分 析 合 作

Analyzing Collaboration
（Part II. MethodologiesP217）

分析合作　**Analyzing Collaboration**

　　学习科学强调的是一种新的学习模式，教师与学习者共同体中的学生一起工作。当学生一起建构知识的时候，教师为学生的项目小组提供合适的脚手架。在一个以新兴的科学原则为基础的课堂中，学生在一起建构知识的时候尝尝会互相交谈。教师总是在场，但绝不会再讨论中处于支配地位；教师尝尝会促进或者引导学生们的讨论，但如果学生们正在一起高效地工作，有经验的教师就会意识到自己能做的最好就是保持沉默。

　　学习科学已经发现：对学生来说，学习科学学科最好方法就是让让学生运用专业的科学家们所使用的方法来学习科学内容。

分析合作　Analyzing Collaboration

The study of collaboration has been part of the learning sciences from its inception. However,articles have appeared that use different definitions of collaboration, that give different reasons for studying it, and that use different methods. This variability has continued to the present. To help make sense of this variety, we propose that the spectrum of methodologies used in collaboration research can be usefully divided into four groups, associated with four different reasons to study collaboration (see Table 10.1): Collaboration-as-a-window, collaboration-for-distal-outcomes, collaboration-for-proximal-outcomes, and collaboration-as-learning. These four dimensions allow us to better characterize the four methodological approaches to studying collaborative discourse, by capturing how they differ along one or more of these dimensions.

（研究协作起初就是学习科学的一部分，尽管如此，许多文献对协作的定义进行了不同的界定，并给出了不同的原因，使用了不同的方法。这种可变性一直持续到现在。为了帮助理解这种可变性，我们假定被用于协作研究的方法论范围能够被分成四个维度，与四个不同的原因联系来研究协作：合作作为一扇窗，协作为了远端的结果，协作为了临近的结果，协作作为学习。这四个维度让我们更好的研究合作会话）

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Our first category – collaboration-as-a-window – uses contexts of collaboration to better understand individual cognition. Our second category – collaboration-for-distal outcomes – seeks to document how particular patterns of collaboration promote or constrain productive learning activities leading to positive or negative individual outcomes that are operationalized apart from the interaction itself (e.g., performance on a later written test). Our third category – collaboration-for-proximal-outcomes – attempts to link collaborative processes with outcomes within the interaction itself (e.g., inter subjectivity), and (sometimes) uses those outcomes to explain distal learning outcomes. Our fourth category, collaboration-as-learning, treats collaboration as more than a means to proximal or distal outcomes, but as the focal process and outcome itself. Forms of collaboration are hemselvesoutcomes. This view brings with it a commitment to understanding the "endogenous"organization and understandings of collaboration among research participants.

（合作作为一扇窗：利用合作的情境去更好的理解个体认知；协作为了远端的结果：寻求文档合作的特定模式如何促进或限制生产学习活动，导致积极的还是消极的个人成果的实施除了本身的交互，协作为了临近的结果，协作作为学习）

Four Reasons to Study Collaboration and Learning

One simple way to understand our four categories is that they answer the question, "Why study collaboration?" In the following sections, we describe four objectives that drive different paradigms of learning sciences research on collaborative discourse and four corresponding methodological approaches. （理解我们的四类的一个简单方法是回答 "为什么研究协作呢?" 在下面几节中,我们描述四个目标驱动不同的协作学习科学研究范式的话语和四个相应的方法论。 ）

Four Reasons to Study Collaboration and Learning

1. Collaboration-as-a-Window-onto-Thinking

One reason to study collaboration is to learn more about how individuals think. In such a study, the focus is not on collaborative processes per se, and the methods typically used in these studies reflect this. For example, the learning sciences has strong genealogical roots in cognitive science, and one of the early methods for studying learning and problem solving within cognitive science was the use of verbal protocols. In a verbal protocol study, a person is asked to think aloud, in the presence of a researcher, while carrying out some task.

研究合作的一个原因是学习更多的关于个体如何去思考。在这样的一个研究里，焦点不是合作的过程，被用到这些研究里的典型的方法。例如，学习科学深深扎根于认知科学，在认知科学里，研究学习和问题解决的早期方法之一是使用口头协议，在一个口头协议的研究中，当学习者在完成一些任务时，被要求以一个研究者的身份去思考。

Four Reasons to Study Collaboration and Learning

Methods for Representing and Analyzing Collaboration-as-a-Window onto Thinking

Researchers who conceptualize collaborative discourse as a window onto thinking focus primarily on the content of talk, rather than the interactional processes of talk, which is then coded at the level of single turns, aggregated, quantified, and submitted to statistical analysis.（研究者主要聚焦于谈话内容，而不是谈话的交互过程，这个交互过程被编码、聚合、量化和统计分析。）

Quite often they seek to minimize social influences by using contrived situations such as clinical interviews or problem solving in laboratory conditions. （他们经常通过使用特定情境，如在研究室的随机采访或问题解决，来最小化社会影响）

Four Reasons to Study Collaboration and Learning

2. Collaboration as a Context that Promotes (or Constrains) Distal Learning Outcomes

Different types of collaboration can be identified and associated with varying levels of individual learning outcomes, which are identified outside the immediate context of the interaction, such as performance on a later cognitive task or a measure of motivation. This second approach has a long history and has been used in many research studies. （不同类型的合作可以和不同水平的个体学习产出联系，这种学习成果能够被外界的及时交互认同，比如后来的认知任务表现或者是动机测量。这种合作的方式已经有了很长的历史，并被用在血多研究领域。）

Four Reasons to Study Collaboration and Learning

Methods for Correlating Sequences of and Norms for Talk with Distal Learning Outcomes

This second methodological approach requires identifying a collaborative pattern within discourse and correlating or relating it to a distal outcome typically reified as a product. This style of research greatly depends on the researcher's ability to operationalize and define the collaborative phenomena of interest and the outcomes in order to make both observable and measurable. （第二个方法论的方法需要确定一个协作模式，在话语和关联或涉及到一个远端结果，通常这种结果被具体化为一个产品。这种风格的研究很大程度上依靠研究者的实施和定义合作兴趣和结果的能力，并使这种能力可观察和可测量的。）

3. Collaboration Coordinated with Proximal, Collective Outcomes within the Interaction Itself

A third body of research tightens the focus of collaboration on proximal outcomes, such as intersubjectivity, that are identified within a focal interaction itself and that are believed to mediate the relationship between patterns of discourse and the distal outcomes like those described in the previous section. This is currently one of the most active areas of research in the learning sciences, because its goal is to explain how collaborative processes contribute directly to learning .（第三种研究聚焦于近期成果的合作，比如主体间性）

Four Reasons to Study Collaboration and Learning

Methods for Representing and Analyzing Collaborative Discourse with the Evidence for Learning Operationalized Proximally in the Interaction Itself

This close attention to the process of collaboration as a jointly produced activity has been accompanied by a major methodological change in how interactions are represented and studied. Nowhere is this more evident than in the way interactions are represented through transcription conventions. When one brings a collective unit of analysis to the study of collaboration, one needs techniques that allow analysts to track how interactions unfold

across participants, for the purposes of identifying units of activity that span different turns, and thereby, different participants in an interaction. This in turn involves capturing all manner of interaction detail that other approaches we have discussed typically "clean up" and leave out of transcripts. These interactional details have been most thoroughly documented by three decades of conversation analysis research; salient details include, among others, the boundaries of when turns at talk start and stop, the prosody of speech, and the pitch contours of particular words. These matter for analysts because they demonstrably matter for the meanings that people in collaboration attribute to each other and act on in interaction. Similarly, people in interaction rely on multiple modalities and semiotic resources .Finally, groups develop shared meanings, shorthand conventions, and common routines as they work together over time.

Four Reasons to Study Collaboration and Learning

4. Collaboration-as-Learning: Committing to a Distributed, Endogenous Unit of Analysis

A fourth category within the learning sciences holds that collective units of activity are an important unit of analysis in their own right. Learning is operationalized as relational changes to a system with multiple parts, human and nonhuman – "adaptive reorganization in a complex system". In some cases, learning scientists have borrowed from these anthropologically oriented traditions to expand a focus beyond individuals, for both the processes and the outcomes of collaboration.

Four Reasons to Study Collaboration and Learning

The Methods of a Distributed, Endogenous Approach

The contrast between the informal sites for collaborative learning and how collaboration is organized in formal schooling is striking. In schools, we isolate individuals via tests and other forms of individual record keeping. But in the many other contexts in which people collaborate and learn together, these forms of isolating individuals are less common or nonexistent. How in these other settings, amidst distributed units of teams, groups, families, and firms are the contributions of individuals recognized and isolated as distinct? This is one of the important and interesting questions that an endogenous and distributed perspective on collaboration brings into view.

Conclusion

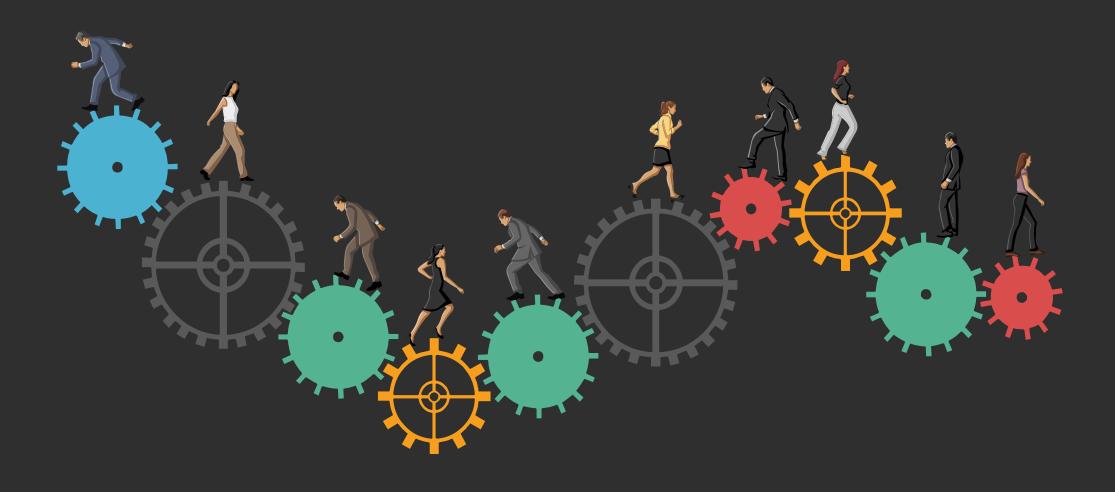　　许多学习科学研究者通过分析协作会话来研究协作在学习中所起的作用，这种经验法所取得的研究成果能够从以下几个方面来拓展我们队学习的理解。

　　第一，交互分析给研究者提供了一种方法，研究教师不在场时，同伴群体是怎样学习的。对协作小组的几十项研究都已经证明同伴群体有助于学习。然而，这种流派还未曾仔细探究过同伴群体的这种会话状态，，对协作学习的研究基本上都关注个体成就、任务结构、激励结构。相对而言，课堂会话的交互研究基本上都关注师生会话；

　　第二，交互分析能够揭示出外部表征为何能影响会话过程和学习的交互机制。学习科学家们已经探究了表述和外化所起的重要教育作用。交互分析能通过细察外部表征如何对小组的会话过程起中介作用，从而拓展这项工作。

Conclusion

　　学习科学已经越来越多地研究教育中课堂会话的动态，许多这方面的研究都关注短暂的、孤立的会话片段。交互分析也能用于研究教育中浮现的长的会话模式。例如，索耶和伯森刚发现，开始时学生总是通过低头看笔记本来进行关于某一主题的谈话，只是在后来才逐渐对同一主题开始面对面的交谈。这种协作模式在小组谈话中浮现，并且逐渐成为一种重要的元素，对协作的教育价值作出贡献。

　　交互分析有潜力揭示出这些浮现模式是如何有助于个体学习的。几乎没有研究曾探究过集群现象怎样从拓展的话语序列中自然浮现出来，以及这些无意识的浮现效应如何促进学习。学习既是一个个体过程，也是一个群体过程。同时，对学习充分的解释需要同时细察个体过程和群体过程。

THANK YOU !