Ecenur Çağırıcı

L2 comprehension in bilinguals after translating into L1 and L2

Abstract

Bilingual language comprehension has been claimed to be not only language-nonselective but also influenced by recency of use (Dijkstra & van Heuven, 2002). However, only a few studies looked into the role of recency and showed that after a bilingual has used only their L1 for a while, it takes them longer to recognize words in their L2 (Declerck & Grainger, 2017; Elston-Güttler, Gunter, & Kotz, 2005). This study investigates whether translating between two languages can also induce an inhibitory effect in the L2 and how a late bilingual's L1, which is assumed to be their dominant language, can be related to that. As translation involves comprehension mainly in the source language and production in the target language, linguistic processing might be optimized by setting a task schema to focus on one language more than the other. An experiment consisting of English lexical decision tasks and a translation task was conducted. One group of proficient, late Turkish-English bilinguals (N = 26) translated a short text from English into Turkish and another group (N = 25) translated from Turkish into English. They were asked to make lexical decisions on words and nonwords both before and after the translation task. The results showed that after the participants had translated from English into Turkish, they slowed down in making lexical decisions in English compared to their reaction times before the translation task. This indicates that they were focusing more on the target language. However, no difference was observed in making English lexical decisions after the participants translated from Turkish into English. These findings suggest that a slowdown in the source language was detected because a task schema that prioritizes the target language is adopted so that translation problems can be resolved in the target language. The fact that the participants did not get faster in making lexical decisions in their L2 in either experimental condition indicates that their L1 was not a factor affecting their L2 comprehension.

Keywords: psycholinguistics, bilingual lexical processing, lexical access, late bilingualism, translation process research

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Descriptive Statistics									
Group translating from English into Turkish					Group translating from Turkish into English				
	M	N	SD	SE		M	N	SD	SE
Pre-Translation RT for Words	579.96	26	69.77	13.68	Pre-Translation RT for Words	567.19	25	63.21	12.64
Post-Translation RT for Words	600.09	26	55.35	10.85	Post-Translation RT for Words	589.81	25	85.74	17.15
Pre-Translation RT for Nonwords	709.89	26	88.81	17.42	Pre-Translation RT for Nonwords	706.76	25	87.44	17.49
Post-Translation RT for Nonwords	703.49	26	95.91	18.81	Post-Translation RT for Nonwords	678.50	25	81.84	16.37

Dependent *t*-test Results							
Group translating from English into Turkish				Group translating from Turkish into English			
	t	df	Sig. (2-tailed)		t	df	Sig. (2-tailed)
Pre-Translation RT for Words – Post-Translation RT for Words	-2.391	25	.0247	Pre-Translation RT for Words – Post-Translation RT for Words	-1.993	24	.058
Pre-Translation RT for Nonwords – Post-Translation RT for Nonwords	.455	25	.653	Pre-Translation RT for Nonwords – Post-Translation RT for Nonwords	1.999	24	.057

Independent *t*-test Results							
	t	df	Sig. (2-tailed)		t	df	Sig. (2-tailed)
Pre-Translation RT for Words	.684	49	.497	Post-Translation RT for Words	.511	49	.612

Example items used in the lexical decision task of the experiment		
Words	Freq_HAL	Nonwords
worth	81429	vease
title	79977	lence
cause	79705	noats
press	77897	bresh
clear	77302	apity

Freq_HAL: The Hyperspace Analogue to Language (HAL) frequency norms (Lund & Burgess, 1996).

Example sentences used in the translation task of the experiment (third sentences)
A team at the University of Pennsylvania School of Medicine studied certain brain cells which are involved in keeping the brain alert.
Sleep increases the production of cells that go on to make an insulating material known as myelin which protects our brain's circuitry.
Pennsylvania Üniversitesi Tıp Fakültesi'nden bir grup, beyni dikkat halinde tutmada rol oynayan bazı beyin hücrelerini inceledi.
Uyku, beynimizi koruyan ve miyelin olarak bilinen bir yalıtım malzemesini yapan hücrelerin üretimini artırıyor.