

## 《心理学报》审稿意见与作者回应

题目：言语产生老化中的抑制损伤：来自不同任务的证据

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### 第一轮

**审稿人 1 意见：**该项研究通过多项实验任务，在词汇和句法水平及语境的限制作用下，调节干扰刺激的强度，探讨干扰抑制能力在言语产生老化中的作用，有较高的理论价值。但目前仍存在如下一些问题：

**意见 1：**前言部分，主要介绍了两种理论：“传输不足假说”和“抑制不足假说”。然而，本文介绍“传输不足假说”的目的何在？是作为一个老的理论假说随便提一提，还是准备两个理论进行 PK 一下。如果是前者，目前对“传输不足假说”较大篇幅的介绍似乎有点宣兵夺主；如果是后者，实验设计和假设似乎并没有做相关的安排。

**回应：**已经将前言重点放在抑制不足假说上，并整理了问题提出的逻辑。在讨论部分综合了传输不足的观点。

**意见 2：**前言部分的第五段，有的语句表述不清。如“两种假说分别适用于两种不同类型的语言加工”，到底是哪两种不同的加工呢？又如“两种理论是否有整合的可能”，这是本文探讨的问题吗？又如，“在现有研究中，鲜有对词汇水平或句法水平的竞争抑制不足的讨论”，“竞争抑制不足”这样的表达应该是有问题的，“抑制不足”是针对老年人的情况，那么“竞争”是指什么？此外，这个句子的逻辑上也有问题，前面强调“鲜有…的讨论”，后面又在说有这方面的研究，但部分研究可能是“无关信息的激活程度不够，抑制不足的表现不突出”。

**回应：**已删除不恰当的说法。

**意见 3：**前言部分的最后一段，建议在简单概括以往研究的不足或争论的基础上，强调本研究的独特设计和做法，从而凸显本研究的创新性。同时，基于抑制不足假说（或者还有传输不足假说？），三个实验间递进的逻辑关系，也应该进一步加强说明和突出。

**回应：**已重新编排问题提出部分，增加了逻辑性。

**意见 4：**文中多次提到通过实验 1 的结果，在实验 2 和 3 中删除了部分被试。为什么要删除这些被试？根据是什么？

**回应：**有研究者认为，错误率增加代表被试难以将实验任务要求保持在可提取状态(Kane & Engle, 2003; Ludwig, Borella, Tettamanti, & de Ribaupierre, 2010)。为保证被试能顺利完成余下实验，且实验结果不受额外因素影响，基于以往对 Stroop 研究结果的分析，本研究删除了这名错误率高于 20% 的被试的数据。相应解释已在正文中给出。

**意见 5：**三项实验中的 trial 数都较少，需要在研究局限性中申明。如实验 1 (stroop) 中，一致/不一致 trial 数仅各有 24 次；实验 2 中，有/无竞争的反义词各有 28 个 trial；实验 3 中，四种实验条件，共 33 个 trial。

**回应：**在前言和研究局限性和展望部分提出了相应的申明。

**意见 6：**讨论部分，建议首段重申一下本研究的目的，以及研究假设。在比较本研究结果与

以往研究结果的基础上，应进一步明确本研究的创新之处和理论意义。关于“工作记忆和言语产生老年化”，本研究既然没有涉及工作记忆，本部分可能以“研究的局限性和展望”的面目出现更为合适。

回应：讨论部分增加了对研究目的和创新性的描述，并增加了研究的局限性和展望部分。

意见 7：结论部分建议以段落形式成文，不要列成孤零零的两条。更为重要的是，结论与结果不同，结论应更为强调由研究结果推导出来的，具有理论意义的发现。

回应：已修改结论部分的呈现方式。

审稿人 2 意见：The manuscript titled "The research of inhibition deficit hypothesis in the aging of speech production: evidence from different speech level" investigated age-related changes in speech production, and found an interesting pattern or contrast previous study on the conclusion of overall inhibition deficit in older adults, and suggested that older adults might show decreased speech production only in "high competition" condition. The findings are novel and worth publishing, however, some theoretical concerns also raised with the current manuscript, which need careful clarification and consideration before this work could be accepted, and I will list as follows:

意见 1：The introduction section is generally okay, but the author needs to be more focused, i.e., review more relevant theories and empirical studies (e.g., the inhibition deficit hypothesis), while do not go too far to the irrelevant theory (e.g., transmission deficit hypothesis).

回应：The transmission deficit hypothesis has been moved to the discussion section and the inhibition deficit hypothesis is now the only one hypothesis that is focused in the introduction section. According to this change, description of the main issues in the present study has also been revised.

意见 2：The organization through study 1 to 3 was kind of odd, please clarify the underlying rationale for the selected order. The current justification certainly does not work well (at least not so convincing).

回应：The underlying rationale and the logic for study 1 to 3 has been clarified.

意见 3：The sample size in the current investigation was small, only 20 older adults was involved. Moreover, as indicated by SDs, there should be larger individual differences in the older adults, which might make the conclusion less safe.

回应：Larger SDs do represent the larger individual differences in the older adults. However, normally they might narrow differences between youths and elders, and, double can be dismissed according to the recent results. More importantly, Ludwig, Borella, Tettamanti and de Ribaupierre (2010) also reported similar large SDs for elders in reading and naming tasks. This prove has been provided in the text.

意见 4：Another concern with the method was the experimental design in the present study, that the authors are using within-subject design for all three experiments, more information should be provided regarding the design and procedure: what's the time interval between different tasks, what's the order of different tasks(counterbalanced or not), is any (potential) practice or fatigue

effect emerged?

回应：The method section has been revised and the appropriate information has been provided.

意见 5: I would personally suggest the authors to directly test how inhibition function could influence older adults' speech production (e.g., Stroop could be treated somehow as a index of inhibition).

回应：This is a really good idea, and a statement for this idea has been made in the discussion section.

意见 6: Other minor points were marked in the manuscript, please see the attached file (please be very careful in writing English and APA style).

回应：Small changes mentioned in the text have been revised. They are: (1) answers for the large  $SD$ ; (2) some syntax errors in the abstract; (3) double check for the APA style; (4) rearrangement for the introduction section. However, in *Acta Psychologica Sinica*, or some other journals (take the report given by Baayena, Davidsonb, & Batesc (2007) in *Journal of Memory and Language* as an example),  $F_1$  always represents participants analyses and  $F_2$  represents items analyses. Therefore, the descriptions about  $F_1$  and  $F_2$  have not been further provided in the text.

## 第二轮

审稿人 1 意见：作者对审稿意见作了认真详尽的修改和回复，还有一些小问题供参考（详见下）。本项研究理论有意义，研究方法较恰当，研究结果较可靠，同意修后发表。

意见 1：一些专业性的措词问题还需注意，如 inhibition deficit 最好翻译为“抑制损伤”而不是“抑制不足”；摘要中最后一句“但抑制能力下降受潜在干扰刺激的激活水平影响”表述也不准确，抑制能力的下降是受年龄等因素的影响，应表述为“但抑制的老化效应受潜在干扰刺激的激活水平影响”。综合讨论第一段中“然而，老年人的抑制不足是有条件的，...”，也应表述为“然而，抑制老化效应的显现也是有条件的，...（这一句后面的内容也需要相应修改）”。这样专业性的措词问题在文中还有很多，就不一一列举了，建议作者仔细检查几遍。

回应：接受审稿人的意见，已将“抑制不足”修改为“抑制损伤”，同时，对表述措辞方面也已经通篇检查并修改。

意见 2：实验中剔除了被试，更严谨一些的话，应该看一下剔除相关被试是否影响了实验结果，如不影响，简单说明一句就可以了。

回应：接受审稿人的意见，对数据进行了检查，发现提出相关被试未影响实验的整体结果趋势，已在文中进行说明。

意见 3：综合讨论部分的内容过于繁杂，希望作者精简一下。

回应：接受审稿人的意见，已精简综合讨论部分的内容。

审稿人 2 意见：

意见 1: Experiment 3 seemed to be an oddball in the flow, and the rationale for conducting Experiment 3 was not so convincing. I would love to see more detailed description of how Experiment 3 related to and extended previous two experiments.

回应： More description has been provided.

意见 2： Still on Experiment 3, I think the results are fine, but the discussion on Experiment 3 was lacking. It seemed that your focus was mainly on the first two experiments.

回应： More discussion on Experiment 3 has been added especially basis on the correlation analyses among three experiments.

意见3： My previous point about directly testing how inhibition function could influence older adults' speech production was not well addressed, could you at least run some correlation analyses?

回应： Correlation analyses have been provided and more details have been added in the text.

### 第三轮

审稿人 2 意见：

意见： Now the manuscript looks much better than before. Just one minor point to be revised - in page 23, section 5, second paragraph, the wording seems to be inconsistent with the statistics, please check.

回应： 这种不一致是修改时作者的粗心所致，现已经修改。谢谢审稿人。此外，对稿件的文字又做了进一步的修订。