Original Paper

Hypothesis of Interaction: Reflections on its Theoretical and Practical Contributions for Second Language Acquisition (SLA)

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Abstract

This article is about one of the most influential hypothesis in the fields of applied linguistics and language learning. It is based on the work of a number of scholars who contributed to the understanding of this hypothesis such as Steve Krashen, Mike Long, Teresa Pica and Merrill Swain. It starts with a brief introduction about the significance of interaction hypothesis generally in language learning in general and its central role in second language acquisition (SLA). The next section reviews some of the fundamental works and studies that have investigated the theoretical and practical understanding of this phenomenon and its relationship to learners' achievement. It also highlights the contribution of interaction hypothesis to learning in two basic areas: noticing and feedback. There are explanatory examples presented in the following section in order to show how interactional modification techniques are used by learners. The last section presents some concluding thoughts pertaining to this topic with a focus on how it can be employed in language learning classrooms.

Keywords

Interaction, second langage acquisition, comprehensible input, output

1. Introduction

This hypothesis has been taken is regarded as one of the most influential hypotheses in language learning and approaches. Interaction hypothesis has received considerable attention by researchers and instructors during the last decade as different research has shown (Ellis, 1991). It has become a prominent practice in second language classroom research and served as the basis for language learning and pedagogical implementation. Swain and Lapkin (1998) confirm that the language learning is both interaction 'or communication' and cognitive activity. These researchers review the whole process of interaction and SLA in brief as follows:

When language use is considered as communication, the concepts of input, comprehensible input, and comprehensible output are appropriate metaphors because they conjure up images of messages. These messages are transmitted as output from one source and received as input elsewhere. When there are difficulties in encoding or decoding these messages, language users modify and restructure their

interaction to achieve message comprehensibility (p. 320).

2. Literature Review

2.1 Development and Understanding of Interaction Hypothesis

2.1.1 First Phase

The term 'interaction' has been understood very differently. The emphasis on interaction is not new, since this idea was primarily developed by Vygotsky (1978). Vygotsky claims that all matters of learning and acquiring knowledge, including learning new languages, are based on social activities in order to be adequately internalised and become more potential to be resorted by individuals. He states that interaction could be referred to as an action that happens between two or more people that results in an effect on each other. Negotiation is considered as a fundamental characteristic during interaction, as it aims to 'adjust speech toward greater clarity and comprehensibility' so those involved 'can potentially reach mutual understanding through modifications of sounds, structures, and vocabulary in their responses to signals of difficulty' (Pica et al.,1991, p. 345).

One of the definitions of interaction is conversational modification that is shared between the learners (i.e. native as well as non-native speakers), during which they have the opportunity to recognise their correct and incorrect utterances (Van Patten & Williams, 2007). Therefore, many studies have been conducted to investigate the importance and relevance of this hypothesis to the learning process and language learning, particularly in second/foreign language acquisition (Loschky 1994; Pica et al., 1996; Swain and Lapkin, 1998; Gass, Mackey, and Pica 1998; De la Fuente, 2002).

The hypothesis of interaction is connected mostly with the researcher Michael Long and his work in the 1980s. This work attempts to cover what was unexplained earlier and to justify what was suggested by Steven Krashen, who first proposed this hypothesis. Krashen highly emphasised the implication of modified interaction and the role of comprehensible input in language acquisition (Brown, 2000). It is suggested that reciprocal interaction would result in clearer, better and more intelligible learning. In line with Ellis (1991), Krashen claimed that the interactional process occurs as it is a condition of making meanings and comprehensible input (Krashen, 1985). Comprehensible input has been found to be one the chief principles for meaningful interaction which could lead to a successful process in L2/FL learning. Mitchell and Myles (2004) assert that the level of input that is required should be "just beyond the learners' current second language competence, in terms of its syntactic complexity" (p. 47).

2.1.2 Second Phase

Yet, based on Krashen's view, comprehensible input is determined by the biological factors in language acquisition such as age and linguistic experience and the quantity of exposure to interactional modification ((Larsen-Freeman & Long, 1991). For this reason, Mike Long developed this notion pertaining to interaction; particularly by specifically explaining the nature of comprehensible input and how it can be maintained (Long, 1983). Long has greatly focused on the importance of establishing quality for building meaning during interaction, rather than just relying on quantity for interactional

conversations (ibid). The hypothesis states that:

Speakers in conversations negotiate meaning. In case of conversations between learners and others, this negotiation will lead to the provision of either direct or indirect form of feedback, including correction (models), comprehension checks, clarification requests, topic shifts, repetitions, and recasts. This feedback draws the learner's attention to mismatches between the input and the learner's output (Long 1981; 1983, cited in Carroll, 2001, p. 291).

Long found that interaction between native-speakers (NSs) with non-native speakers (NNSs) is more beneficial than the interaction solely among non-native speakers (NNSs) (Long, 1981). The researcher also shows that in order to enhance the product of content, face-face interaction and accuracy of form are key factors. The advantageous outcome of such interaction has been observed as beneficial for solving learners' problems.

In conjunction with the benefit comprehensible input as suggest earlier, Long argues that input in this form alone is not satisfactory; as more awareness and quality during interaction is also essential. An ideal interaction, as proposed for this hypothesis, should involve NNSs and NSs that 'make use of conversational tactics such as repetition, confirmation checks, comprehension checks or clarification requests' (Mitchell & Myles, 2004, p. 167). Following Long's theory, Mackey asserts that through interaction, the acquisition of second language becomes easier and more intelligible because of the conversational and linguistic communication that provides sufficient feedback (Mackey, 1999).

In fact, these assumptions made about interaction are compatible with the theoretical perspectives of constructivism (Wadswarth, 1996) and socio-constructivism (Vygotsky, 1985). The perspectives posited an emphasis on associating learners with their peers and with their interlocutors (Brown, 2000). One way that interaction has been investigated to understand its role in enriching language proficiency is by affording the practice to the learners, so they can produce new forms via repetition (Mackey, 1999). Long (1996) later adopted the principle of interlanguage to enhance the effectiveness of interaction.

Consistently, Duran (1994) states that "interlanguage is the result of the interaction among the many language acquisition device factors in any two (or three in multilingual situations) languages developing more or less simultaneously". Duran (1994) adds that interlanguage may be viewed as an adaptive strategy in which the speaker tries to speak the interlocutor's L1, despite the fact he or she may have little proficiency in it.

2.1.3 Third Phase

The latest updated version of the interaction hypothesis has looked at the role of negotiation during interaction. According to Long (1996), negotiation can prompt interactional amendments and interactional adjustment between non-native speakers (NNSs) or learners and native speakers (NSs) or interlocutors. This would contribute to accelerating second (or foreign) language acquisition, owning its combination of input and output with encouraging learning capabilities of learners. Long (1996) stated that "negotiation of meaning … facilitates acquisition because it connects input, internal learner capabilities, particularly selective attention, and output in productive ways" (pp. 451-452). In

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accordance with this hypothesis, negotiation of meaning (or 3 Cs) involves three interactional modification techniques or conversational repair, as suggested by Long (1996): 1) clarification request, 2) confirmation check and 3) comprehension check.

Comprehensible output and modified output have been recognised as two phenomena that show their significance in the process of interaction (Swain, 1995; 2005). Swain showed that these kinds of output or production are vital for language learning mastery; along with that, she argued that learners need to be pushed to reach their potential by having to live feedback. Pica (1994) has adopted Swain's ideas on this topic in terms of viewing learners' modification of their output as a vehicle for them to attend to their interlanguage grammar and thereby manipulate it in creative, complex, and ultimately more targeted ways. This hypothesis has also been influenced by the effect of negative feedback of learners when interlocutors lack the meaning targeted by learners. Thus, they work on inferring their problems and attempt to repair these in order to make progress with their acquisition of vocabulary, syntax and pronunciation (Mackey, Gass & McDonough, 2000).

In SLA, in order to see the beneficial transformation of input into intake and productive output, we, as learners, should experience the following: 1) 'understanding a second language i+1 form' 2) 'noticing a gap between the second language i+1 form and the interlanguage rule' 3) 'the reappearance of the i+1 form with minimal frequency' (Mitchell and Myles, 2004, p. 156). A related concept to this is that SLA and hypothesis interaction play a key role in creating a foreigner talk, that is to say 'a simplified and pidgin-like variety sometimes used to address strangers and foreigners' (Mitchell and Myles, 2004, p. 164).

3. Critical Review of the Hypothesis

It is evident that the hypothesis of interaction has drawn the attention of many researchers for deeper investigation due to a number of reasons: as it is a guide to a naturalistic environment in language acquisition and an opportunity to practise language learning on a shared basis (Ellis, 1991). Many factors are expected to determine the speed and faultlessness of SLA: i.e. intelligence, confidence, active personality of learners. Such elements are seen as fundamental in second language learning, along with learning environment (i.e. natural and cooperative or artificial and unhelpful), timing suitability, interlocutors' professionalism, chosen topics and graduality.

As comprehensible input shapes the key constituent of this proposal, the connection between input and acquisition is well-linked. However, input may not always necessarily lead to acquisition. Input is sometimes used just to provide information while others use it to increase their interlanguage, so they become more competent at understanding the knowledge that is acquired through experience (Ellis, 1991). As explained earlier, interactional modification and meaningful negotiation cause comprehensible input. Yet, comprehensible input might focus on narrow linguistic aspects of language specifically discourse functions that neglect topicalization (Ellis, 1991).

This claim greatly supports the rule of quality rather than quantity in language comprehension. The

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success in any interaction process relies greatly on the level of friendship and closeness among NNSs (learners) and their NSs (interlocutors). The friendlier the learners are with interlocutors, the more they are likely to enhance their linguistic proficiency will be achieved. In accordance with Saville-Troike, (2006), two types of interaction process were suggested: interpersonal and intrapersonal interaction. The first occurs on a social level when there is a situation resulting in communication taking place among NNSs with their interlocutors or any NSs. or experts. The second type of interaction takes place on a personal level when learners start the process of incorporating ideas and information in their minds on an individual basis.

3.1 Contribution of Interaction Hypothesis to Noticing in SLA

A number of language researchers have proved that noticing is a requisite to achieve successful SLA. The interaction hypothesis plays a key role in enhancing different acts of noticing by learners among themselves as well as with their interlocutors. The concept of noticing has been defined by Richard Schmidt as 'the process of bringing some stimulus into focal attention...' (Mitchell and Myles, 2004, p. 184). Noticing is a critical factor and primary medium in learning, a language, whether it a native or target one, language. Hanaoka (2007) found noticing to be a powerful action for rewarding output related to lexis and grammar. Based on Hanaoka's (2007) study, the practice of noticing was accomplished via four phases: initial output, comparison and two forms of revision. The learners were observed to be more motivated when comparing with their interlocutors. Furthermore, a valuable lesson was learned from this study; repetition is the key to memorising solutions to language learning.

Noticing follows a similar process to attention, that is to say, it is a wholly conscious process used while language learning in order to absorb how structures are organised and how words are pronounced, and enable the learners to perceive their problems and difficulties. Functional output depends in essence on professional and attentive noticing. The amount of knowledge given as input must be appropriate and at the same level of the learners, as it will not be transformed into output unless the learners are trained with the strategies of noticing.

Gass (1991) points out that 'nothing in the target language is available for intake into a language learner's existing system unless it is consciously noticed' (p. 136). Ellis (1991) also argues that acquisition of language involves several actions such as noticing new items, and comparing and integrating between what is learned. Some researchers confirm that learners should notice, observe and be aware of the variances between their interlanguage, the learners' native language and the language they are learning (Schmidt, 1994). The practice of noticing can be facilitated by focusing on certain features such as: paralanguage, speech intonation, pronunciation and foregrounding (Mackey: 1999). The next example shows how pronunciation helped learners to use noticing for better language learning:

    NS: okay, as we agreed guys last time, today we will present presents to the new classmates.

    NNS: present and presents, don't they have the same meaning!

    NS: well, they're totally different. Look at the board; the first 'present' is a verb, there's a stress

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> on the second part and means to give something to somebody; but the second 'present' is a noun, a stress on the first part of the word and means a gift.
>
> **NNS:** aha, now I got it.

In the previous example, the learner applied the skill of noticing to obtain to decode the words he knew. As the learner noticed how the pronunciation of the two words were different, he later realised that something was wrong which needed correcting and thus led him to question the NS. In doing so, the learner was able to enrich his mental, personal dictionary with a number of new words to exist in second language. That is what is known as 'noticing the gap' (VanPatten & Williams, 2007).

3.2 Contribution of Interaction Hypothesis to Feedback in SLA

The role of feedback in SLA is crucial as it works at promoting learners' linguistic abilities and their communicative proficiency. The interaction hypothesis values different types of feedback (i.e. interlocutor-student feedback or peer feedback). Leeman (2000) identified beneficial outcomes after a group of learners were exposed to interactional feedback. In another study, MacKey, Gass and McDonough (2000) found that interactional feedback was more beneficial for better learning lexis and phonology more than other aspects of grammar. Peer feedback is the result of this type of joint communication. Peer feedback, which is also known as peer review (Mangelsdorf, 1992) or peer editing (Keh, 1990), helps learners to extend their different (e.g. linguistic and expressive) abilities as they can comment on their fellow students' written or oral work (Topping, 2000).

In his updated view about interaction hypothesis, Long (1996) takes into consideration the significance of feedback; which is termed as corrective feedback. Corrective feedback and negative feedback have been widely used simultaneously to refer to the usage of non-native speakers of English (Gass, 1997). Feedback can also involve some types of conversational modification: clarification requests and confirmation checks (Mitchell and Myles, 2004). Such feedback is important because it does not only show learners the correct and incorrect information, but rather it provides positive evidence that might be ignored in less interactive learning environments (Tran, 2009). As Gass and Mackey (2007) state, feedback constitutes two broad types: explicit feedback which includes 1) direct correction and explanation of the errors and 2) implicit feedback which includes specific interactional modification techniques (e.g. confirmation checks, requests for clarification, comprehension checks, and recasts), as shown in the section 3 below.

Because of the interaction among learners with the provision of feedback of NSs, this seems a motivating environment for learners to develop their abilities relating to systematic comparison of the contents (Carroll, 2001). Long comments on negative feedback, also referred to as corrective feedback, as follows:

it is proposed that environmental contributions to acquisition are mediated by selective attention and the learner's developing L2 processing capacity... negative feedback obtained in negotiation work or elsewhere may be facilitative of SL [second language] development' (Mackey, 1999, p. 414).

Accordingly, feedback can be shown to learners in several ways, either implicitly or explicitly. The next

example for explicit feedback is given by Mackay, Gass and McDonough (2000).

NNS (learner): there's a basen of flowers on the bookshelf.

NS (teacher): a basin?

NNS (learner): base

NS (teacher): a base?

NNS (learner): a base

NS (teacher): oh, vase

NNS (learner): vase

The NS, or the interlocutor, used a confirmation check to verify the NNS's utterance in order to comprehend his sentence. The NS knew that the NNS had a problem with the pronunciation so he attempted to correct the learner directly.

4. Examples for Interaction Strategies already Addressed

Long has described the three terms of interactional modification -so called 3 Cs- as shown in the previous section:

1) clarification request is an expression that is made by NNSs or learners to elicit clarification or help in understanding from NSs or interlocutors' preceding utterances (Foster & Ohta, 2005). The following dialogue exhibits this technique:

NS: In learning vocabulary, it is usual that content words are grasped before abstract ones.

NNS: But what do you mean by that? Can you elaborate more?

NS: Yah, especially among children, they often learn words related to their everyday life earlier.

In the dialogue above, the modified interaction here is based on clarifying the request. The learners (or NNSs) were required to explain the content of the message to the interlocutor so that he/she was able to understand the learners. Through this direct appeal, the NS knew the idea and overcame the problem of confusion in meaning. Pica (1987) has given an illustrative example (Table 1) for this type of interactional modification.

Table 1. An example for clarification request

Excerpt	Interactional modification Technique	Functional Feature	NNS (English) learner	NS (interlocutor)
A.				So you came here by yourself or did you come with friends?
B.	Clarification Request	Knowing more details and get extra explanations	*No no I—what? what you say?*	
C.				Did you come to the states with friends or did you come alone?
D.			No, alone from Toronto	

2) Confirmation check refers to an action that is performed by NNSs immediately following an utterance by NSs or interlocutors in order to seek confirmation that the utterance had been correctly understood or heard by the speaker through repetition or rising intonation (Foster & Ohta, 2005). The next dialogue shows this:

    NS: All right, take the old sofas to the storage.

    NNS: The storage?

    NS: Yes please, the one below the stairs.

The modified interaction used in the previous dialogue is confirmation check which focuses on testing the degree of understanding of what has been expressed by the interlocutor. It also identifies whether s/he (the interlocutor) should continue the lesson or go back to what has been missed for further explanation. In other words, *"The storage?"* was uttered by the learner to show the instructor accurately the corrected word.

Thus, this process of checking the meaning of this unknown word is used to enable it to be stored in the unconscious mind. In this regard, Pica (1987) has shown the following two examples (Tables 2 and 3) for further clarification illumination.

Table 2. An example for confirmation check (1)

Excerpt:	Interactional Modification Technique	Functional Feature	NNS (English) learner	NS (interlocutor)
A.			Like us three months ago that the SEPTA doft doft doft	
B.				*Dropped?*
C.	Confirmation check	Meaning verification	no you lo- you you lend me I am You	
D.				Oh owe debt
			Debts okay they debt million of Dollars	
				Oh yeah yeah

Table 3. An example for confirmation check (2)

Excerpt:	Interactional Modification Technique	Functional Feature	NNS (English) learner	NS (interlocutor)
A.				Did you get high marks? Good Grades?
B.	Confirmation check + repetition	Repetition of what has been said by the interlocutor	*High marks?*	
C.				Good grades, A's and B's Did you get A in English?
D.			oh no in English yes em B	

3) Comprehension check is a technique that is usually used by the NSs to confirm whether his/her utterance(s) had been understood accurately by the NNSs (Foster and Ohta: 2005). The next dialogue provides an example of this:

    NS: Well, guys, did you understand the new terms that recently covered

    NNS: Yeah, yeah all of them

    NS: Ok, let's name some of them

In the last dialogue, a comprehension check was utilized to give further confirmation of the meaning that is addressed by the interlocutor. The first statement was not initiated by the NNS as seen in the

previous two types of negotiation of meaning. Rather, it was started by the NS or interlocutor in order to hear the answer from the NNS and to check their understanding. In this sense, Pica (1987) demonstrated the example below (Table 4) to explain the role of this form of comprehension check.

Table 4. An example for comprehension check

Excerpt:	Interactional Modification Technique	Functional Feature	NNS (English) learner	NS (interlocutor)
A.				OK, he's dancing with the woman Doctor
B.	Comprehension check	Understanding the target message	*Excuse me?*	
C.				*The the young man doctor is dancing with the woman doctor, right?*
D.			Mmhm	

References

Brown, H. D. (2000). *Principles of Language and Learning and Teaching: Theories of Second Language Acquisition*. Longman.

Carroll, S. E. (2001). *Input and evidence: The raw material of second language acquisition* (vol. 25). The Netherlands: John Benjamins Publishing.

De la Fuente, M. J. (2002). Negotiation and oral acquisition of L2 vocabulary. *Studies in second language acquisition, 24*(01), 81-112.

Duran, L. (1994). Toward a better understanding of code switching and interlanguage in bilinguality: Implications for bilingual instruction. *The Journal of Educational Issues of Language Minority Students, 14*(2), 29.

Ellis, R. (1991). The Interaction Hypothesis: A Critical Evaluation. Paper presented at the Regional Language Center Seminar, Singapore

Foster, P., & Ohta, A. S. (2005). Negotiation for meaning and peer assistance in second language classrooms. *Applied linguistics, 26*(3), 402-430.

Hanaoka, O. (2007). Output, noticing, and learning: An investigation into the role of spontaneous attention to form in a four-stage writing task. *Language Teaching Research*, *11*(4), 459-479.

Gass, S. M. (1991). Grammar instruction, selective attention and learning processes. In R. Phillipson, E. Kellerman, L. Selinker, M. Sharwood Smith, & M. Swain (Eds.), *Foreign/second language pedagogy research*. Clevedon: Multilingual Matters.

Gass, S. M. (1997). *Input, Interaction, and the Second Language Learner*. Nahwah: Lawrence. Erlbaum Associate.

Gass, S. M., & Varonis, E. M. (1994). Input, interaction, and second language production. *Studies in second language acquisition, 16*(3), 283-302.

Gass, S. M., Mackey, A. & Pica, T. (1998). The Role of Input and Interaction in Second Language Acquisition Introduction to the Special Issue. *The Modern Language Journal, 82*(3), 299-307.

Keh, C. L. (1990). Feedback in the writing process: A model and methods for implementation. *ELT journal*, *44*(4), 294-304.

Krashen, S. (1985). *The input hypothesis: Issues and implication.* London: Longman

Larsen-Freeman, D., & Long, M. H. (1991). *An introduction to second language acquisition research* (pp. 153-219). Essex: Longman.

Leeman, J. (2000). *Investigating recasts and L2 development: Negative evidence and enhanced salience*. Paper presented at the American Association of Applied Linguistics Conference, Vancouver, British Columbia.

Long, M. H. (1981). Input, interaction, and second-language acquisition. *Annals of the New York Academy of Sciences*, *379*(1), 259-278.

Long, M. H. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input1. *Applied linguistics*, *4*(2), 126-141.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie, & T. K. Bhatia (Eds.), *Handbook of language acquisition*. New York: Academic Press.

Loschky, L. (1994). Comprehensible input and second language acquisition. *Studies in Second Language Acquisition*, *16*(3), 303-323.

Mackey, A. (1999). Input, interaction, and second language development. *Studies in second language acquisition*, *21*(4), 557-587.

Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback?. *Studies in Second Language Acquisition*, *22*(4), 471-497.

Mangelsdorf, K. (1992). Peer reviews in the ESL composition classroom: What do the students think?. *ELT journal*, *46*(3), 274-284.

Mitchell, R., & Myles, F. (2004). *Second Language Learning Theories* (2nd ed.). Arnold.

Pica, T. (1987). Second-language acquisition, social interaction, and the classroom. *Applied linguistics*, *8*(1), 3-21.

Pica, T., Holliday, L., Lewis, N., Berducci, D., & Newman, J. (1991). Language learning through interaction. *Studies in Second Language Acquisition*, *13*(3), 343-376.

Pica, T. (1994). Questions from the language classroom: Research perspectives. *Tesol Quarterly*, *28*(1), 49-79.

Pica, T., Lincoln-Porter, F. E., Paninos, D., & Linnell, J. (1996). Language Learners' Interaction: How Does It Address the Input, Output, and Feedback Needs of L2 Learners? *TESOL quarterly*, *30*(1), 59-84.

Saville-Troike, M. (2006). *Introducing second language acquisition*. Cambridge University Press.

Schmidt, R. W. (1990). The Role of Consciousness in Second Language Learning. *Applied linguistics*, *11*(2), 129-158.

Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. *Consciousness in second language learning, 11*, 237-326.

Swain, M. (1995). Three functions of output in second language learning. In G. Cook, & B. Seidlhofer (Eds), *Principles and practice in the study of language.* Oxford: Oxford University Press.

Swain, M. (2005). The output hypothesis: Theory and research. *Handbook of research in second language teaching and learning*, *1*, 471-483.

Swain, M. and Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal*, *82*(3), 320-337.

Tran, Hoang-Thu. (2009). *The critical period and second language acquisition*. ERIC. Universiti Utara Malaysia Library. Retrieved from http://www.ukessays.co.uk/essays/linguistics /childrens-language-learning.php#ixzz36FSX6JYz

Topping, K. J. (2005). Trends in peer learning. *Educational psychology*, *25*(6), 631-645.

VanPatten, B., & Williams, J. (2007). *Theories in second language acquisition: An introduction*. Routledge.

Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Wadsworth, B. J. (1996). *Piaget's theory of cognitive and affective development: Foundations of constructivism*. Longman.