies. First, if coding deficits were being compensated for during native language tasks, the same strategies would apply to second language tasks. Unfortunately, the application of such strategies may not occur automatically and specific attempts or instruction to transfer those strategies may be needed. Second, Sparks and Ganschow (1995) state that "*direct* instruction in phonology/orthography will be needed . . ." (p. 238). Given the usual definition of strategies, this specific training certainly could be considered strategy training and current knowledge about strategy use and training applied to providing instruction in phonology.

A major point of contention is Sparks and Ganschow's (1995) claim that, theoretically, anxiety cannot actively disrupt the cognitive processing involved in language learning because affective factors are "sealed off" from cognitive processing, specifically that processing performed in the language coding module. The vast body of research on the relation between anxiety, cognition, and behavior demonstrates that emotions in general (see Fiske & Taylor, 1991, chapter 11), and anxiety in particular, can and do affect cognitive processing (Eysenck, 1979; Tobias, 1986; see volumes by Booth-Butterfield, 1991; Schwarzer, 1986). This is an important issue and it seems that a resolution may be possible.

Sparks and Ganschow (1995) argue that language coding is a separate module and therefore immune to the effects of anxiety. Let us accept their model, at least for the moment. If language encoding is performed in a separate module, the results of that process must be under the control of a central processing system. Therefore, even if language anxiety does not affect the operation of the coding module, it may still affect what the learner is able to do with the encoded linguistic stimuli. Anxiety arousal, with its distracting, task-irrelevant cognitions, may affect central processes that make

use of the encoded stimuli. In a recent study, one not considered by Sparks and Ganschow (1995), MacIntyre and Gardner (1994a) induced anxiety at various stages of processing in a computerized L2 vocabulary learning task. The results show that the arousal of anxiety during the processing of linguistic stimuli significantly hindered the learners' performance at two of three processing stages, and the anticipated trend was clearly observed at the remaining stage. The data were not collected to examine the linguistic coding module separately, but anxiety arousal seems to have had an effect on the overall quality of cognitive processing. Perhaps the current debate will stimulate interest in finding the locus of the cognitive effects of anxiety on language learning.

A fourth point of contention is Sparks and Ganschow's (1995) assertion that "one cannot discuss anxiety without inferring a cause" (p. 236). In making this argument, they cite a useful distinction between state and trait anxiety. Stated as an extreme position, it is not necessary to know why a student is anxious in order to know that the arousal of state anxiety will have emotional, behavioral, and cognitive effects. It can be predicted that making learners nervous, by treating them in a cold, aloof manner (see Steinberg & Horwitz, 1986), or by videotaping them while they study vocabulary items (see MacIntyre & Gardner, 1994a), will disrupt language learning or production. Anxiety arousal can create difficulties independent of the problems that provoked the anxiety. For example, a learner with a subtle language coding deficit who becomes highly frustrated, embarrassed, and anxious now has two problems, the deficit and the anxiety. Both problems may hinder language learning, but for different reasons. Therefore, those interested in language anxiety, or more specifically the arousal of state anxiety during language learning, are not confounding anxiety with aptitude differences, as suggested by Sparks and Ganschow (1995). Instead, they are focusing on the practically and theoretically interesting link between anxiety arousal and its consequences for language learning behavior.

Whereas it is not absolutely necessary to describe the source of anxiety arousal, it is certainly advantageous to do so. Evidence from surveys (Horwitz, Horwitz, & Cope, 1986), interviews with language learners (Price, 1991), and experiments (MacIntyre & Gardner, 1994a) all suggest that language anxiety arises when speaking in a social context. Sparks and Gan-

schow (1995) offer some inaccurate and potentially misleading criticism of the role of "social context." Space does not permit a complete response to their sweeping generalizations about this issue. Suffice it to say that the important facets of social context, such as group cohesion, can be identified, measured, and tested with the possibility of disconfirming the relationships expected between variables (for example, see Clément, Dörnyei & Noels, 1994). Measures of the other facets of the social context, mentioned previously (MacIntyre, 1995), have been developed and certainly have been used in a predictive fashion. The arguments for rejecting social context made by Sparks and Ganschow (1995) are exaggerated and unconvincing.

With the wide range of potential influences on language learning, including language anxiety, attitudes, motivation, strategies, learner beliefs, general intelligence, personality, group dynamics, intercultural issues, and so on, it seems unlikely that one variable could account for the majority of the variance in language achievement. However, Sparks and Ganschow (1995) claim that native language coding deficits are the *primary* source of individual differences in language achievement. This claim is made in spite of the reported findings that native language encoding differences are not "overt," but rather are "subtle but statistically significant" (p. 236).

Although they advocate a strong inference approach, empirical evidence clearly "disproving" the role of the above variables has not been offered. Sparks and Ganschow (1995) argue that their studies consistently show that poor learners have lower levels of aptitude. Similarly, our studies of language anxiety also have shown consistently that poor learners experience higher levels of anxiety. A more explicit investigation, where aptitude and anxiety are independent of each other is required to clarify this issue. Such a study might involve an experimental design where high and low aptitude groups are crossed with high and low anxiety arousal conditions.

As was argued previously (MacIntyre, 1995), affective variables in general, and anxiety in particular, are not alternative explanations for individual differences in language learning. Explanations based on native language coding differences and those based on affective factors are best seen as supplemental to one another because, even if encoding is performed by a separate module, phonetic coding is part of a larger, integrated, cognitive and emotional sys-

tem. By considering the nature of each of these influences and their interaction, we can better map the potentially unique sources of variation in the language learning process.

ACKNOWLEDGEMENTS

I would like to express thanks to Zoltán Dörnyei for helpful comments on a draft of this response.

REFERENCES

- Booth-Butterfield, M. (Ed.). (1991). *Communication, cognition, and anxiety*. Beverly Hills, CA: Sage.
- Clément, R. (1980). Ethnicity, contact, and communicative competence in a second language. In H. Giles, W. P. Robinson, & P.M. Smith (Eds.), *Language: Social psychological perspectives* (pp. 147-154). Oxford: Pergamon Press.
- Clément, R. (1987). Second language proficiency and acculturation: An investigation of the effects of language status and individual characteristics. *Journal of Language and Social Psychology, 5*, 271-290.
- Clément, R., Dörnyei, Z., & Noels, K. A. (1994). Motivation, self-confidence, and group cohesion in the foreign language classroom. *Language Learning, 44*, 417-448.
- Eysenck, M. W. (1979). Anxiety, learning and memory: A reconceptualization. *Journal of Research in Personality, 13*, 363-385.
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition*. New York: McGraw-Hill.
- Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal, 70*, 125-132.
- MacIntyre, P. D. (1995). How does anxiety affect second language learning?: A reply to Sparks and Ganschow. *Modern Language Journal, 79*, 1-32.
- MacIntyre, P. D., & Gardner, R. C. (1989). Anxiety and second-language learning: Toward a theoretical clarification. *Language Learning, 39*, 251-275.
- MacIntyre, P. D., & Gardner, R. C. (1991). Language anxiety: Its relation to other anxieties and to processing in native and second languages. *Language Learning, 41*, 513-534.
- MacIntyre, P. D., & Gardner, R. C. (1994a). The effects of induced anxiety on cognitive processing in second language learning. *Studies in Second Language Acquisition, 16*, 1-17.
- MacIntyre, P. D., & Gardner, R. C. (1994b). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning, 44*, 283-305.
- Price, M. L. (1991). The subjective experience of for-

- eign language anxiety: Interviews with highly anxious students. In E. K. Horwitz & D. J. Young (Eds.), *Language anxiety: From theory and research to classroom implications* (pp. 101-108). Englewood Cliffs, NJ: Prentice Hall.
- Schwarzer, R. (Ed.). (1986). *Self-related cognition in anxiety and motivation*. Hillsdale, NJ: Erlbaum.
- Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. *Language Learning*, 28, 129-142.
- Sparks, R. L., & Ganschow, L. (1991). Foreign language learning differences: Affective or native language aptitude differences? *Modern Language Journal*, 75, 3-16.
- Sparks, R. L., & Ganschow, L. (1993a). The impact of native language learning problems on foreign language learning: Case study illustrations of the linguistic coding deficit hypothesis. *Modern Language Journal*, 77, 58-74.
- Sparks, R. L., & Ganschow, L. (1993b). Searching for the cognitive locus of foreign language learning difficulties: Linking first and second language learning. *Modern Language Journal*, 77, 289-302.
- Sparks, R. L., & Ganschow, L. (1995). A strong inference approach to causal factors in language learning: A response to MacIntyre. *Modern Language Journal*, 79, 235-244.
- Steinberg, F. S., & Horwitz, E. K. (1986). The effect of induced anxiety on the denotative and interpretative content of second language speech. *TESOL Quarterly*, 20, 131-136.
- Tobias, S. (1986). Anxiety and cognitive processing of instruction. In R. Schwarzer (Ed.), *Self-related cognition in anxiety and motivation* (pp. 35-54). Hillsdale, NJ: Erlbaum.

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