



外国语言文学研究学术论丛 | 总主编◎文 旭

视觉汉语词汇识别实验中 同音字性质的研究

林文治◎著

Nature of Homophony Manipulated
in Experiments
on Visual Chinese Lexical Access



科学出版社

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内 容 简 介

本书考察在汉语阅读实验中使用的同音词里声调是否属于被明显感知的一个语音成分。研究采用3个受试内设计实验,针对孤立汉字、成语中的汉字或句子中双字词里的汉字,要求受试分别进行反义字、四字成语或句子正确性判断3个任务,从而置汉字处理于强、弱、中3种不同强度的语境制约中。各实验均采用3个实验组和1个控制组,其目标刺激字与对应的基字分别只在声调、音段或音节上相同,或无语音相似。

研究表明,汉字识别中语音的作用随语境制约强度而变化。语境制约弱时,语音对否定目标刺激字为正确字的判断有抑制作用;语境制约强或适中时,语音对否定判断有促进作用。但只有语境制约适中时,声调的作用才显著。语音并没有中介语义激活的作用。

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丛 书 序

外国语言文学博大精深，其内容涵盖外国语言学研究、外国文学研究、翻译研究、外语教育研究及跨文化研究等。在我国，外国语言文学研究历史悠久、成绩斐然。近些年来，外国语言文学研究发展迅猛，其理论与模式不断创新，研究方法多种多样。尤其在研究领域方面，其跨学科性和交叉性日益凸显并普遍，如与哲学、符号学、心理学、社会学、人类学、认知科学、脑科学等众多领域的日渐交叉和融合，促使我们必须多维度、多视角、多层面地进行研究，从而在科研上真正做到有所创新、有所前进、有所作为。多学科、跨学科、超学科研究已是当今学术发展的必由之路。

当然，无论是从学科研究历史传统的传承上来看，还是从其未来发展的开拓创新上来说，外国语言文学研究都任重而道远。因此，与时俱进，汇聚外国语言文学领域研究的最新成果，并为先行者和后学共同搭建学术交流的平台便成为促进学科发展极为重要的一环。为此，我们秉承西南大学“特立西南，学行天下”的大学精神，在学界广大同仁的关心和帮助下，精心打造了《外国语言文学研究学术论丛》系列学术专著，以期促进外语界同仁相互沟通与交流，共同创新与进步。该系列学术专著的规模化出版，是西南大学外国语学院科学研究事业中的一件大事，其诞生是学院学科建设与科学研究事业发展的必然，同时也必将进一步搭建西南大学外国语学院学术成果交流的平台。

西南大学起源于1906年4月建立的川东师范学堂，于2005年由原西南师范大学、西南农业大学合并组建而成，是教育部直属重点综合性大学，国家“211工程”和“985工程优势学科创新平台”建设高校。西南大学外国语言文学学科历史悠久、实力雄厚。学贯中西的大师吴宓先生，著名诗人、文学家方敬，翻译家邹绛、外语教育家张正东等学术先贤和著名专家曾在此执教，积淀了深厚的人文底蕴，形成了优良的学术

传统和办学特色。西南大学外国语学院拥有“外国语言文学”一级学科博士学位、硕士学位授权点和博士后科研流动站，以及“翻译硕士”、“教育硕士”专业学位授权点，同时接收国内访问学者。学院拥有重庆市人文社会科学重点研究基地“外国语言学与外语教育研究中心”、西部地区外语教育研究会、重庆市外文学会、重庆市莎士比亚研究会等学术组织或团体。学院现有多名国内外知名专家学者，在认知语言学、语用学、功能语言学、莎士比亚研究、英美现代主义文学、翻译研究、外语教育学等领域有较深的造诣，并在多个全国性学术团体中担任重要职务。改革开放以来，学院秉承“博学中西，砥砺德行”的院训，以“崇尚学术自由、培养外语英才、造就模范国民”为办学宗旨，以学科建设为龙头，以科学研究为基础，在语言学研究、文学研究、翻译研究、外语教育以及文化研究等领域取得了一批学术价值大、实用性强的科研成果，多次获得全国和部市级的教学科研成果奖，在国内外产生了一定的影响。

本丛书的出版得到了西南大学学科建设的大力资助，外国语学院的许多教师以及各界朋友也给予了极大的支持，尤其离不开科学出版社阎莉女士的真诚相助，在此对他们表示衷心的感谢。诚然，这个新生婴儿的成长与发展，要靠广大学人的呵护和支持。因此，敬祈学界朋友不惜赐教为幸，也热忱欢迎同行专家不吝赐稿。我们将秉承西南大学“含弘光大、继往开来”的校训，继续不遗余力为本丛书的成长壮大添砖加瓦。

为学之道，“辟如行远必自迩，辟如登高必自卑”。共同的事业就是共同的生活情趣，也是共同的追求，“嚶其鸣矣，求其友声”。“行到水穷处，坐看云起时”，思考求索的起点，追寻学术的真谛，这就是我们的责任和使命。是为序。



谨识于西南大学

2014年6月22日

前 言

心理语言学研究犹如钟摆，总是在揭示语言处理的普遍机制与语言特性的两种努力中摇摆。视觉词汇识别研究正是如此。词汇识别，从广义上，被看作是词汇的语义、句法、拼写和语音属性共存的一个过程；而从狭义上，仅仅涉及一些最基本的词汇信息，如词典中显示的那样。在本书中，词汇识别这个概念取其更广泛接受的、宽泛的意义。

在文献中有不少研究结果表明，在拼音文字的语言，尤其是书写与拼读联系较明显的语言中，视觉词汇识别会有语音中介（van Orden, 1987; Fleming, 1993; Lesch & Pollatsek, 1993; Lukatela & Turvey, 1991, 1994; Lukatela et al., 2002; Pexman, Lupker & Jared, 2001; Pexman, Lupker & Reggin, 2002; but see Taft & van Graan, 1998; Ziegler, Benraïss & Besson, 1999）。但是，这一关于词汇语义处理中必有语音起作用的结论受到了各种研究成果的挑战（Coltheart, 1999）。

挑战之一直指上述结论的普遍性。理由是像英语这样的拼音文字有一套字母与音素对应转换（grapheme-to-phoneme Conversion, GPC）的规则，于是语音激活可能是其视觉词汇识别的内在属性。特别是在这种文字的视觉词汇识别中，语音激活既出现在前词汇识别过程（对非词和规则词而言），也出现在词汇识别过程本身（对不规则和规则词而言）。前词汇识别过程语音激活基于 GPC 规则，这样的语音激活称为语音组合；而通过词汇识别过程本身激活的语音称为语音通达。为此，Coltheart 等（1977）提出了双通路模型。不管怎样，人们认为，对于像汉语这样的非拼音文字来说，情形可能不同，因为汉语中并没有一套系统的规则引导书写符号与音素的转换。

另一个挑战针对的是文献中的一些实验证据的可靠性。比如,有人怀疑在有的同音词研究中,当采用语音中介的语义启动(phonologically mediated semantic priming, PMP)范式和语义范畴化的任务时,结果中可能混淆了语音效应和拼写效应,因为拼音文字中的同音词往往同时也在拼写上相似(Zhou & Marslen-Wilson, 1999a)。而在汉语这样的非拼音文字中,同音词处理情形可能不一样,因为汉语同音词远不如英语这样的拼音文字的同音词那样有高度的拼写相似性。

为此,由于汉语与拼音文字的书写系统大相径庭,人们以为把研究兴趣转向汉语有望揭示视觉词汇识别中语音处理的一些事实。于是,在这个领域中兴起了一种对汉语视觉词汇识别中的语音问题的关注。一般来说,这一领域的研究通常围绕7个主题进行:语音激活的自动性、词语构成成分激活的时间进程、前词汇语音与词汇下语音、语音中介、语义激活通路的相对重要性、拼写和语音的相对重要性、词汇识别中的语音作用等。

而在对这些主题的研究中,争议几乎无处不在。特别是一些研究(如, Cheng & Shih, 1988; Yeung, 1989; Hung, Tzeng & Tzeng, 1992; Perfetti & Zhang, 1991, 1995a, 1995b; Tan & Peng, 1991; Tan, Hoosain & Peng, 1995; Tan, Hoosain & Siok, 1996; Perfetti & Tan, 1998; Tan & Perfetti, 1997)提出,汉语视觉词汇识别中存在着语音中介,从而在这一点上支持对语言普遍性的强调。然而,另一些研究(如, Zhou & Marslen-Wilson, 1999a; Zhou et al., 1999)则认为语音只有有限的作用。还有一些研究甚至认为不存在语音中介(如, Wydell, Patterson & Humphreys, 1993; Leck, Weekes & Chen, 1995; Chen, Flores d'Arcais & Cheung, 1995; Sakuma et al., 1998; Zhou & Marslen-Wilson, 1996, 2000),从而倾向于强调语言特殊性。

很明显,找出这些争议的根源有着重要的意义,因为如此挖掘出的根源对于认识视觉汉语词汇识别过程中语音激活的作用和意义有重要启

示，而这一认识又可以从不同语言的普遍性或特殊性的角度帮助解释视觉词汇识别中语音的作用。为此，一个事实不容忽视，那就是在许多实验中，同音词的定义是大不相同的，而正是这一事实激发了本书的整个研究。

林文治

2015年7月于重庆北碚

Abstract

Psycholinguistic study is like a pendulum, swinging between the conflicting efforts that attempt to uncover universal language processing mechanisms and that endeavor to expose language-specific characteristics in language processing. So is the field of research into visual lexical access. Lexical access, in the broad sense, is treated as a process whereby its semantic properties, syntactic properties, spelling and pronunciation become available (Taft, 1991:2). In the narrow sense, lexical access only involves some minimal (dictionary-like) word information (see Carr & Pollatsek, 1985; Tan et al., 1995). Lexical access is treated in this study in its broad and more generally recognized sense.

In the literature of this field, a lot of evidence reported strongly suggested that visual word access in alphabetic languages, especially the orthographically shallow ones, is via phonological mediation (e.g., van Orden, 1987; Fleming, 1993; Lesch & Pollatsek, 1993; Lukatela & Turvey, 1991, 1994; Lukatela et al., 2002; Pexman, Lupker & Jared, 2001; Pexman, Lupker & Reggin, 2002; but see Taft & van Graan, 1998; Ziegler, Benraïss & Besson, 1999). However, this strong conclusion about the obligatory role of phonology in access to lexical meaning was challenged by various kinds of findings (Coltheart, 1999).

One challenge was directed at the universality of such conclusions above. It was argued that alphabetic languages like English have a set of GPC (grapheme-to-phoneme conversion) rules so that phonological activation may

be an inherent property of the visual lexical access process in these languages. In particular, it was believed that in such lexical access, phonology is generated both pre-lexically (for nonwords and regular words) and lexically (for irregular and regular words). The pre-lexical route to phonology is based on GPC rules, and the phonology thus accessed was called assembled phonology. In contrast, the phonology accessed through the lexical route was called addressed phonology. Accordingly, Coltheart et al. (1977) proposed the dual-route model (see also Coltheart et al., 1993; Rastle & Coltheart, 2000). Nevertheless, it is believed that the situation may be different in non-alphabetic languages like Chinese, because such languages do not have a set of systematic rules to rely on for efficient conversion from grapheme to phoneme.

Another challenge was directed at the validity of the experimental evidence. For example, the results reported in studies manipulating homophony with the PMP (phonologically mediated priming) paradigm (e.g., Fleming, 1993; Lesch & Pollatsek, 1993; Lukatela & Turvey, 1991, 1994) and the task of semantic categorization (e.g., van Orden, 1987) were on suspicion of having confounded phonological effect with orthographic effect, because homophones in alphabetic languages are usually also orthographically similar (Zhou & Marslen-Wilson, 1999a). It was believed that the situation may not be the same for homophonic manipulation in non-alphabetic languages like Chinese, because Chinese homophones have far lower chance to share high orthographic similarity than those in alphabetic languages like English.

Thus, as the Chinese writing system is quite different from alphabetic scripts, a shift of research interest to Chinese was believed to hold promise in revealing some truths about phonological processing involved in visual word access. As a result, a focus on the involvement of phonological processing in

visual Chinese word access arose. Generally, studies in this area used to unfold around seven major issues: the automaticity of phonological activation, the time course of the activation of lexical components, prelexical phonology and sublexical phonology, phonological mediation, the relative importance of meaning access routes, the relative importance of orthography and phonology, and the role of phonology in word access, etc.

Nevertheless, disputes lay almost everywhere around all these issues in the literature. In particular, some studies suggested the existence of phonological mediation in Chinese word access (e.g., Cheng & Shih, 1988; Yeung, 1989; Hung, Tzeng & Tzeng, 1992; Perfetti & Zhang, 1991, 1995a, 1995b; Tan & Peng, 1991; Tan, Hoosain & Peng, 1995; Tan, Hoosain & Siok, 1996; Perfetti & Tan, 1998; Tan & Perfetti, 1997), lending support to the emphasis on language universality. In contrast, some studies admitted only a limited role of phonological mediation (e.g., Zhou & Marslen-Wilson, 1999a; Zhou, et al., 1999), and others even proposed an absence of it (e.g., Wydell, Patterson & Humphreys, 1993; Leck, Weekes & Chen, 1995; Chen, Flores d'Arcais & Cheung, 1995; Sakuma, et al., 1998; Zhou & Marslen-Wilson, 1996, 2000), tending to stress language specificity.

Clearly, it is important to find the causes of these disputes because finding such causes will shed light on the role and importance of phonological activation in visual Chinese word access. This, in turn, will help to give an account of the role of phonology in visual word access in terms of universality or specificity across different scripts. Consequently, one fact attracts attention, namely the manipulation of homophony differently defined in the experiments of many studies. It is this fact that motivated the whole research here.

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