

Robinson, Peter

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Born in London, United Kingdom, Peter Robinson is probably best known for his empirical studies, beginning in the mid-1990s, into the roles of attention and awareness during implicit and explicit second language learning, and the effects of task complexity on L2 learners' production and acquisition. Throughout his work in these areas he has consistently addressed the influence of individual differences in cognitive abilities on successful learning under implicit or explicit conditions, or on different types of task. His long list of academic interests and his contributions to the field of applied linguistics through journal articles, conference presentations, book chapters, and edited and authored books have revolved around three main hypotheses that he has put forward. These are the cognition hypothesis, the aptitude complex/ability differentiation hypothesis, and the fundamental similarity hypothesis, which will be further described below.

Peter Robinson obtained a BA degree in modern English linguistics and literature from the University of Wales, a PGCE in English education from the University of Nottingham, an MA in applied linguistics from the University of London, and a PhD in second language acquisition (SLA) from the University of Hawai'i. He has lived and taught in the United Kingdom, the Middle East, the United States, Australia, and Japan, where he is currently professor of linguistics and SLA at Aoyama Gakuin University in Tokyo. He has also been visiting professor at a number of universities worldwide and has editorial commitments either as editor of book series or as editorial board member of many academic journals in the SLA field. He has also been conference chair and organizer of a number of conferences, a plenary speaker at many local and international conferences, and is a prolific supervisor of many SLA-based BA, MA, and PhD theses.

Drawing on research and theory in SLA, developmental psychology and psycholinguistics Peter Robinson developed the cognition hypothesis of adult second language learning (Robinson, 1995, 2001a, 2003a) and its associated triadic componential framework (Robinson, 2001a, 2002b, 2003a, 2005a, 2007a, 2007c; Robinson & Gilabert, 2007). Influenced by the work of Givón (1995), Cromer (1991), and Slobin (1993), the basic tenet of the hypothesis is that language development can be promoted by manipulating the design of language-learning tasks so as to progressively increase the cognitive and conceptual demands they impose on learners. In childhood, increasing conceptual sophistication promotes language development, and the shift from what Givón (1995) called the pragmatic to the syntactic mode of production. For example, children (under two years of age) are initially only able to conceptualize and talk about things happening in the here-and-now, but later, with conceptual development, they are able to talk about the there-and-then, and this promotes their acquisition of past tense morphology and deictic expressions. In this sense, conceptual development "pushes" linguistic development (see Cromer, 1991; Robinson & Ellis, 2008). By default, adult L2 learners too may draw on and attempt to communicate using the ontogenetically earliest acquired concepts first in the early stages of L2 acquisition, and will try to find the simplest linguistic means to express them. This explains why early second language speech appears similar to the speech of users of pidgin languages. Robinson suggests that interlanguage will be optimally pushed to grammaticize more complex linguistic forms if the conceptual, attentional, and memory demands of the tasks increase in ways that recapitulate the sequence of conceptual development in childhood. This is

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what he calls the “natural order” for sequencing task demands (Robinson, 2003a, 2005a; Robinson, Cadierno, & Shirai, 2009).

The four basic predictions of the cognition hypothesis are that if task cognitive complexity increases along certain dimensions: (a) more complex and accurate messages will be produced to meet more complex tasks demanding more attention and memory; (b) learners will pay more attention to task demands, and therefore be more vigilant, and learn more from the features in the input they are exposed to; (c) as a consequence they will retain such features in the input for a longer time; and (d) performing simple tasks first and then more complex tasks will contribute to more efficient scheduling of attentional demands, and so better performance on more complex tasks. The cognition hypothesis is also driven by pedagogic concerns, such as the need to establish criteria for sequencing tasks in a syllabus (Robinson, 2005a, 2007a, 2009), and so it has associated with it a triadic componential framework that lists potential features of tasks that are susceptible to manipulation. These include cognitive task variables (e.g., the amount of reasoning they impose on learners or the number of elements they have to deal with during task performance), interactive variables (e.g., whether information flows in a single direction or in both directions between participants, or whether there is a single solution or a number of solutions to the task), and affective variables (e.g., learners’ aptitude or anxiety during performance).

The hypothesis proposes that tasks should be organized on the basis of their cognitive complexity (i.e., the attention and memory demands they impose on learners’ processing) alone and not on their linguistic demands, as traditional syllabi have suggested. Such progressive increases in the complexity of task demands will speed up the passage through stages in interlanguage development, and will cause more attention to, noticing of, and retention of input. A fundamental aspect of the hypothesis is that not all dimensions of task complexity will cause the above mentioned effects, and so it distinguishes between variables that draw learners’ attentional and memory resources to their performance and learning (i.e., resource-directing variables, such as the reasoning demands of the task) and those variables that contribute to task complexity but which disperse or deplete learners’ attention and memory resources with negative effects for learners’ performance and learning (i.e., resource-dispersing variables, such as not providing enough pre-task planning time).

Both the cognition hypothesis and its associated triadic componential framework have provided a theoretical basis for a wealth of empirical studies looking at the effect of task complexity on learners’ oral and written production and their learning. As is typical of emerging fields, most studies have tried to isolate a single variable from the componential framework, with few studies looking at several variables simultaneously, or at the effects of task complexity longitudinally. So far most studies have looked at the effects of increasing task complexity along the degree of past time reference (i.e., +/- here-and-now studies), the number of elements involved in task performance, and the amount of reasoning that task design imposes on learners, and they have done so with a variety of task types and mostly in monologic mode. Some examples of empirical studies on the effects of task complexity on production and acquisition include: (a) studies on task complexity and monologic oral production (Robinson, 1995; Rahimpour, 1997; Michel, Kuiken, & Vedder, 2007; Gilabert, 2007a, 2007b; Ishikawa, 2007), (b) dialogic oral production (Nuevo, 2006; Robinson, 2007c; Gilabert, Barón, & Llanes, 2009), (c) monologic written production (Kuiken, Mos, & Vedder, 2005; Kuiken & Vedder, 2007a, 2007b), and (d) recasts and acquisition (Revesz, 2009).

Despite mixed findings, as yet, concerning the predictions of the cognition hypothesis, the area of task complexity is one of the most prolific areas of task-based research within the SLA field. This is confirmed by the large number of journal articles, conference presentations and symposia, and research networks, as well as MA and PhD theses written on various aspects of the theory in the last two decades. Motivated by the tenets and

predictions of the cognition hypothesis, task complexity studies are providing more and more information about the effects of manipulating task design on language performance and development, with important implications for syllabus design, classroom practice, testing, and SLA theory.

Beyond his interest in task design and how task internal features may contribute to L2 performance and development, Peter Robinson has carried out extensive work within the area of individual differences. Taking the person-in-situation approach to aptitude of Richard Snow (1987, 1994) as a source of inspiration, the basic claim of the aptitude complex hypothesis is that rather than a single, monolithic aptitude for language learning there exists multiple aptitudes and that these should be matched to the tasks and conditions under which students learn the foreign or second language. Simply put, the theory holds that there are different bundles of cognitive abilities (e.g., ability to notice gaps in your own interlanguage, ability to remember previous input, ability to process the meaning of messages) which are called upon under different conditions of L2 learning and exposure. Cognitive abilities, such as noticing the gap or memory for contingent speech, are in turn made up of a number of other primary abilities such as perceptual speed and pattern recognition in the case of the former and of phonological working memory capacity for the latter. Robinson (2001b, 2002a, 2005b, 2007b, 2010) advances four aptitude complexes associated with four different modes of instruction or pedagogical intervention. These are recasting (i.e., correct reformulations of an error by a more proficient interlocutor), oral input flooding (i.e., input manipulated to be rich in target forms), written input flooding, and explicit rule explanation. Which combinations of cognitive abilities (or "aptitude complexes") are drawn upon will therefore depend on whether students are being exposed to explicit rule explanations or to less intrusive interventions such as recasts or incidental learning by means of input flooding. For example, to learn from a recast learners will have to draw on both an ability to notice the gap (i.e., by which they notice what is missing or wrong in their interlanguage) and an ability for contingent speech memory (i.e., by which they remember what was previously said by the most proficient interlocutor), while for incidental learning through input flooding they will draw on their memory for contingent speech but also on their elaborate, semantic processing abilities.

Associated with the aptitude complex hypothesis is the ability differentiation hypothesis, which proposes that the strength in cognitive abilities contributing to each aptitude complex may vary from one individual to another. This means that, for example, a specific learner may have a high aptitude for noticing the gap in his or her interlanguage but may test low in his or her semantic processing abilities. That is, as in the case just mentioned, some learners will have clearly differentiated abilities. On the other hand, some learners may display similar strengths in all abilities, being high in aptitude on all of them, or low in aptitude on all of them. These differences in aptitude profiles, Robinson argues, explain individual differences in instructed language learning success. While still in need of more empirical studies exploring such aptitude complexes, both hypotheses lay the ground for research into the best ways of matching learners' individual cognitive differences to the instructional modes they are most likely to learn well under. Such links can be of enormous importance for successful instructional grouping and practice in foreign and second language acquisition, since matching aptitudes and instructional modes (and language learning tasks) should speed up second language acquisition processes.

Finally, the last hypothesis around which the work of Peter Robinson has revolved is called the fundamental similarity hypothesis of explicit, incidental, and implicit adult second language acquisition (Robinson, 1996, 1997a, 1997b, 2001b, 2003b, 2005c, 2007d). Largely inspired, among others, by the theories on attention and awareness of Richard Schmidt, the fundamental similarity hypothesis' basic claim is that when it comes to adult L2 learning, there are no fundamental differences between explicit and implicit learning.

This is a very similar position to the one held by Baars (2002) and Shanks and St. John (1994). All adult learning is the result of both attention to and awareness of input. Noticing (i.e., attention with awareness) and rehearsal (i.e., holding it in working memory for long enough for the new material to go into long-term memory) are necessary to learning, regardless of whether learning takes place under what laboratory experimenters call implicit versus explicit conditions. With regard to classroom learning, such noticing and rehearsal in working memory will take place regardless of whether adult learners are merely exposed to oral or written texts or whether they are receiving explicit rule explanations about how a language works. The difference lies, then, not in whether instruction is implicit or explicit, but on how much each instructional approach facilitates or enhances attention to, noticing of, and subsequent processing of forms in the input.

In sum, the work of Peter Robinson has contributed to applied linguistics from a cognitive perspective in the field of SLA. In the area of task cognitive complexity it has inspired and continues to inspire intense and extensive empirical research on the effects of manipulating task design on L2 performance and acquisition. In the area of individual differences, Peter Robinson has laid out some theoretical bases for the exploration of the links between certain combinations of cognitive abilities to success in language learning under different conditions of instructional exposure. Finally, his work has suggested that the implicit/explicit divide may not matter that much for instructed adult second language acquisition: what is more important is to develop instructional conditions (and design learning tasks) which foster the noticing and processing of new forms in the input.

SEE ALSO: Aptitude in Second Language Acquisition; Attention, Noticing, and Awareness in Second Language Acquisition; Explicit Learning in Second Language Acquisition; Implicit Learning in Second Language Acquisition; Task-Based Learning; Cognitive Underpinnings

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Suggested Readings

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