



# The principle of double stimulation: A path to volitional action



Annalisa Sannino\*

*Institute of Behavioural Sciences, Center for Research on Activity, Development and Learning (CRADLE), University of Helsinki, P.O. Box 9, (Siltavuorenpenger 3 A), FIN-00014, Finland*

## ARTICLE INFO

### Article history:

Received 20 August 2014  
 Received in revised form 16 January 2015  
 Accepted 28 January 2015  
 Available online 16 February 2015

### Keywords:

Double stimulation  
 Volitional action  
 Conflict of motives

## ABSTRACT

While contemporary literature understands double stimulation primarily as a method to study specific mental functions with the help of two types of stimuli, this article points at two under-researched aspects of double stimulation based on a close reading of classic texts by Vygotsky and his colleagues. First, double stimulation, besides being a method, is a principle of volition which distinctively characterizes all higher mental functions. Second, double stimulation comprises conflictual aspects, in particular conflicts of motives. Together with the two types of stimuli, conflicts of motives constitute the core of a strategic setup that human beings establish to intentionally affect their behavior and the world around them. A model based on these interpretations is constructed. The model may enrich our understanding of double stimulation and open up interesting new avenues for further research.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Double stimulation is widely acknowledged as a foundational issue in contemporary studies, commentaries and interpretations of Vygotsky's work, as well as in its interventionist legacy within cultural–historical activity theory. Usually double stimulation is understood as “a particular method of experimental investigation... using two groups of stimuli... One group of stimuli has the function of a task toward which the activity of the experimental subject is directed, whilst the other takes on the function of signs which help to organize the activity” (Vygotsky, 1931/1994, p. 208).

Double stimulation appears in a fragmented way in the literature. Overcoming this fragmentation requires bringing together numerous sources, most of which tackle the topic rather unsystematically. Often texts by Vygotsky and his colleagues refer to second stimuli but do not mention double stimulation or equivalent terms. No comprehensive account was left by these authors which would cover the different types of experiments conducted and the broad theoretical implications of their results. The fragmentation in these texts is due most likely to the academic, historical and political circumstances in which the works of these authors<sup>1</sup> were conducted (Sannino, Daniels, & Gutierrez, 2009). Taken alone, literature fragments can be considered more as indications to direct further research than as explanations within an accomplished research agenda.

In such a context, today's applications, commentaries and interpretations of double stimulation play an important role in the mapping of an agenda for further research. Contemporary literature, however, seldom goes beyond brief accounts, primarily centered around the experimental design with two stimuli and limited domains of investigation. Also many contemporary studies attribute different connotations and scopes to double stimulation. A thorough examination of the contemporary and classic literature leads me to consider underestimated aspects which may enrich our understanding of double stimulation and open up interesting new avenues for further research.

\* Tel.: +358 04 51 35 6343 (mobile).

E-mail address: [annalisa.sannino@helsinki.fi](mailto:annalisa.sannino@helsinki.fi).

<sup>1</sup> Vygotsky's understanding of double stimulation developed over time. It would be valuable to trace this development from his early writings onward. Such an analysis, however, faces difficulties of timing, periodizing and identifying original versions of Vygotsky's works, which cannot be overcome within the scope of this article. The bibliography at the end of this article includes specifications of the years of writing (YW) of Vygotsky's works as far as they could be found in editorial notes (E) to texts in English and in two Russian chronologies (Liphanova, 1996, (L) and Yasnitsky, 2011a (Y)).

In this article I present my journey through the literature and an initial attempt at overcoming its fragmentation by proposing a model which highlights two aspects of double stimulation to which contemporary research has paid little attention. First, double stimulation, besides being a method, is a principle of volitional action which distinctively characterizes all higher mental functions. Second, double stimulation comprises conflictual aspects, in particular conflicts of motives. Together with the two stimuli conflicts of motives constitute the core of a strategic setup that human beings establish to intentionally affect their behavior and the world around them. These two interpretations lead to a model which may enrich our understanding of double stimulation and open up interesting new avenues for further research.

Double stimulation is frequently exemplified by means of particular behavioral instances such as the tying of a knot for the purpose of remembering (Vygotsky, 1999b), the throwing of dice (Vygotsky, 1960/1997c), and counting to three (Vygotsky, 1960/1987). Vygotsky (1960/1987) refers also to the use of the clock in the Lewinian waiting experiment as an instance of a second stimulus. The two types of stimuli serve the purpose of objectifying inner psychological processes to trace the development of higher mental functions and reveal their structure. Although second stimuli play a crucial mediating function, double stimulation cannot be subsumed to the general idea of mediation by symbolic tools. The emergence of volitional action involves conflicts of motives as a key component which has largely been neglected in discussions of double stimulation.

The article starts in Section 2 with an overview of contemporary works which refer to double stimulation or utilize it in the context of theoretical discussions and empirical inquiries. This section highlights dominant orientations in the current understanding of double stimulation and leads to questions concerning the relationship between double stimulation and volition, the possibility of conceiving double stimulation as both a method and a principle, and the inclusion of conflict of motives as a key feature of double stimulation. Section 3 returns to the texts by Vygotsky and his colleagues in an attempt at providing initial answers to these questions. Preliminary answers are formulated with the help of fragments from the literature, some of which have remained in shade, and by putting forward a tentative model to expand current conceptualizations of double stimulation. Concluding remarks in Section 4 sum up the findings of this journey through the literature and propose an agenda for future research.

Two main criteria guided the selection of the literature examined in this article, namely: 1) explicit mentioning of double stimulation or corresponding terms and 2) mentioning of auxiliary stimuli or corresponding terms.<sup>2</sup>

## 2. Contemporary studies, commentaries and interpretations of double stimulation

Double stimulation has been increasingly used in recent years in empirical studies touching upon a wide range of topics such as curriculum design (Garraway, 2010), facilitation of algebraic tasks among children with difficulties in math (Abramovich, 2006), family therapy (Sundet, 2010), language disabilities (Martin, 2012), partnership between health professionals and families (Hopwood, in press), and second language acquisition (Lantolf, 2011). In studies such as these double stimulation appears as a well-established mechanism without elaboration on its actual functioning or use in the reported empirical analyses.

Available contemporary commentaries and interpretations of double stimulation provide grounds for tracing how this notion is understood today. In the following, three areas of emphasis are briefly outlined. They concern the relationship between double stimulation and specific higher mental functions, double stimulation as a method, and the mechanism of double stimulation. An examination of these three areas leads me to formulate questions which will be addressed in Section 3 of this article with the help of a close reading of classic texts.

### 2.1. Double stimulation and higher mental functions

Double stimulation is usually related to the study of specific higher mental functions, in particular memory and attention (Damianova & Sullivan, 2011; Martin, 2012; Puzyrei, 2007) and, most frequently, concept formation (Hanfmann & Kasanin, 1937; Hedges, 2012; Kozulin, 1986; Macdonald, 2002; Towsey & Macdonald, 2009; Vaughan, 1981). Volition is one among the higher mental functions also discussed in the literature in connection to double stimulation (Engeström & Sannino, 2013; Kozulin, 1990) or, when double stimulation is not explicitly mentioned, in connection to the use of auxiliary stimuli (Aidman & Leontiev, 1991). The connection between double stimulation and volition, however, seems to be the least understood and articulated in the literature.

Towsey (2009) engages in a discussion of double stimulation exclusively related to the development of concepts using the Zalkind Summary probably written by Vygotsky in 1930. One point in the summary is, however, of particular interest for the connection between double stimulation and volition:

“Experimental research into complex choice processes (free and combined) has shown: a) that the complex choice process is built on a type of process that has similarities with mnemotechnical operations, based on auxiliary stimuli (signs, words), and

<sup>2</sup> The method of double stimulation is referred to with different terms such as experimental genetic method (e.g., Vygotsky, 1929/1979), functional method of double stimulation (e.g., Vygotsky, 1931/1994), functional method of twofold stimulation (Vygotsky & Luria, 1930/1994), historical-genetic method (e.g., Vygotsky, 1929/1994), and instrumental method (e.g., Vygotsky, 1960/1997a). Also the two groups of stimuli are referred to with different terms. Today they are often simply named first and second stimuli. The first stimuli were originally also called object stimuli (Sakharov, 1930/1994). Second stimuli were referred to with numerous different names: additional stimuli (Leont'ev, 1932/1994), auxiliary stimuli (e.g., Vygotsky & Luria, 1930/1994), auxiliary means (e.g., Luria, 1928/1994), artificial stimuli (e.g., Leont'ev, 1932/1994), external stimuli (e.g., Vygotsky, 1997a), instrumental stimuli (Sakharov, 1930/1994), neutral stimuli taking on the function of a sign (e.g., Vygotsky, 1997b), secondary stimuli (Vygotsky, 1960/1997c), secondary order stimuli (Vygotsky & Luria, 1930/1994), special stimuli (e.g., Vygotsky, 1999a), stimuli of a special order (Luria, 1932), stimuli-signs (Vygotsky, 1999c), and symbolic stimuli (Vygotsky, 1999a).

Download English Version:

<https://daneshyari.com/en/article/364382>

Download Persian Version:

<https://daneshyari.com/article/364382>

[Daneshyari.com](https://daneshyari.com)