

Dang, J., Sedikides, C., Wildschut, T., & Liu, L. (2023). More than a barrier: Nostalgia inhibits, but also promotes, favorable responses to innovative technology. *Journal of Personality and Social Psychology*. <https://doi.org/10.1037/pspa0000368>

摘要

在科技不断进步的同时，人们也在回顾过去。怀旧如何影响人们对创新技术的反应（即态度和行为）？作者假设了一个双路径模型，作为一种社会情感，怀旧会促进社会联系，从而导致对创新技术的积极反应。与此同时，作为一种高度重视过去的情感，怀旧也会加深对变革的怀疑，导致对创新技术（AI或5G）的不利反应。作者在七项研究（ $N = 1,629$ ）中，通过相关性和实验方法，以不同的方式操纵构念，在三种文化（中国、英国和美国）中验证了该模型的有效性。这些发现促进了关于人与技术关系的热烈讨论。

While technology is moving forward, people are looking back to the past. How does nostalgia influence responses (i.e., attitudes and behavior) to innovative technology? We postulated a dual-pathway model, according to which nostalgia, as a social emotion, would foster social connectedness that would be associated with or lead to favorable responses to innovative technology. At the same time, nostalgia, as an emotion that places a high premium on the past, would be associated with or lead to unfavorable responses to innovative technology (i.e., artificial intelligence or fifth-generation wireless communication) via skepticism about change. We provided support for the dual-pathway model in seven studies ($N = 1,629$), using correlational and experimental methods, operationalizing the constructs in diverse ways, and testing participants from three cultures (China, United Kingdom, and United States). The findings contribute to the vibrant conversation on human-technology relationship.

研究问与研究模型

尽管科技行业普遍认为新技术更好，但市场上对复古技术产品（如第一代iPhone、普通手机）的买卖却也在蓬勃发展，消费者对过时技术的兴趣不断增加。在技术不断向前发展的同时，人们却回望过去，形成了一种对传统和创新截然相反的态度和行为。这引发了一系列问题，即怀念过去和认可技术进步之间是否存在悖论？而怀旧情感是否可以解释这种悖论？尤其是，怀旧情感如何影响人们对技术创新的态度？

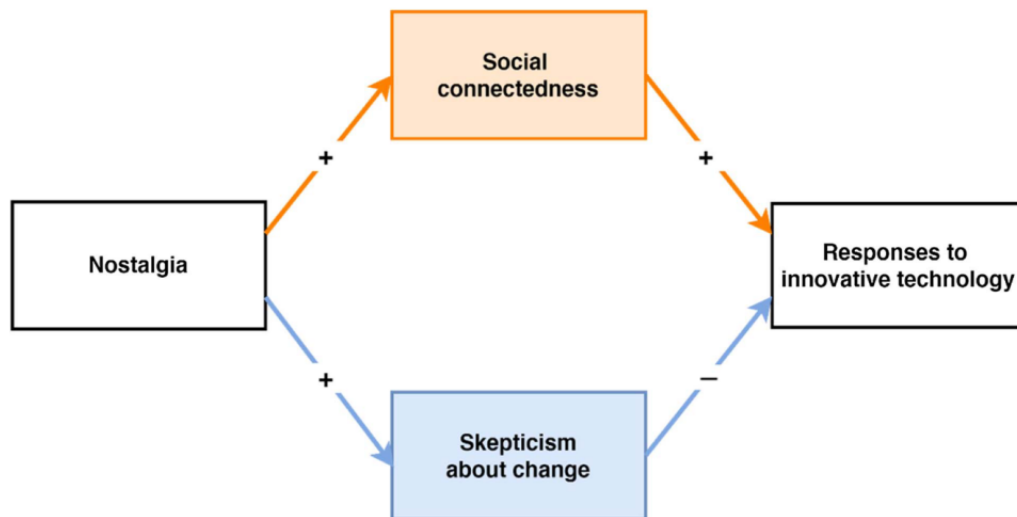
怀旧是“对过去的一种感伤的渴望或思念”。它有三个特征：

- **【苦乐参半】**因为它既包含了满足和喜悦，也包含了对难以企及的珍贵过去的渴望；
- **【自我相关】**因为怀旧者回忆起个人有意义的经历，突显了他们生活的时间连续性；
- **【社交性】**因为怀旧者在回忆中象征性地被重要的他人所包围。

技术创新涉及原始或显著改进的技术产品或流程。作为一种可识别的创新技术，人工智能指的是“一种不断增长的交互式、自主、自学代理的资源，它使计算工具能够执行通常需要人类智能才能成功执行的任务”。人工智能的关键特征是创新和未来导向。这些特征构成了一把双刃剑：人们担心颠覆性技术的发展将无法控制地超越人类思维或能力，导致对人工智能产品的拒绝，而对新技术的吸引力则可能促使人们支持人工智能产品。那么，怀旧如何影响对技术创新的反应呢？

- **【积极路径】**一方面，怀旧是一种对过去的深刻回忆和留恋的情感，具有社交性。研究表明，怀旧能够加强个体对未来的积极看法，使其感到准备好迎接新挑战，培养了对未来的积极期望。将怀旧扩展到人与技术的关系中，作者主张怀旧通过加强社会联系，特别是对个体归属感和被接纳感的满足，从而在人与技术的关系中起到促进技术创新接纳的作用。
- **【消极路径】**另一方面，怀旧情感是以过去为导向的情感。怀旧情感强调对过去的珍视，与对互联网技术或信息技术系统实施的回避态度相关，因此与对技术创新中变革的怀疑可能存在关联。那些对变革持怀疑态度的人可能认为无法准确预测或完全理解技术发展的轨迹，这是接受创新技术的主要障碍。

因此，作者提出了一个双刃剑模型：怀旧通过对变革的高度怀疑，与逃避技术创新有关，但通过更强的社会联系，与拥抱技术创新有关。



模型图

研究方法

Study 1A

通过操纵怀旧引发的社交联系，检验了社会联系对创新技术反应的因果效应，因变量为人-人工智能机器人关系的质量。作者还在两项补充实验研究中证实了研究结论的稳健性。

Study 1B

通过一个2（怀疑：有vs无）×2（AI vs 5G）的实验，作者从态度（即对创新技术研究的支持）和行为（即对创新技术的行为支持）两方面考察了对变革持怀疑态度对创新技术反应的因果关系。

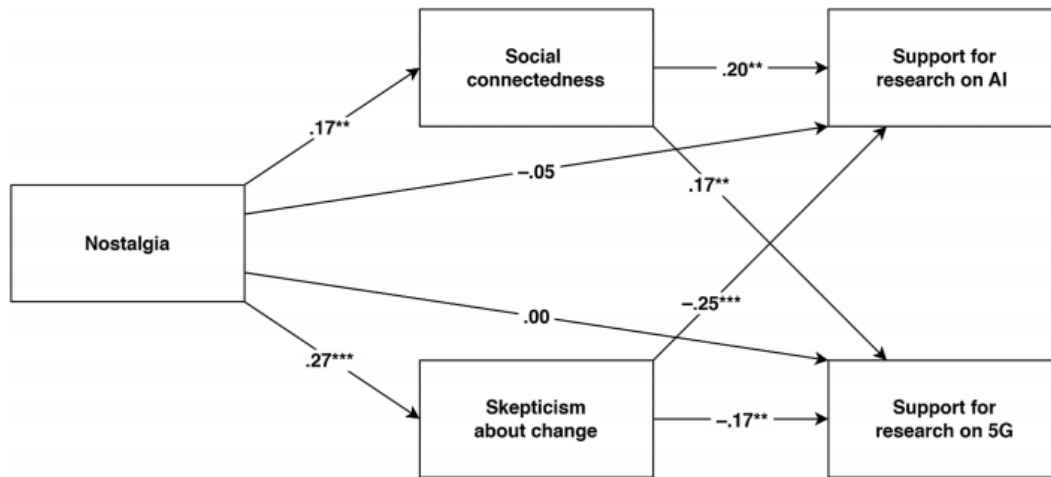
作者通过引入5G（一种渐进性创新技术），评估了对两种不同创新技术（突破式vs渐进式）是否会有不同强度的怀疑态度效应。

研究结果发现，对变革持怀疑态度会减弱对创新技术的支持。相比于5G，这种怀疑态度对人工智能技术的影响明显更大。

Study 2

作者采用单时点问卷设计，在英国招募了298名被试检验了完整模型。

Figure 2
Associations Among Nostalgia, Social Connectedness, Skepticism About Change, and Support for Research on AI and 5G Technologies in Study 2



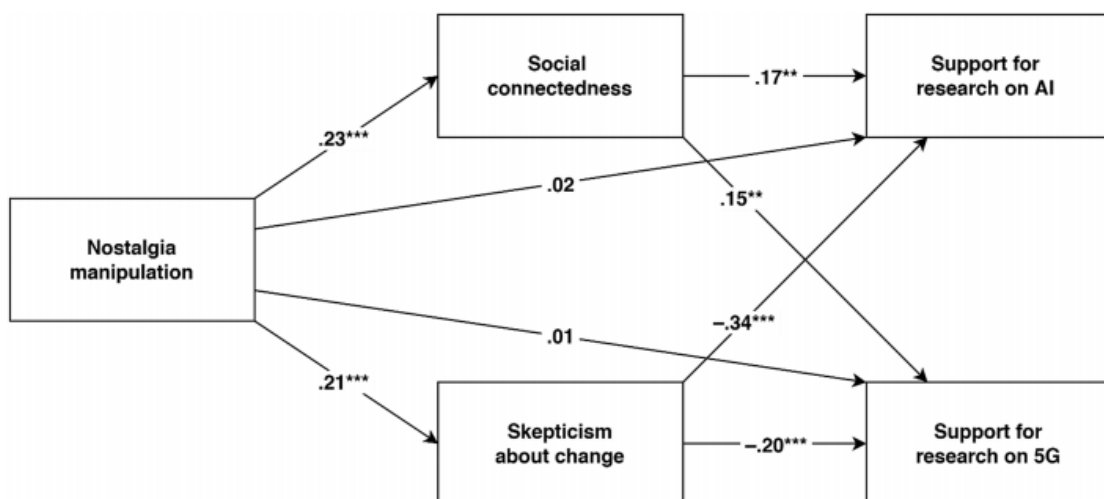
Note. Coefficients are fully standardized. To enhance figure clarity, we omitted the correlated residuals between the mediators (covariance = -0.15, 95% CI [-0.26, -0.03], $SE = 0.06$, $p = .015$) and the outcome variables (covariance = 1.51, 95% CI [1.23, 1.80], $SE = 0.15$, $p < .001$). AI = artificial intelligence; CI = confidence interval; SE = standard error; 5G = fifth-generation wireless communication.
** $p < .01$. *** $p < .001$.

Study 2 结果

Study 3

作者采用关键事件法，操纵了怀旧；然后采用量表测量了社会联系、怀疑态度、对创新技术（AI/5G）的支持态度，并测量了对创新技术的实际支持行为（即自愿参与对创新技术的研究项目）。

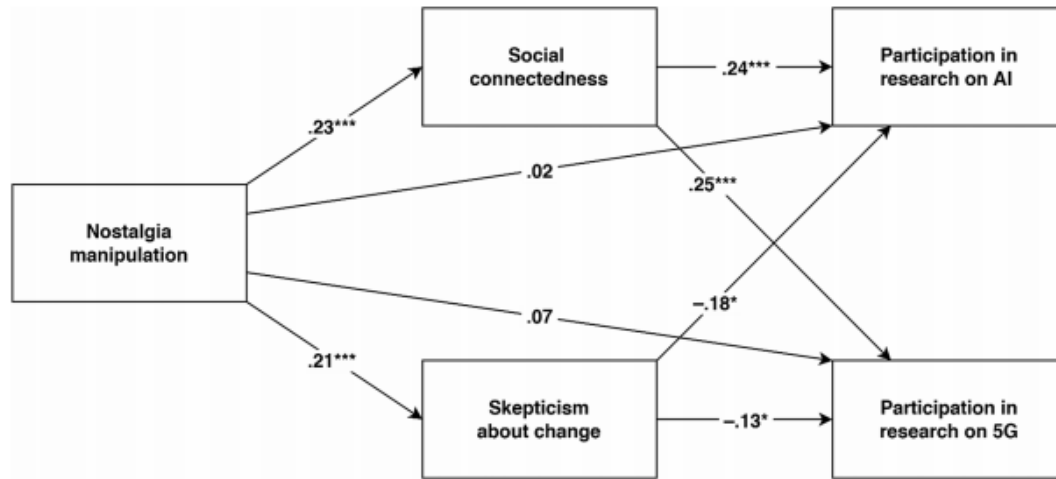
Figure 3
Effects of Nostalgia on Social Connectedness, Skepticism About Change, and Support for Research on AI and 5G in Study 3



Note. Nostalgia manipulation was coded: nostalgia condition = 1, control condition = 0. Coefficients are fully standardized. To enhance figure clarity, we omitted the correlated residuals between the two mediators (covariance = -0.09, 95% CI [-0.22, 0.04], $SE = 0.07$, $p = .159$) and the two outcome variables (covariance = 0.61, 95% CI [0.49, 0.74], $SE = 0.05$, $p < .001$). AI = artificial intelligence; CI = confidence interval; SE = standard error; 5G = fifth-generation wireless communication.
** $p < .01$. *** $p < .001$.

Study 3 结果-支持态度

Figure 4
Effects of Nostalgia on Social Connectedness, Skepticism About Change, and Participation in Research on AI and 5G in Study 3



Note. Nostalgia manipulation was coded: nostalgia condition = 1, control condition = 0. Coefficients are fully standardized. To enhance figure clarity, we omitted the correlated residuals between the two mediators (covariance = -0.09 , 95% CI $[-0.20, 0.02]$, $SE = 0.06$, $p = .103$) and the two outcomes (covariance = 0.77 , 95% CI $[0.68, 0.86]$, $SE = 0.05$, $p < .001$). AI = artificial intelligence; SE = standard error; 5G = fifth-generation wireless communication.
 * $p < .05$. *** $p < .001$.

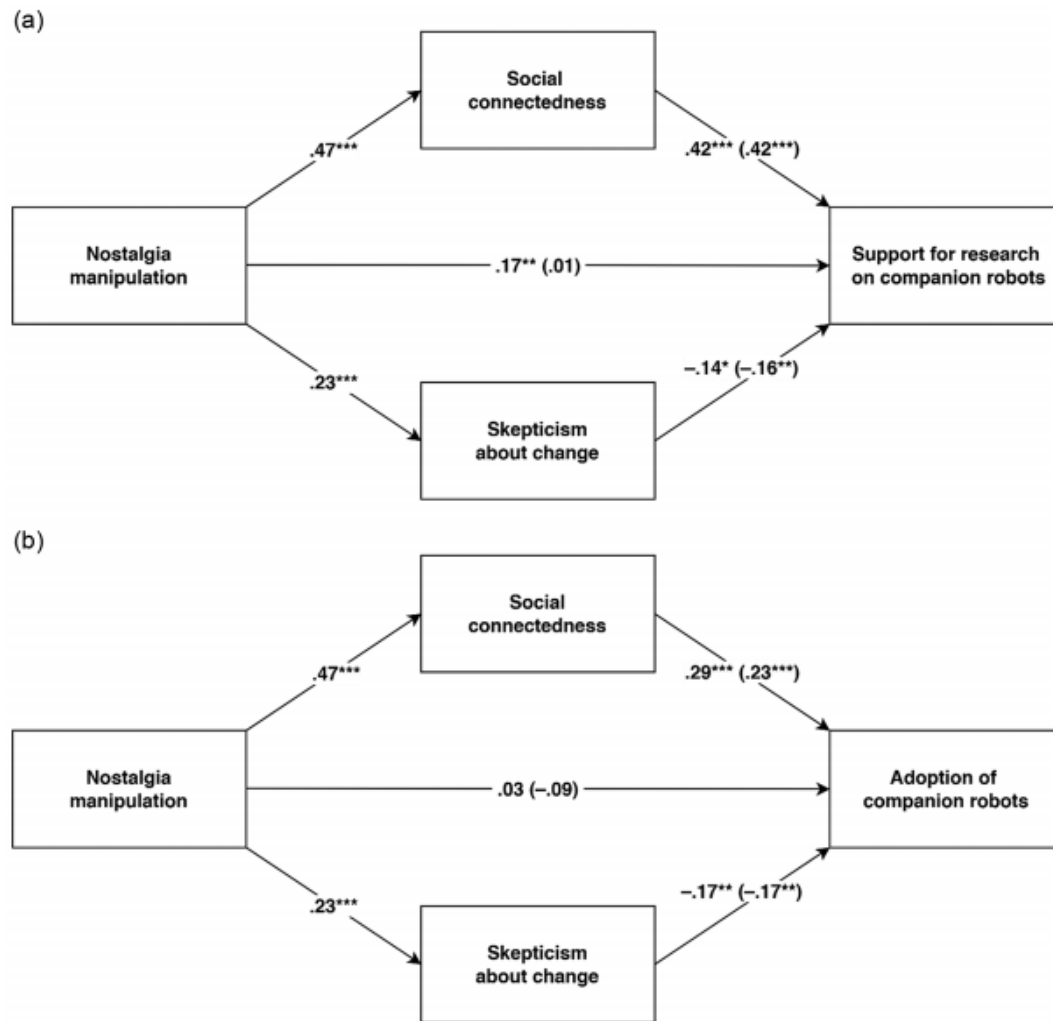
Study 3 结果-支持行为

Study 4

在实验性研究4中，作者通过改变自变量怀旧的操纵与因变量的选择，增加了研究稳健性。

- 首先，他们评估了对特定AI产品（伴侣机器人）的反应，包括态度和行为两方面。这是对研究2和研究3结果的进一步证明，因为前两项研究评估了对一般创新技术的反应而非具体产品。
- 其次，他们在研究4中使用了不同的怀旧操纵方法，以检验研究结果的稳健性。操纵包括两个任务，一个是呈现图片，另一个是利用怀旧的典型结构，即核心和外围特征。

Figure 5
Effects of Nostalgia on Social Connectedness, Skepticism About Change, and (a) Support for Research on Companion Robots or (b) Adoption of Companion Robots in Study 4



Note. Nostalgia manipulation was coded: nostalgia condition = 1, control condition = 0. Coefficients are fully standardized. To enhance figure clarity, we omitted the correlated residuals between the two mediators (covariance = -0.13 , 95% CI $[-0.35, 0.10]$, $SE = 0.11$, $p = .271$). CI = confidence interval; SE = standard error.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Study 4 结果

Internal Meta-Analysis

最后，作者进行了内部的元分析，估计了双路径模型中每条路径的总体影响

Table 7
Effect Sizes (r_s) Across Studies

Study No.	N	X_{M_1}	X_{M_2}	X_Y	$M_1_{M_2}$	M_1_Y	M_2_Y
1A	141					.26	
Supplemental Study S1	201					.26	
Supplemental Study S2	198					.19	
1B	200						-.26
2	298	.17	.27	-.05	-.09	.20	-.23
3	291	.23	.21	.02	-.03	.19	-.20
4	300	.47	.23	.10	.05	.36	-.15

Note. X = nostalgia; M_1 = social connectedness; M_2 = skepticism about change; Y = responses to AI technology. For studies with multiple dependent variables, we report averaged correlation coefficients; AI = artificial intelligence.

Effect Sizes (r_s) Across Studies

作者在https://osf.io/4khxr/?view_only=71a8a41d65004cfa9d5a92ba17128e27上提供了数据和分析代码。

总结

本研究解决了怀旧和对创新技术的反应之间的关系。怀旧是一种以过去为导向但又具有前瞻性的情感，它如何影响人们对新技术的反应?怀旧是进步的障碍还是进步的工具?事实证明两者都有。作者提出了一个双路径模型来捕捉怀旧的双重性。根据该模型，怀旧会通过增加对变革的怀疑来降低对创新技术的好感度。与此同时，怀旧通过增加社会联系促进了对创新技术反应的好感度。在这方面，双路径模型不仅调和了两种看似相互矛盾的观点，而且还提供了一个新的框架来理解对过去的向往如何影响对技术进步的认可。

这篇推送就到这里啦。作者的实验材料和研究数据都提供得很详细，有兴趣的小可爱可以自行探索哦。

往期推送：

2023_Parent-Rochelleau_Creation of the algorithmic management questionnaire_KEY-BDBFBT6N

Metadata

Title::Creation of the algorithmic management questionnaire: A six-phase scale development process

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Description::(量表开发过程很完整，值得参考)

文章摘要

Note

Definition

Algorithmic management-Parent-Rochelleau et al., 2023

Augmented management-Parent-Rochelleau et al., 2023

Algorithmic management-Griesbach et al., 2019, p. 2

Algorithmic management-Jabagi et al., 2020, p. 4001

Algorithmic management-Mateescu & Nguyen, 2019, p. 1

Algorithmic management-Kellogg et al., 2020

Algorithmic management-Gagné et al., 2022, p. 248

Measure

Written

The automation and augmentation of human work triggered by these technological developments have received a great deal of attention from researchers (Langer & Landers, 2021; Makarius et al., 2020; Ralsch & Krakowski, 2021; Tschang & Alimrall, 2020).

注释笔记 57PZ7J4E

2023-Parent-Rochelleau-Creation of the algorithmic management questionnaire: A six-phase scale development process

*KEYrefTitle

The automation and augmentation of human work triggered by these technological developments have received a great deal of attention from researchers (Langer & Landers, 2021; Makarius et al., 2020; Ralsch & Krakowski, 2021; Tschang & Alimrall, 2020).

由这些技术发展引发的人类工作的自动化和增强受到了研究人员的极大关注(Langer&Landers, 2021; Makarius等人, 2020; Ralsch&Krakowski, 2021; Tschang&Alimrall, 2020)。 (q1)

*KEY7PHRILH9

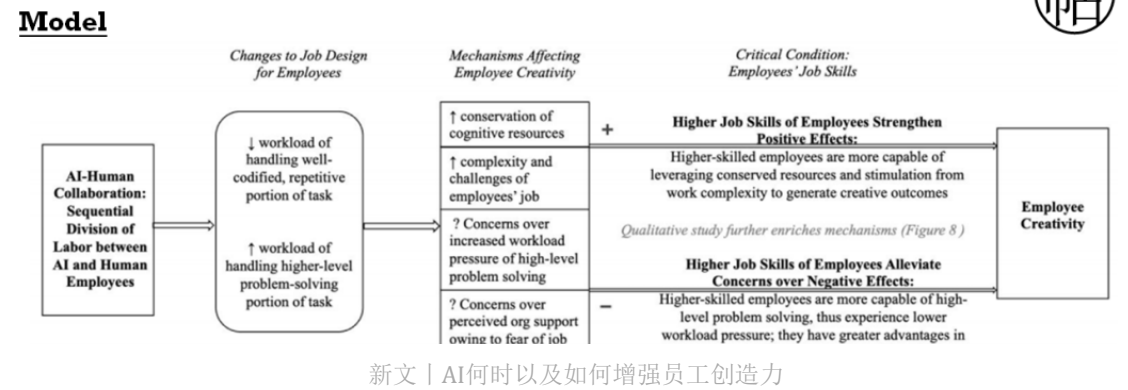
algorithmic management (AM), defined as the use of programmed algorithms by an organization to partially or completely execute workforce management functions

算法管理(AM), 定义为组织使用编程的算法来部分或全部执行劳动力管理功能 (q1)

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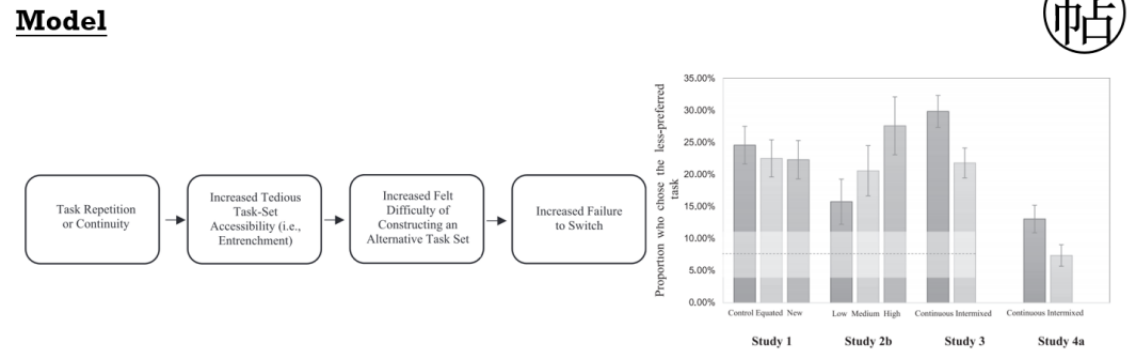
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