

Trauma reactions, memory and the brain

创伤反应,记忆和大脑



Bessel A. van der Kolk MD

Trauma Center Boston, MA USA

www.besselvanderkolk.com

www.traumacenter.net

How do children process trauma? 儿童如何处理创伤

It all depends on the quality of their
attachment relationships
这完全取决于他们的依恋关系的质量





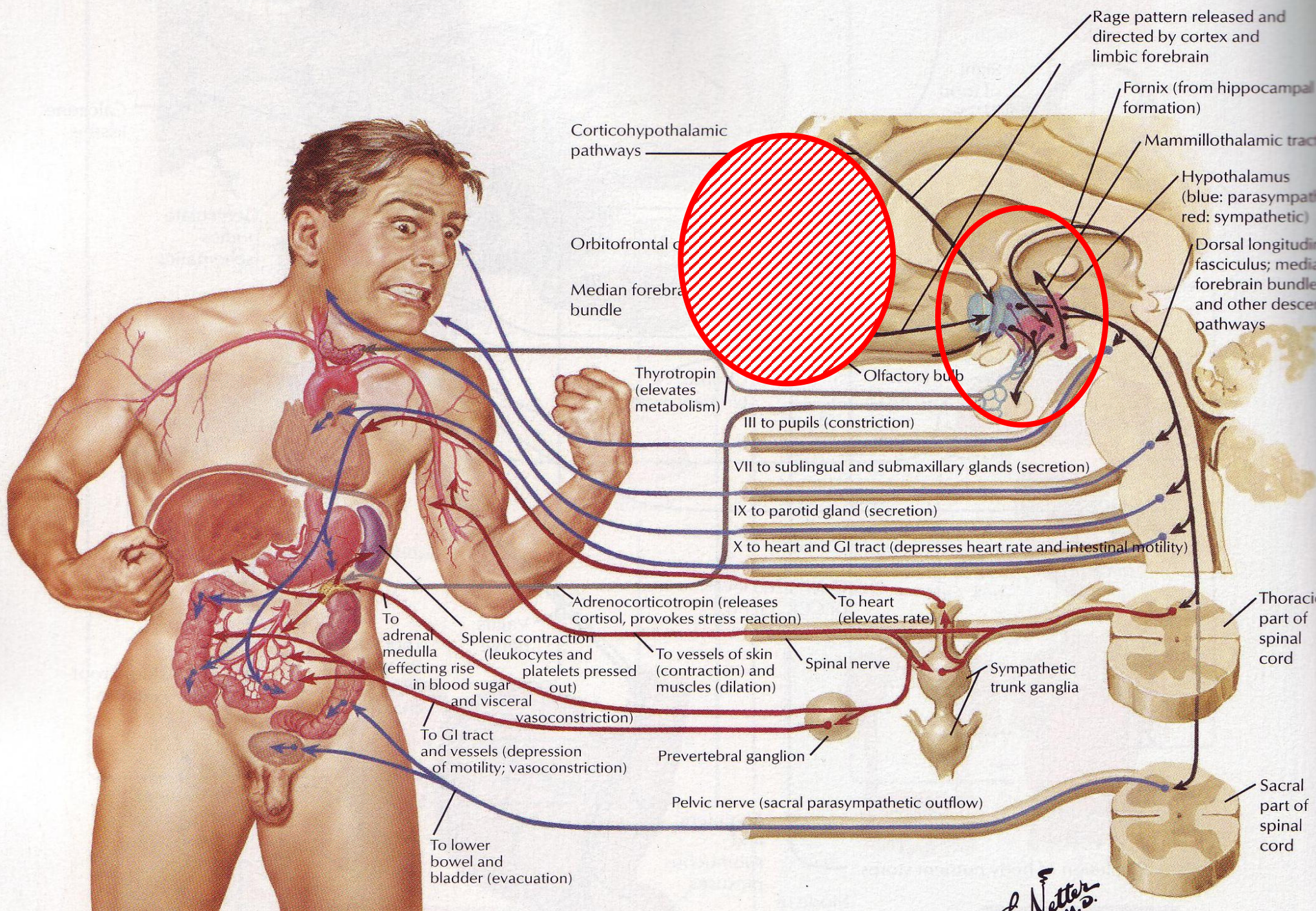
证道心理



证道心理

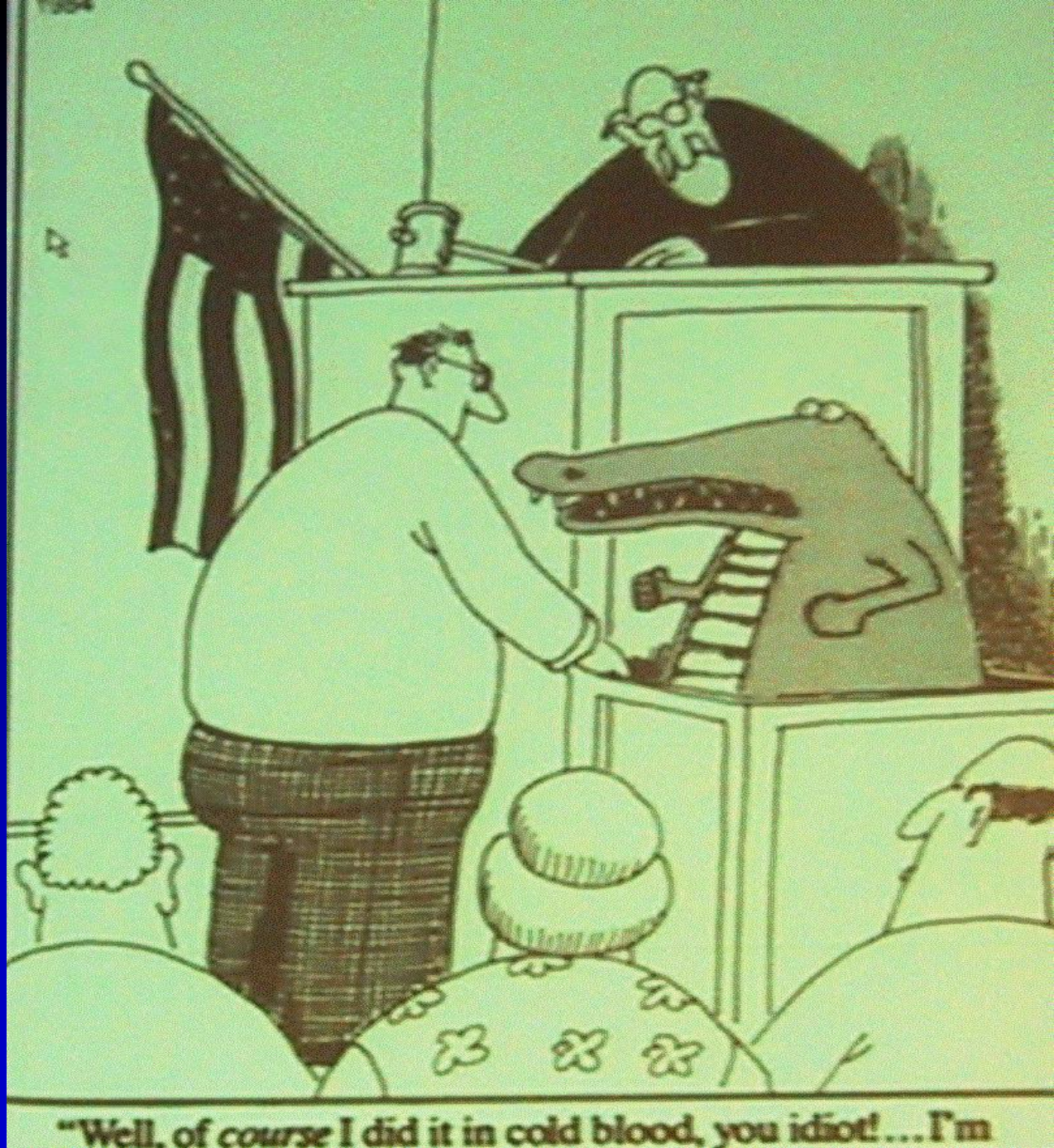






Aggression:
A phylogenetic
Explanation

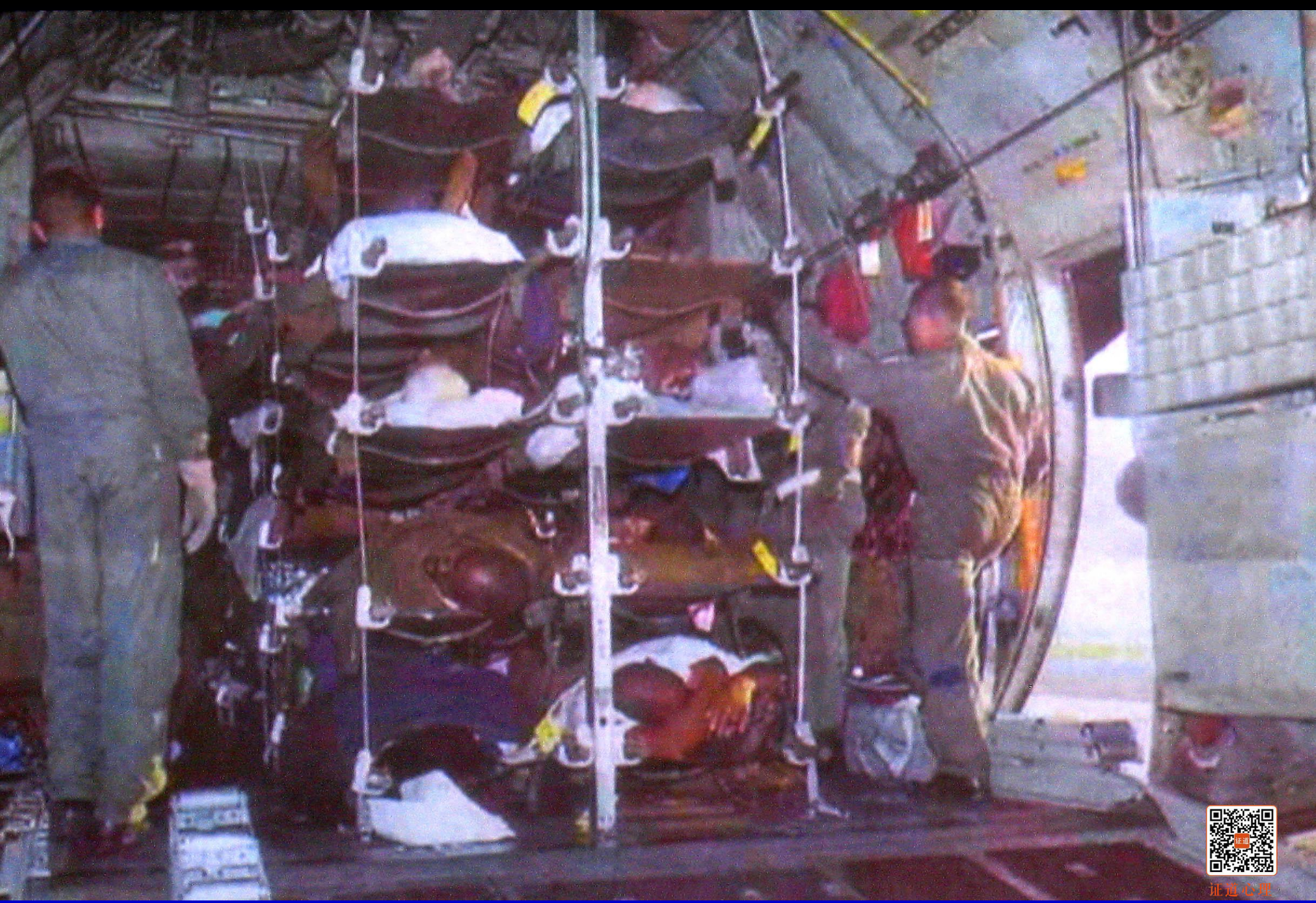
攻击性:
一个源于进化论的解释



"Well, of course I did it in cold blood, you idiot! ... I'm

当然是我蓄意干的，你白痴啊！我是冷血动物...









Imagination is the foundation of being able to create your life 想象力是创造生活的基础

You can only engage with what you can imagine
你仅能参与你能想象到的

To a large degree our imagination is shaped by what we are exposed to
很大程度上我们的想象力被我们的经历所塑造

Harry Potter 哈利波特

Therapy, to a large degree, is only as effective as it is able to open up people's
imagination to new possibilities

很大程度上，治疗只有在能帮助人们想象新的可能性时才起作用



Traumatized kids live in an entirely
different world.

受创伤的孩子生活在一个完全不
同的世界

They have an impaired capacity to imagine alternative realities.

他们对现实选择的想象能力受损

Tend to stay egocentric (causality) – this happens because
there is something wrong with ME.

倾向于保持以自我为中心（因果关系）——事情之所以发生，
是因为我有问题

Loose capacity for “thought as experimental action”- loss of
executive functioning.

失去“实验性行动”的思考能力——失去执行功能



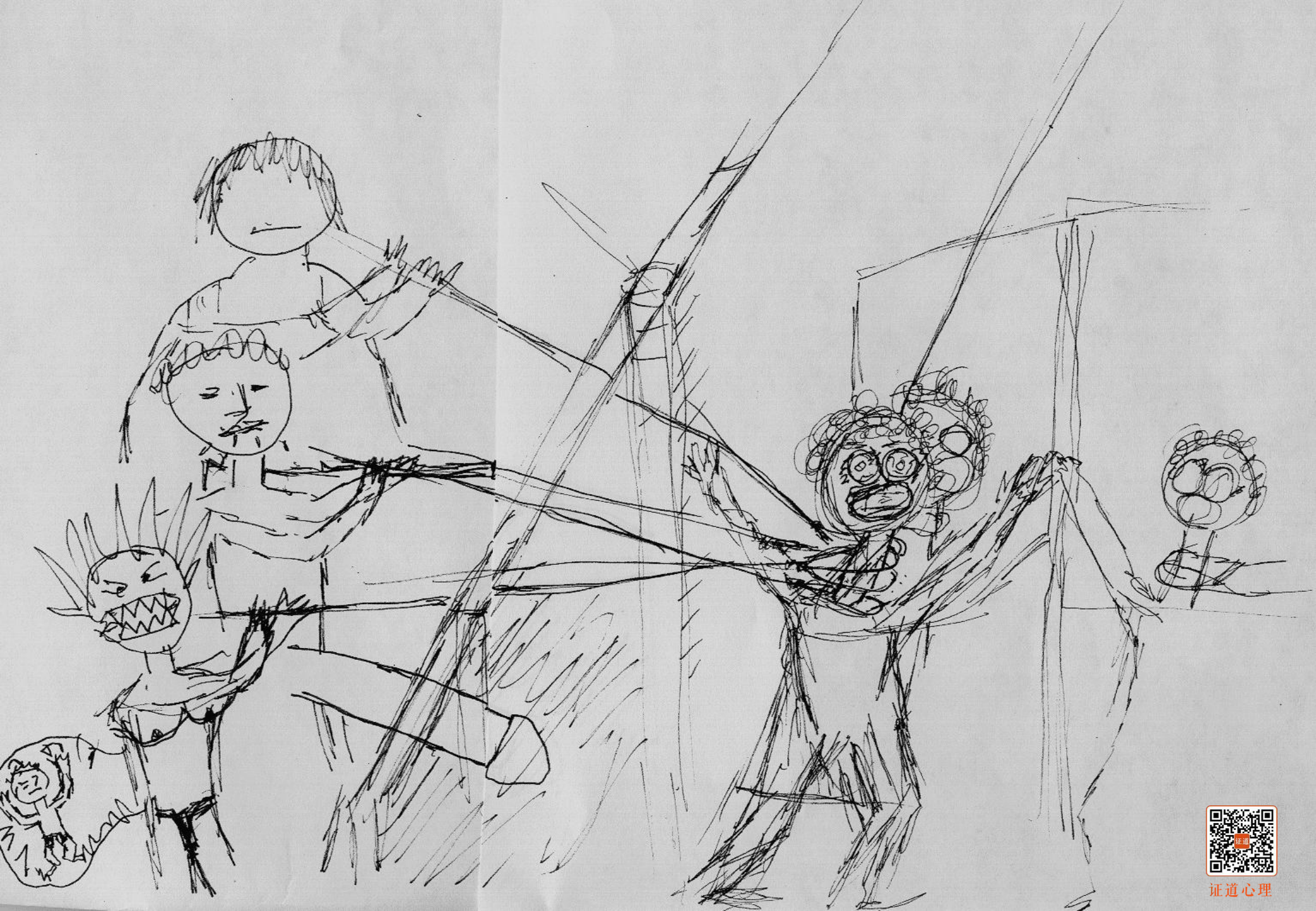


Murray, Koby & van der Kolk, 1991



Murray, Koby & van der Kolk, 1991





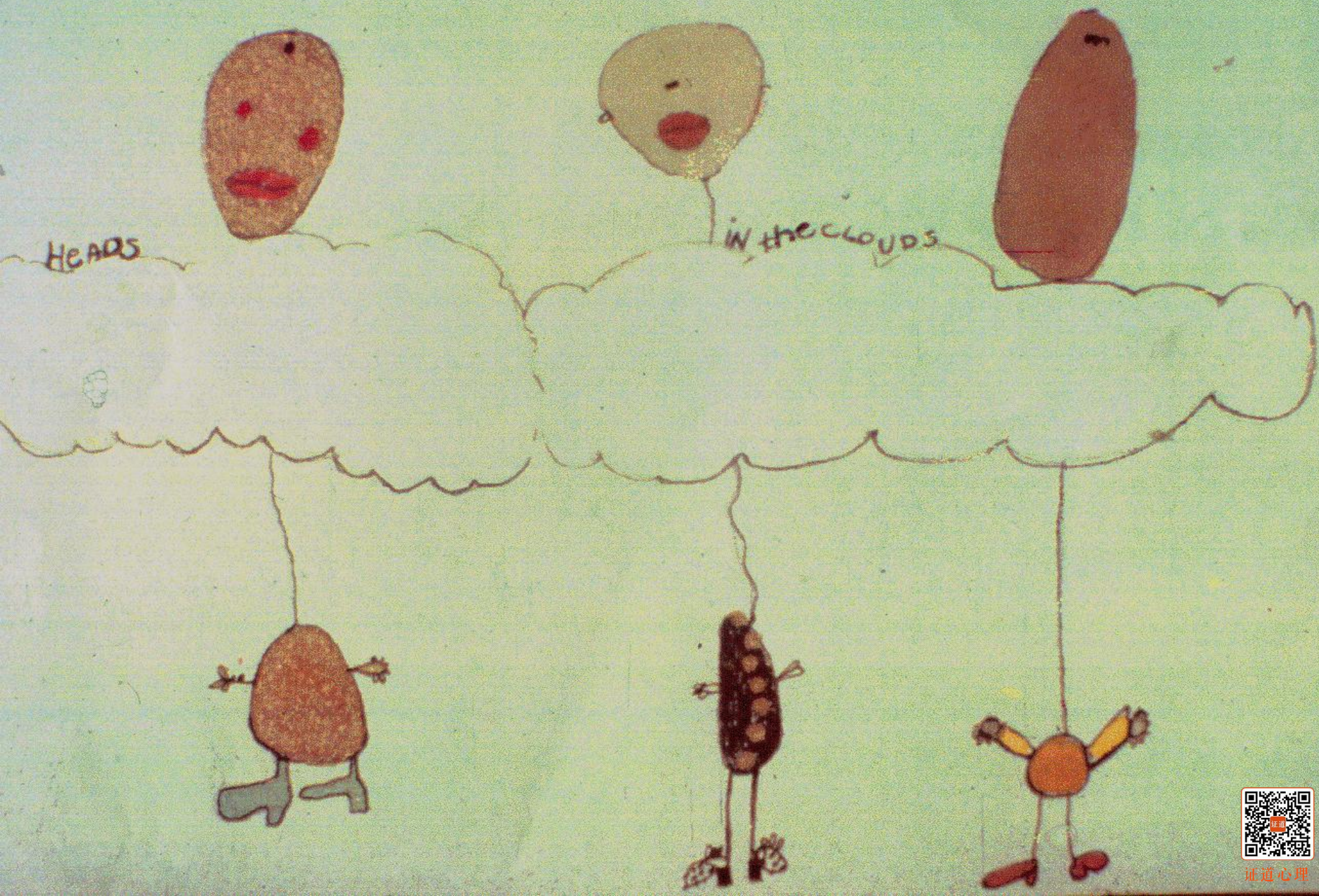
Immune function in women with incest histories

有乱伦史女性的免疫功能

van der Kolk, Wilson, Burbridge & Kradin

		mean	SD	#observ	sign
		均数	标准差	观察	显著性
CD3	患者 patients	69.7	12.8	12	.813
	对照 controls	68.6	9.1	12	
CD4	patients	47.6	12.4	12	.905
	controls	48.1	7.3	12	
CD8	patients	23.2	9.0	12	.604
	controls	25.2	9.6	12	
CD25	patients	3.9	1.9	12	.450
	controls	4.5	1.8	12	
CD45RA	patients	50.8	12.1	12	.157
	controls	57.9	11.9	12	
CD45RO	patients	36.8	11.3	12	.092
	controls	30.2	6.3	12	
RA:RO ratio	patients	1.5	0.51	12	.046
	controls	2.0	0.65	12	

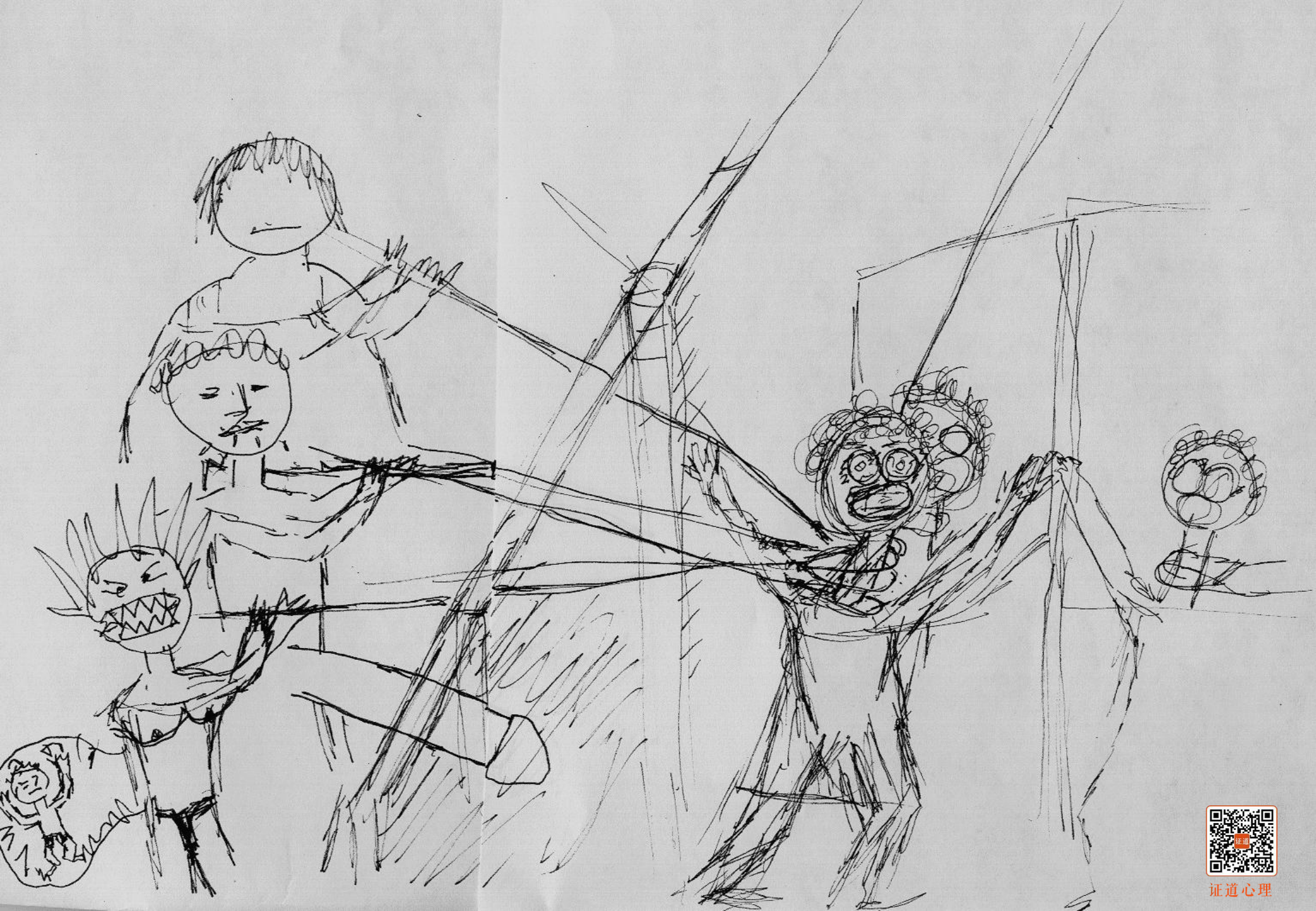




Trauma is response form
the entire organism.

创伤是整个机体的反应。





What happens to
memories of trauma?

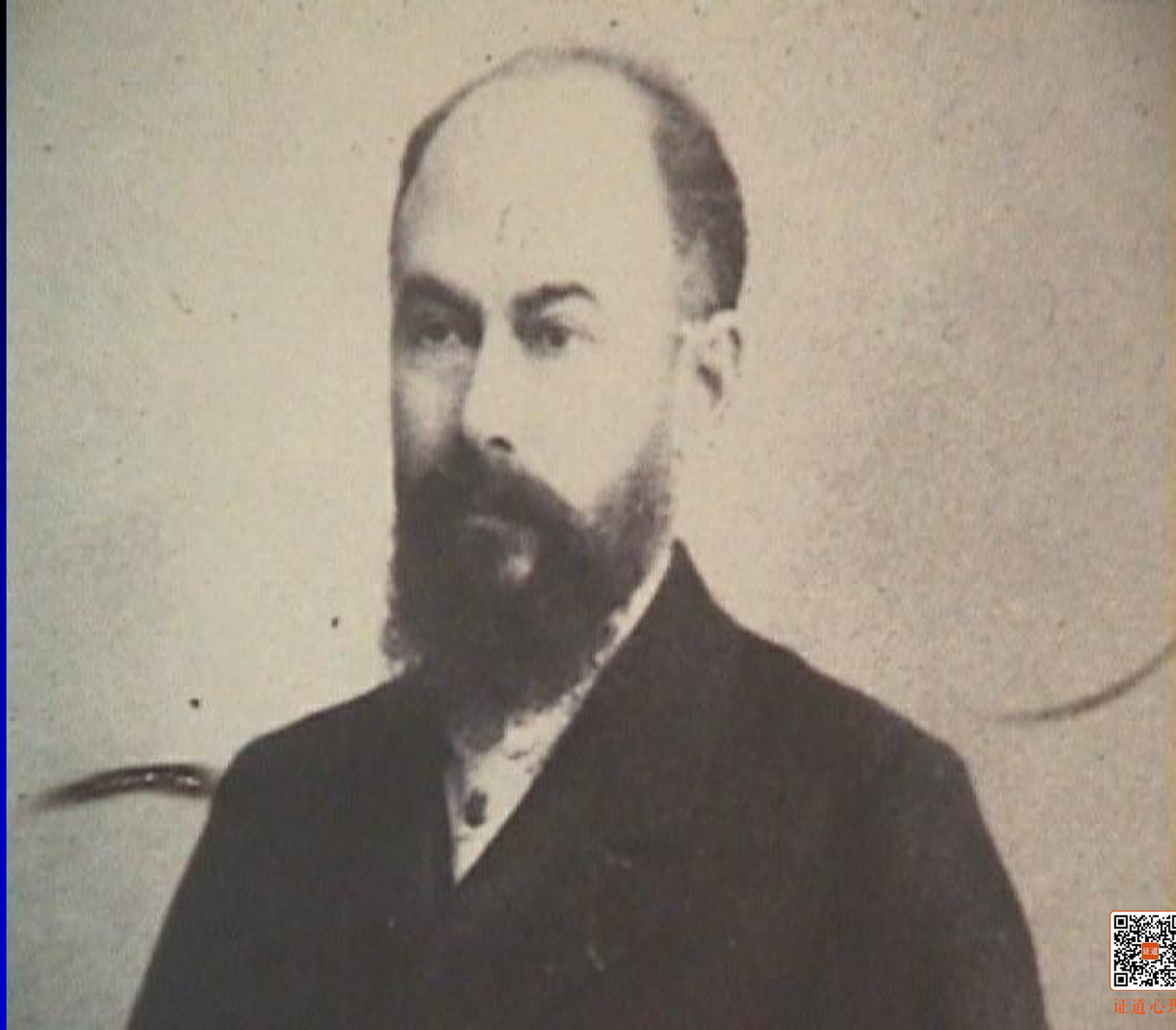
创伤性的记忆发生了什么？



The nature of
traumatic memory.

创伤性记忆的性质





证道心理

Janet: Trauma results in fragmentation & repetition

Janet: 创伤导致碎片化 & 重复

“as long as people are unable to integrate the memories of the trauma, fragments of the experience keep returning as intense emotions, images, bodily sensations and as irrelevant behaviors”

“只要人们无法整合创伤性记忆，碎片式的体验会以强烈的情绪，图像，身体感觉和不相干的行为方式不断重来”

(“1 Automatisme Psychologiques, 1889).



l'Automatisme Psychologique 心理自动机制(1889), Pierre Janet

Dissociation (désaggregation) central.

“Unable to integrate traumatic memories,
they seem to lose their capacity to assimilate new experiences as well.

“It is as if their personality has stopped at a certain point, and cannot
enlarge any more by the addition or assimilation of new experiences.”

解离 (désaggregation) 的核心

无法整合创伤性记忆，他们看起来也失去吸收新经验的能力

“它看起来...好像他们的个性停在某一点上，

无法通过增加或吸收新的经验而成长”



Attachment to the trauma

创伤的附着

When patients dissociate the traumatic experience, they become stuck:
当患者解离创伤性体验时，他们就被卡住了

All traumatized people seem to have the evolution of their lives halted: they are “attached to an insurmountable obstacle” (1919)
看起来所有受创伤的人的生活停止了变化：他们“附着于一个难以逾越的障碍” (1919)

Unless the dissociated elements of the trauma are integrated into personal consciousness, the patient is likely to experience a slow decline in personal and occupational functioning. " (Janet, 1919/1925 p.660)

除非解离的创伤内容被整合进个人意识，否则患者很可能经历个人和职业能力的缓慢下降 " (Janet, 1919/1925 p.660).



The early treatment of trauma

创伤的早期治疗

Hypnosis

Bring people back to the traumatic incident and
transform the experience

催眠

把人们带回创伤事件中
转变经验



作用机制-记忆的整合

MECHANISM OF ACTION

INTEGRATION OF MEMORIES (Stickgold 2002)

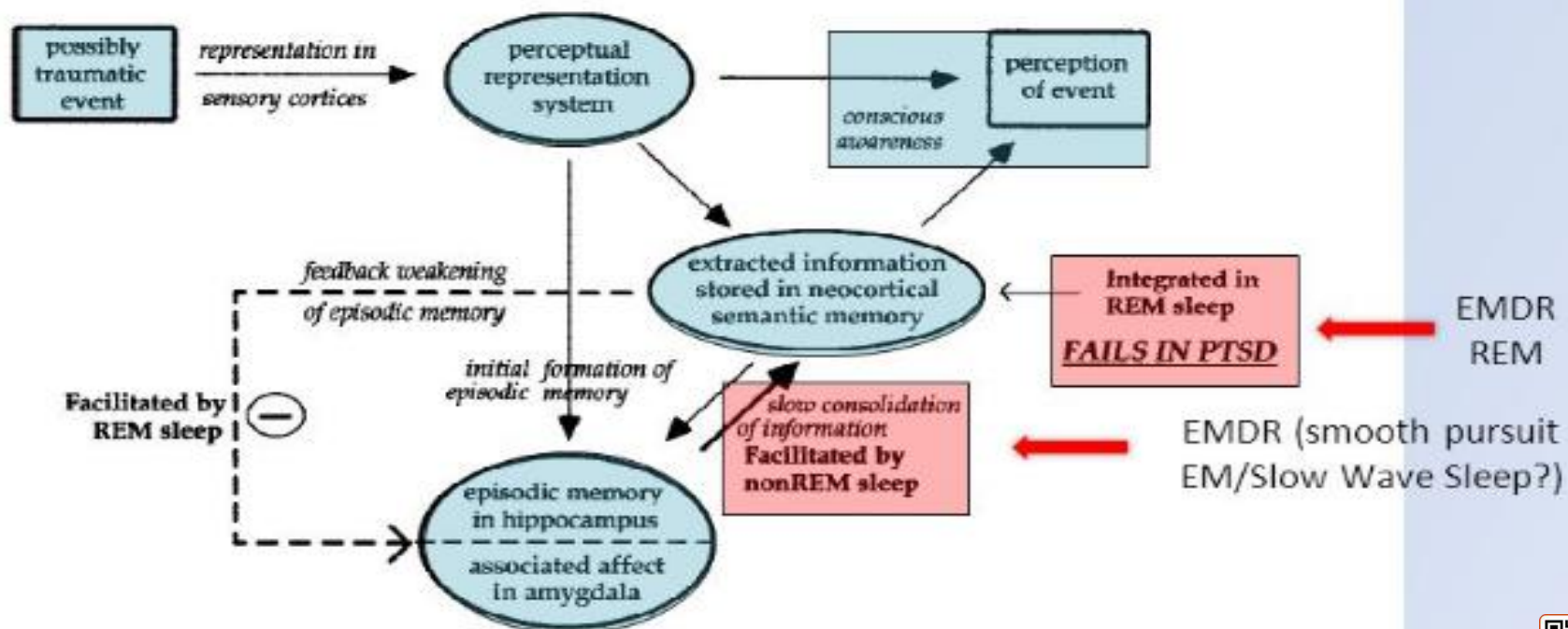
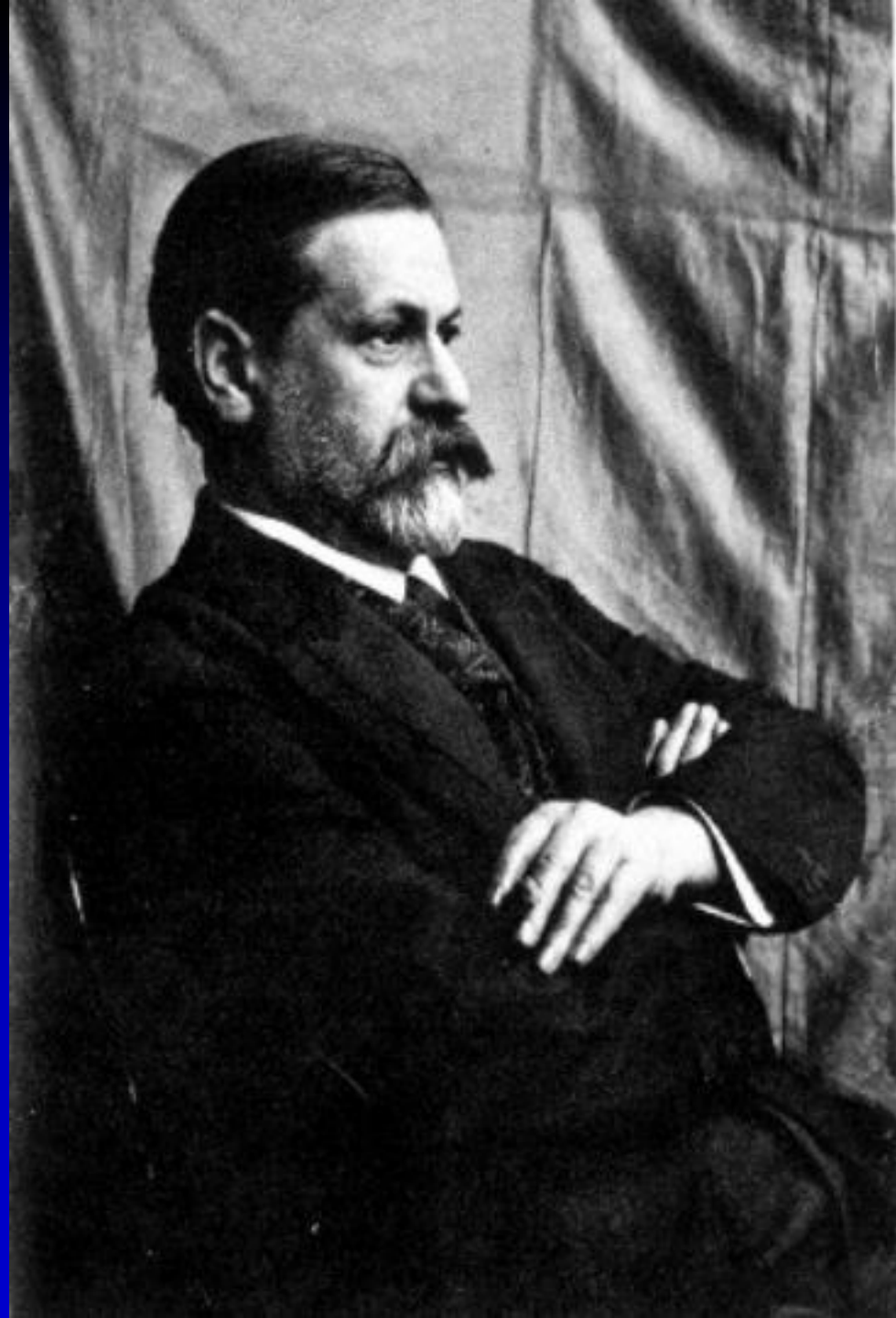


Figure 1. General model for sleep-dependent transfer and integration of episodic memories.





证道心理

The Etiology of Hysteria, 1893

癔症的病因学, 1893

Breuer & Freud

“The .. memory of the trauma .. acts like a foreign body which long after its entry must be regarded as an agent that is still at work”

创伤性记忆如同一个异物，在发生很久以后，仍必须看做一个在不断起作用的成分。



The memories which have become the determinants of hysterical phenomena persist for a long time with astonishing freshness and with the whole of their affective coloring”.

记忆已经成为癔症现象的决定性因素，它持续很长时间存在，带着令人惊叹的鲜活性和完整的情感渲染力

At first sight it seems extraordinary that events experienced so long ago should continue to operate so intensely—that their recollection should not be liable to the wearing away process to which, after all, we see all our memories succumb”.

乍一看起来很奇特的是，很久以前发生的事情仍持续强烈的运转着-它们的记忆不容易随着时间而消逝，毕竟，我们看到所有的记忆都遵从这个规律。



The fading of a memory or the losing of its affect depends on various factors. The most important of these is whether there has been an energetic reaction to the event that provokes an affect.

一个记忆的褪去或失去了它的情感色彩取决于各种因素。最重要的一点是，当事件激发了一种情感时，是否伴随着一个能量反应

“If a (somatic) reaction is suppressed [the emotion] continues to attached to the memory”

“如果一个（躯体）反应被压抑了，[情感]会持续附着于记忆”



The defining statement of 20th century psychology 20 世纪心理学的决定性声明

But language serves as a substitute for action: with its help, an affect can be ‘abreacted’ almost as effectively”.

语言作为行为的替代物：在它的帮助下，情感几乎可以被有效的“宣泄”

It brings to an end the operative force of the idea which was not abreacted in the first instance, by allowing it strangulated affect to find a way out through speech;

“语言终止了在事件发生当下因情感未被宣泄而持续作用的思维，这是通过言语给予被锁住的情感一个出口。”

and it subjects it to associative correction by introducing it into normal consciousness.

通过将其引入正常意识，使得被锁住的情感经历相关的修正。



Joseph Breuer & Sigmund Freud, 1893:

The mechanisms of Hysterical Phenomena

癔症现象的机制

We must, however, mention another remarkable fact, namely...
that these memories, unlike the memories of the [rest of their] lives,
are not at the patient's disposal.

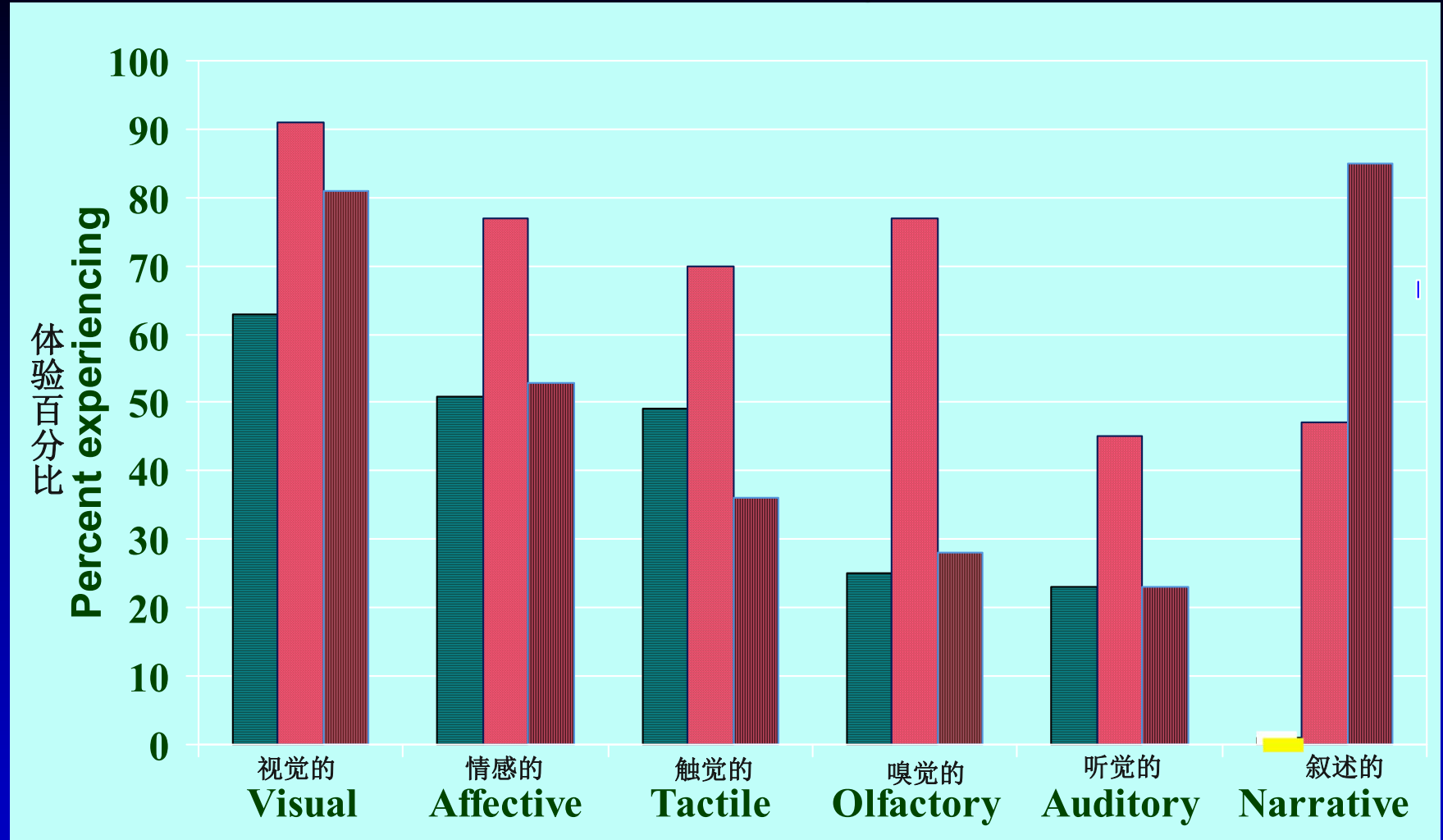
然而, 我们必须提及另一个惊人的事实, 即, 这些记忆不像他们其它的记忆, 不受这些病人的处置”

On the contrary, these experiences are completely absent from the patient's memory when they are in a normal psychical state, or are only present in a highly summary form.

相反, 当病人处于正常精神状态时, 这些经历完全无法被他们回忆起来, 或者仅仅以一种高度概括的形式存在

First TRAUMA CLINIC MEMORY STUDY

首个创伤中心记忆研究, 1995



Sensory modalities in which trauma was experienced
initially, at peak, and currently

经历创伤时的感觉形态起始, 高峰和目前



Freud on the return of the repressed

FREUD 关于压抑的回归

The compulsion to repeat the trauma is a function of repression itself:

重复创伤的冲动是压抑本身的功能:

Because the memory is repressed the patient "is obliged to repeat the repressed material as a contemporary experience, instead of ... remembering it as something belonging to the past"
- *Beyond the Pleasure Principle*, 1920

因为记忆被压抑，病人不得不反复将被压抑的内容当作现在的经历，而不是...将其当作过去发生的事情。

- *超越快乐原则*, 1920

If a person does not remember, he is likely to act out: "he reproduces it not as a memory but as an action; he repeats it, without knowing, of course, that he is repeating, and in the end, we understand that this is his way of remembering

- *Inhibitions, symptoms and anxiety*, 1914, p150.

如果一个人不记得，他很有可能会用行动表示：他用行为重演它，而不是记忆。他在重复，但不知道自己在重复，最后，我们理解这是他记住的方式。

- *抑制, 症状和焦虑*, 1914, p150.

Autobiographical Study

自传性研究(1925)

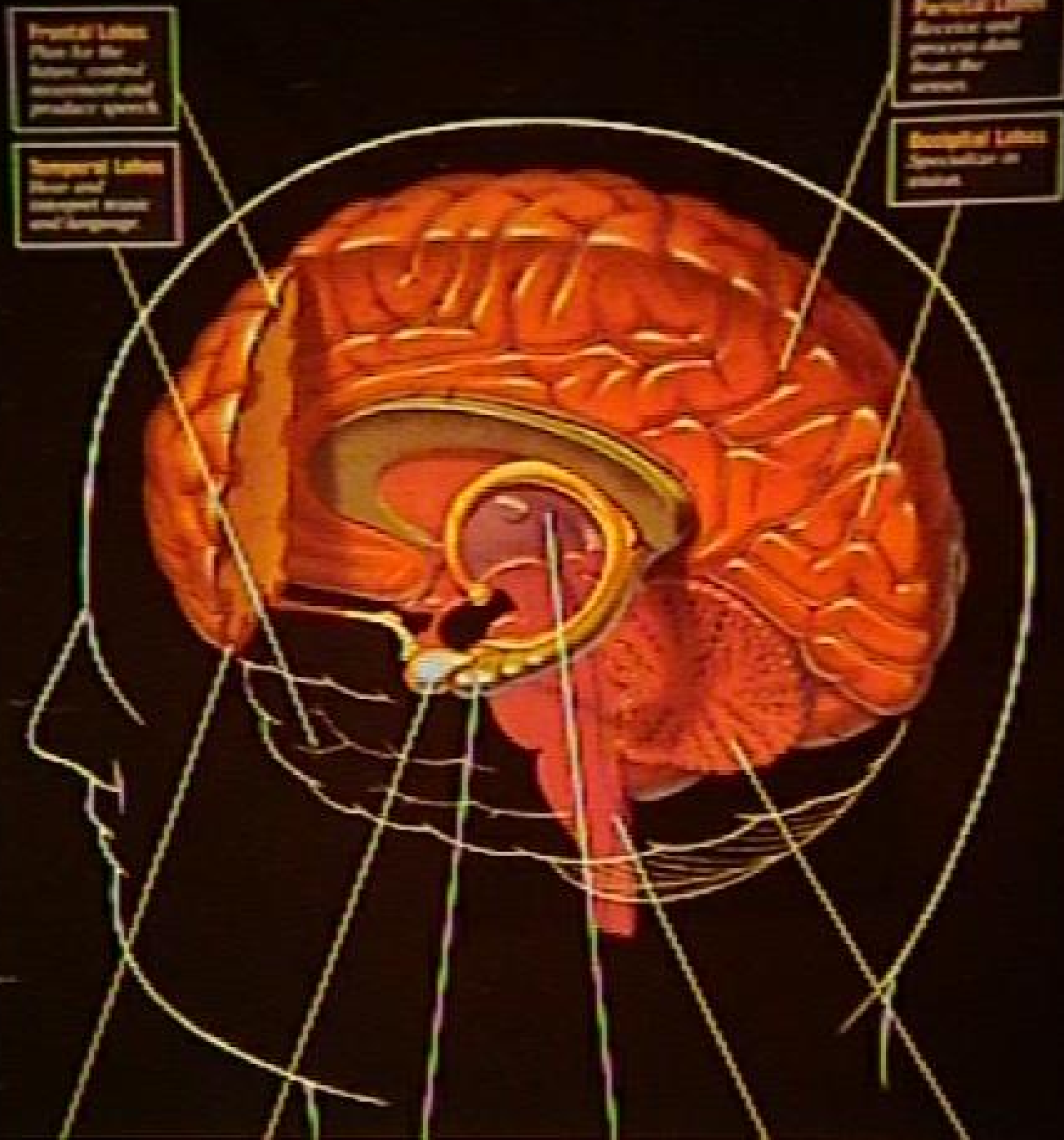
"I believed these stories (of childhood sexual trauma) and consequently supposed that I had discovered the roots of the subsequent neurosis in these experiences of sexual seduction in childhood. If the reader feels inclined to shake his head at my credulity, I cannot altogether blame him". ... "I was at last obliged to recognize that these scenes of seduction had never taken place, and that they were only fantasies which my patients had made up" (p34).

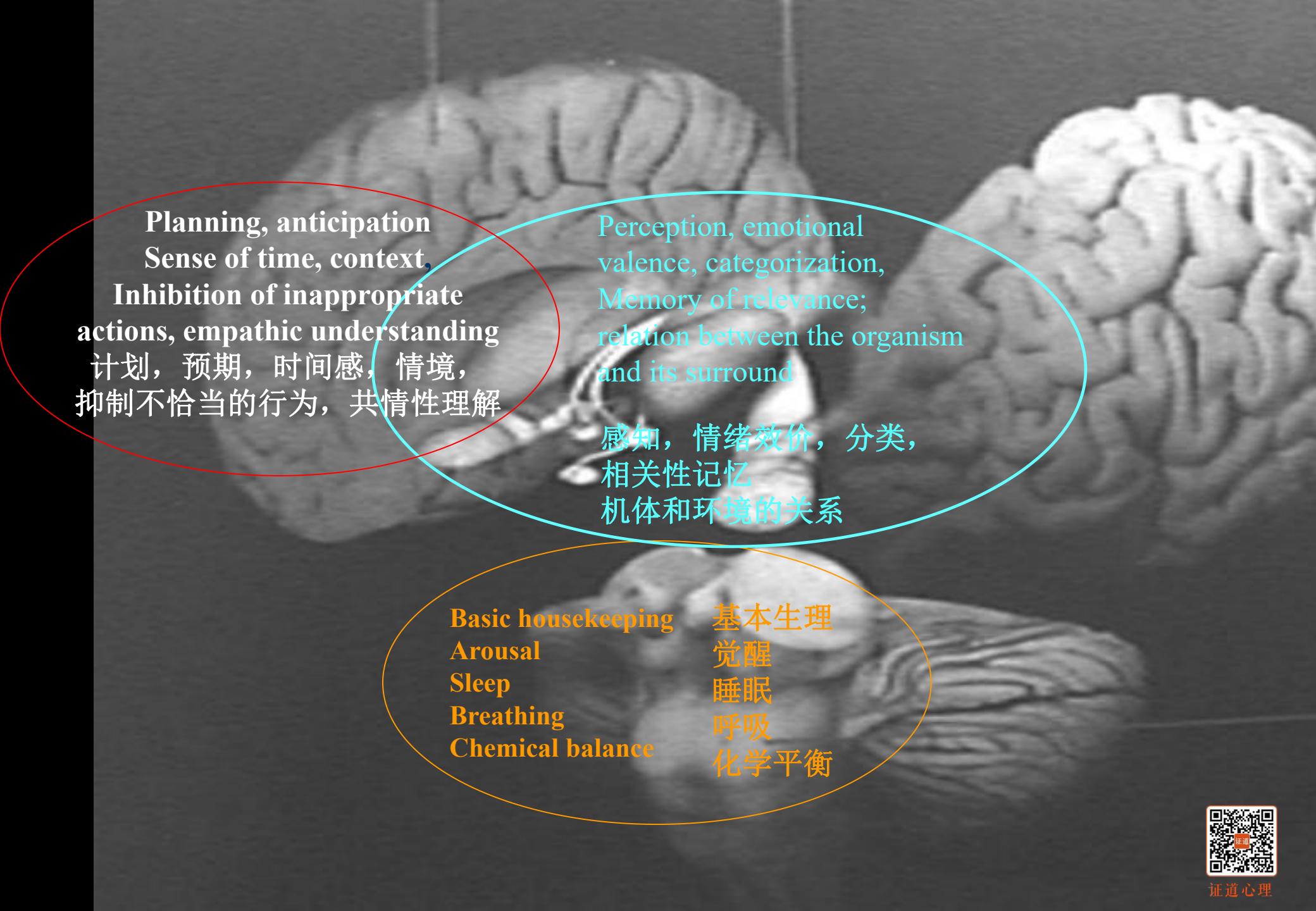
“我相信了这些故事（儿童性创伤），因此认为在这些经历了性诱惑的儿童期，我发现了神经症的根源。如果读者对我的轻信质疑，我无法完全责怪他”...“我最后不得不认识到这些诱惑的场景从没发生过，它们只是我的病人编造的幻想” (p34).

How is brain organization
affected by trauma?

大脑组织如何被创伤影响？







Planning, anticipation
Sense of time, context,
Inhibition of inappropriate
actions, empathic understanding
计划，预期，时间感，情境，
抑制不恰当的行为，共情性理解

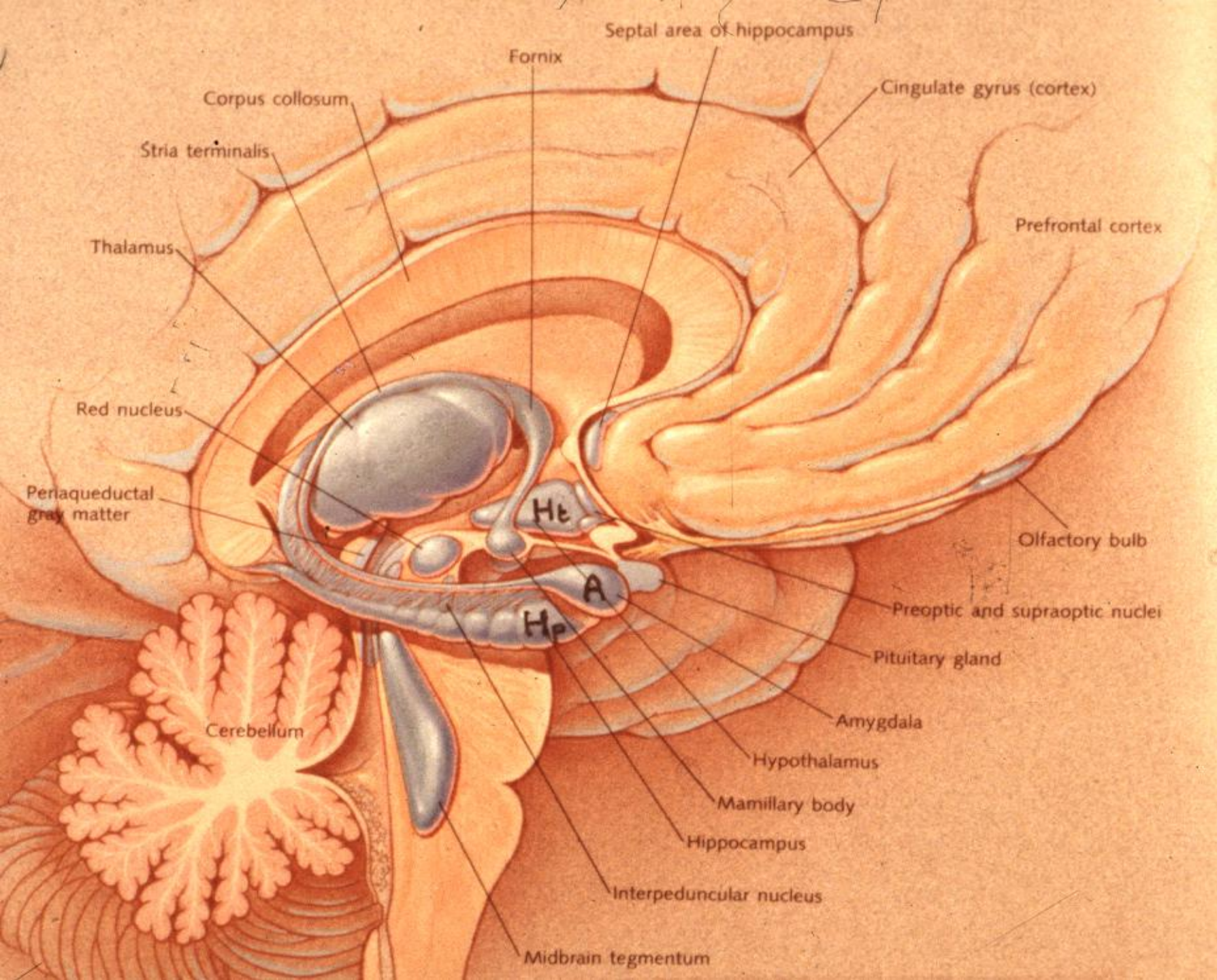
Perception, emotional
valence, categorization,
Memory of relevance;
relation between the organism
and its surround

感知，情绪效价，分类，
相关性记忆
机体和环境的关系

Basic housekeeping
Arousal
Sleep
Breathing
Chemical balance

基本生理
觉醒
睡眠
呼吸
化学平衡

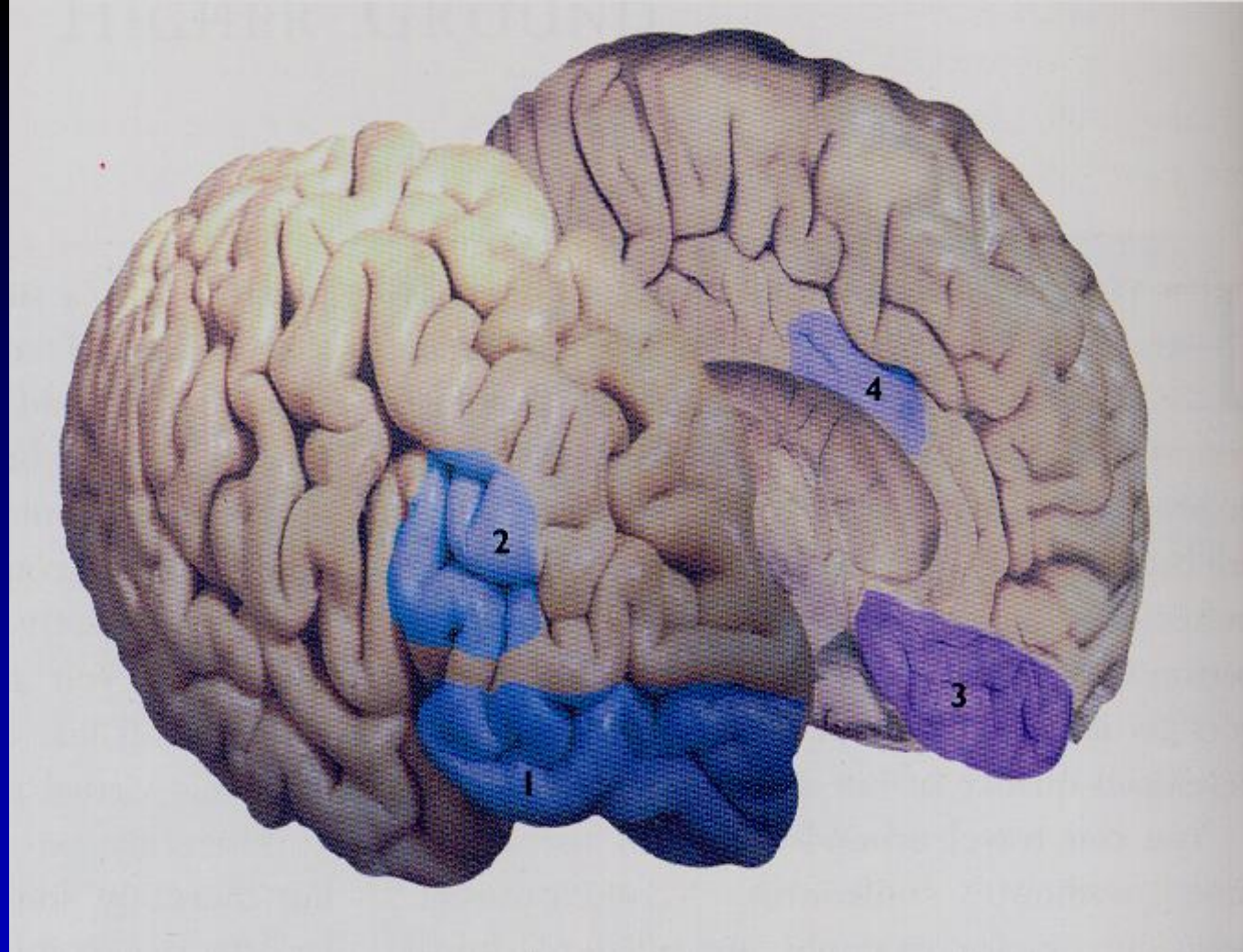




1) Orbitofrontal cortex.
Inhibits inappropriate
action; helps postpone
reward seeking.
眼窝前额皮质:抑制不合理行为
, 帮助推迟寻求奖赏

2) Dorsolateral pre-
frontal cortex. Here
things are “held in
mind” and manipulated
to form plans and
concepts.
Helps set priorities.
背外侧前额叶皮质。“记住”事情,
形成计划和概念

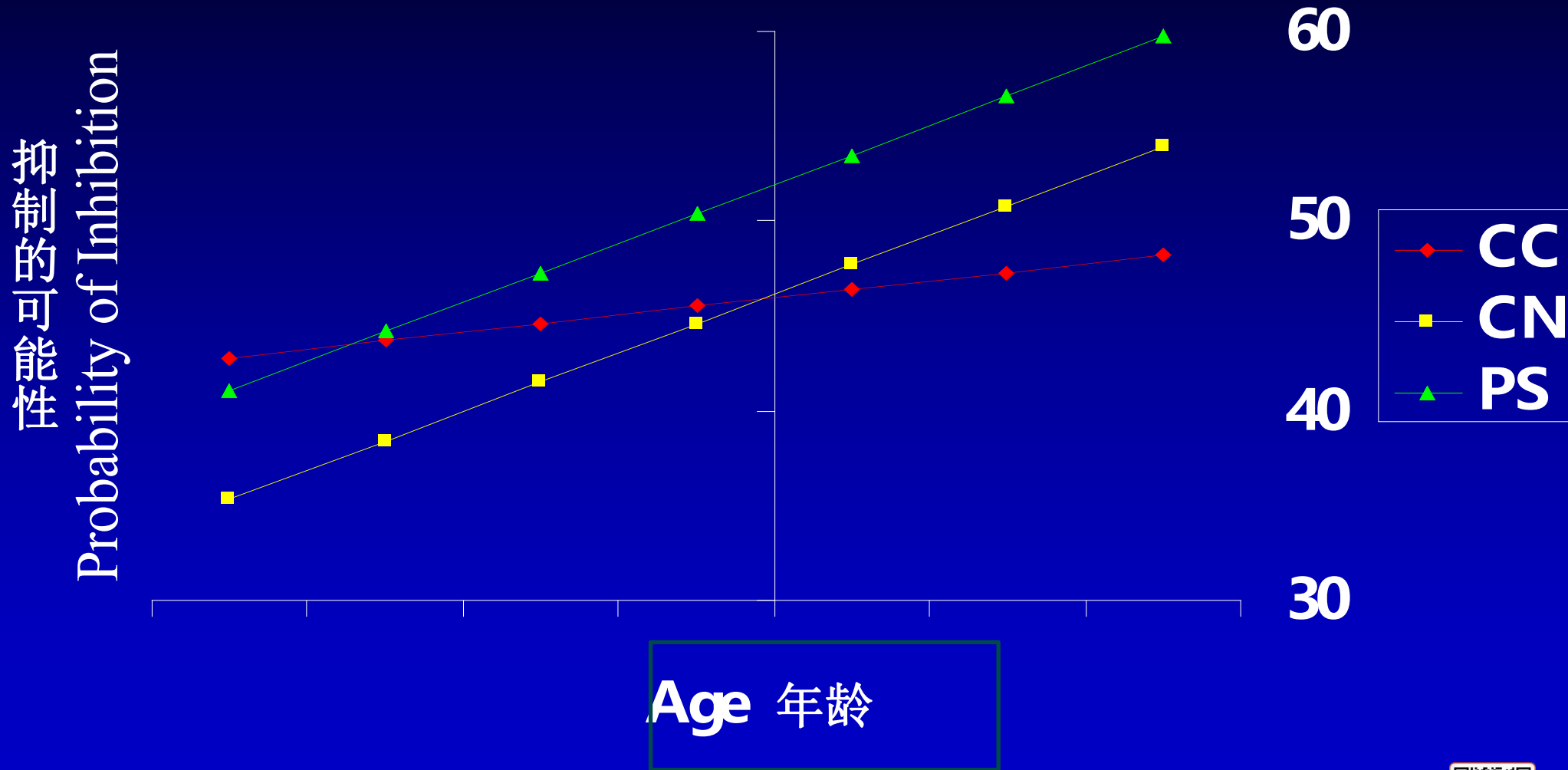
3) Ventromedial
Prefrontal cortex. Here
Emotions are registered and
meaning bestowed on
perceptions.
腹正中前额叶皮质。情绪登记
和知觉赋予含义



4) Anterior cingulate. Helps focus
Attention. Integrates cognition and
affect. Tunes into thoughts;
Awareness of “self”
前扣带回。帮助集中注意力。
整合认知和情感。与想法匹配;觉察“自我”

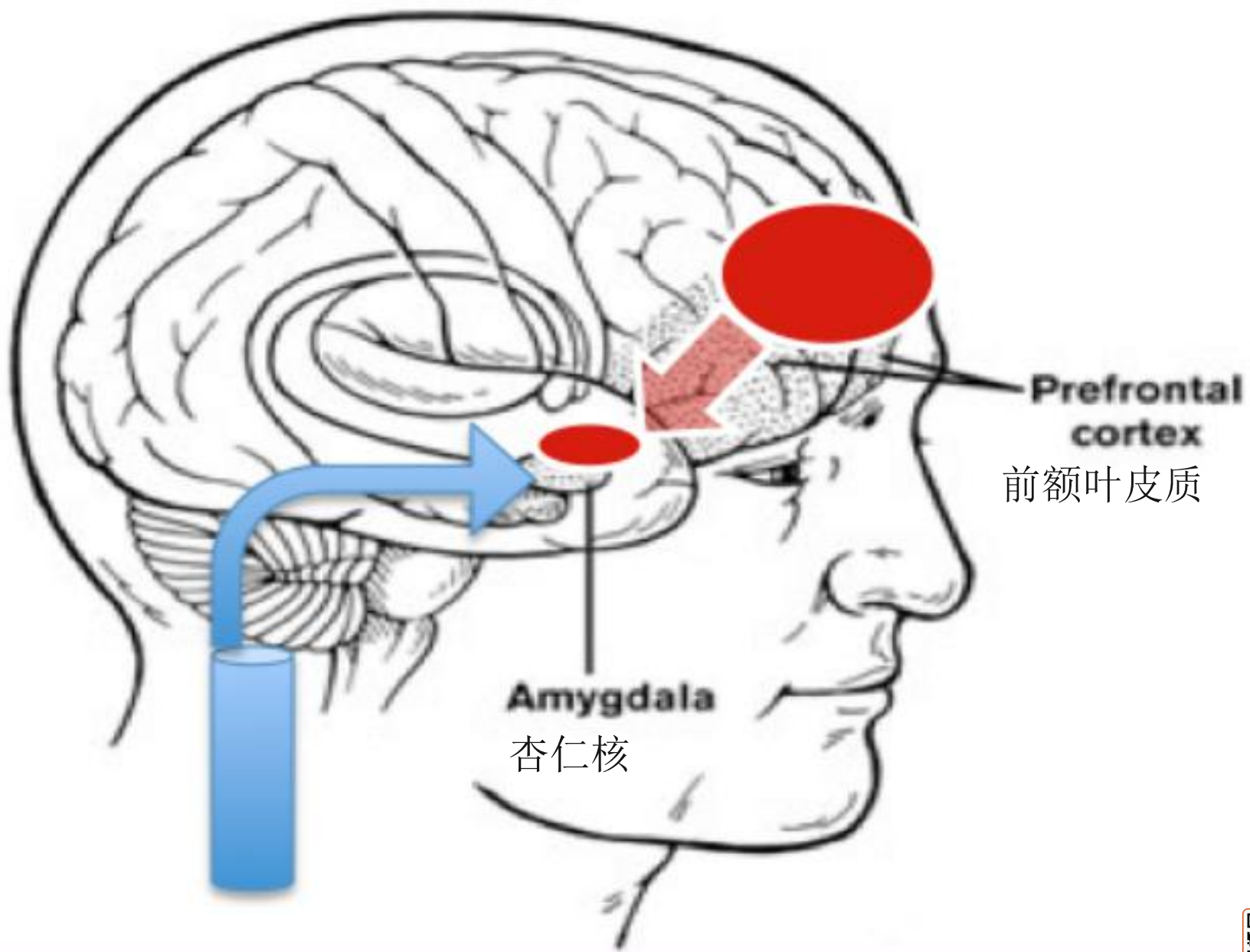


Figure 1: Stop Task 表1: 终止任务



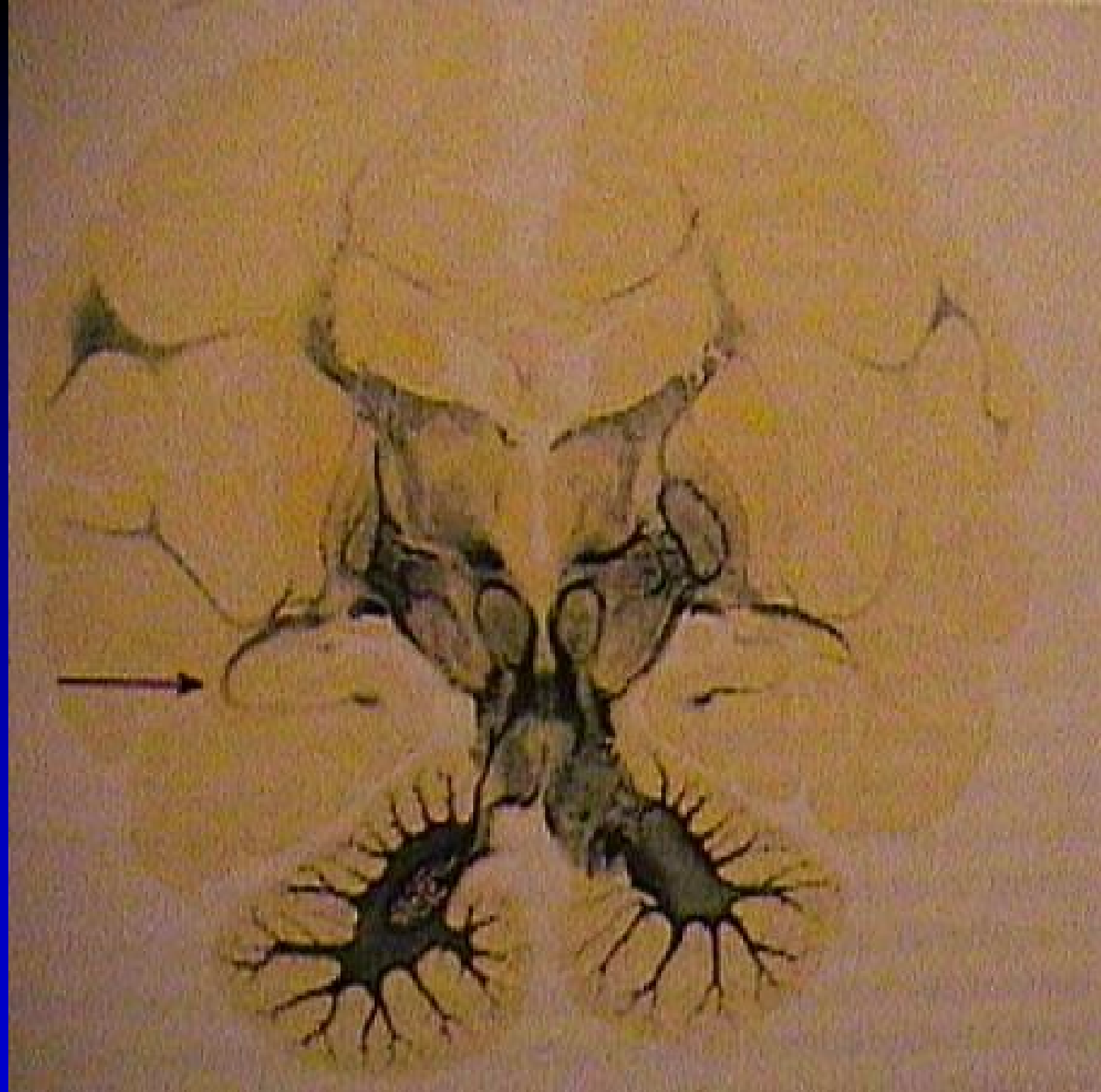
Mezzacappa et al, 2001













How Brains Connect in Proto-Conversation

对话-原型：大脑之间如何联结

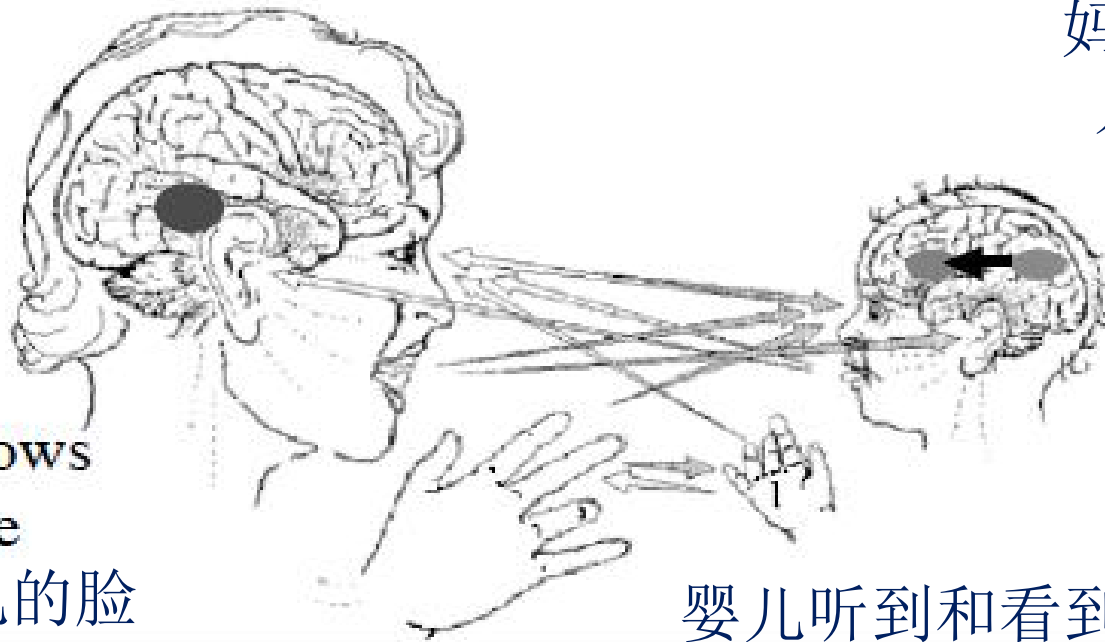


Baby Knows
Mother's Face

婴儿识别妈妈的脸

Mother Hears
& Sees Baby's
Expressions,
& Responds

妈妈听到和看到婴
儿的表情和反应



Mother Knows
Baby's Face

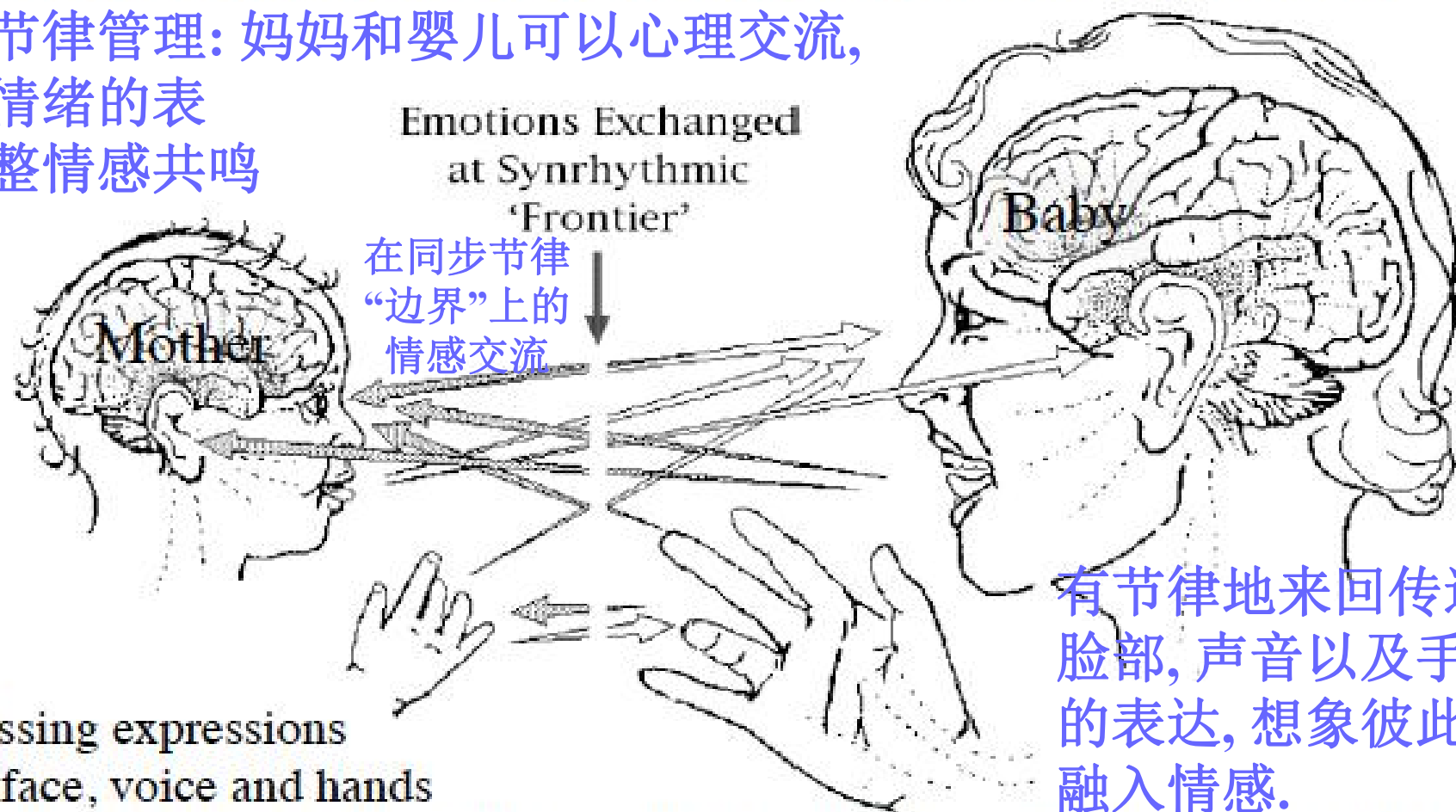
妈妈识别婴儿的脸

Baby Hears
& Sees Mother's
Expressions,
& Responds

婴儿听到和看到妈妈的表情和反应

SYNRHYTHMIC REGULATION: Mother and infant can communicate **psychologically**, regulating sympathy by expressions of emotion.

同步节律管理: 妈妈和婴儿可以心理交流,
通过情绪的表
达调整情感共鸣



Passing expressions

of face, voice and hands

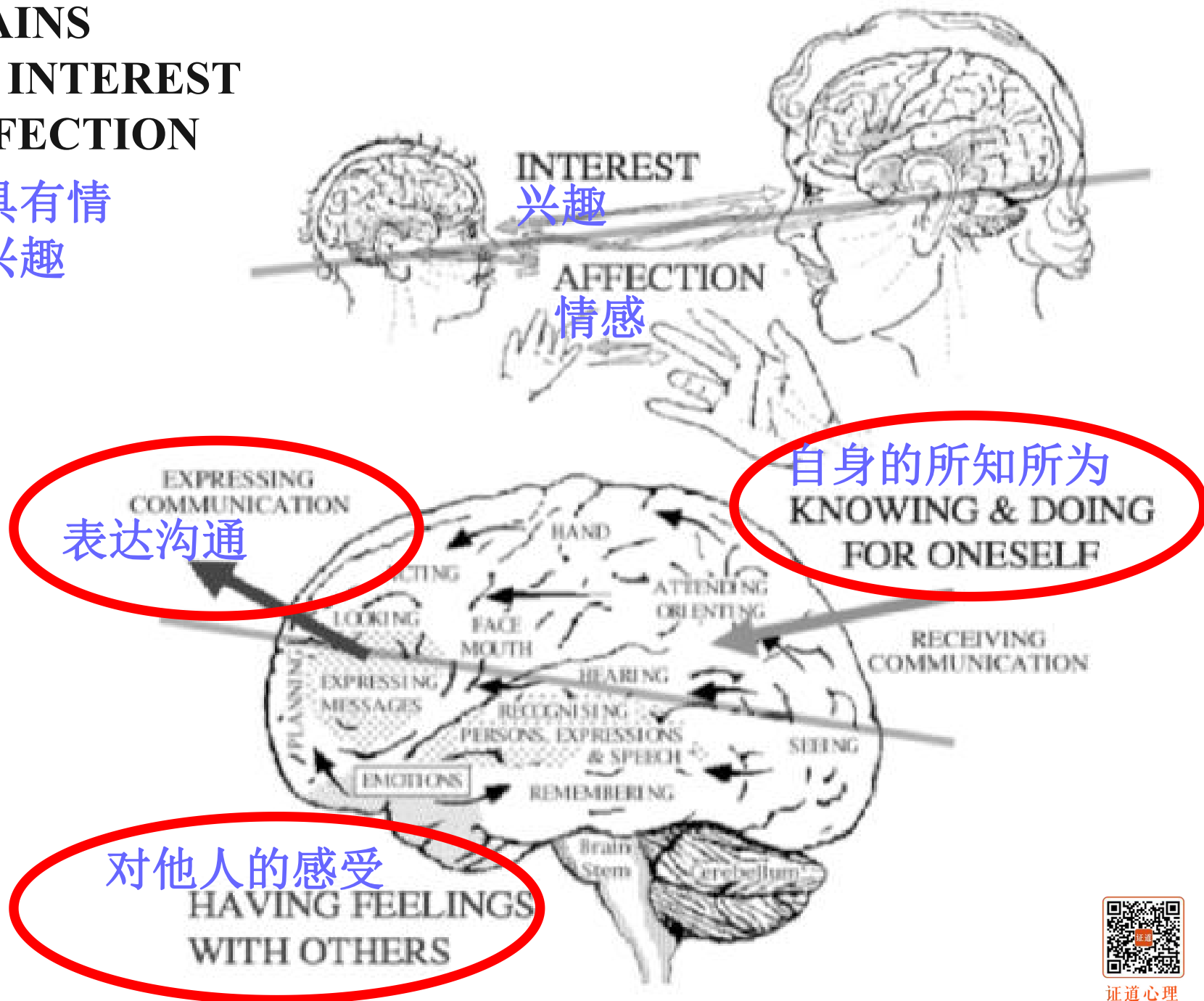
back and forth, rhythmically, imagining each other, participating in feelings

Telling and acting out stories with emotion, listening to thoughts and imitating actions is how humans learn -- in shared vitality and awareness.



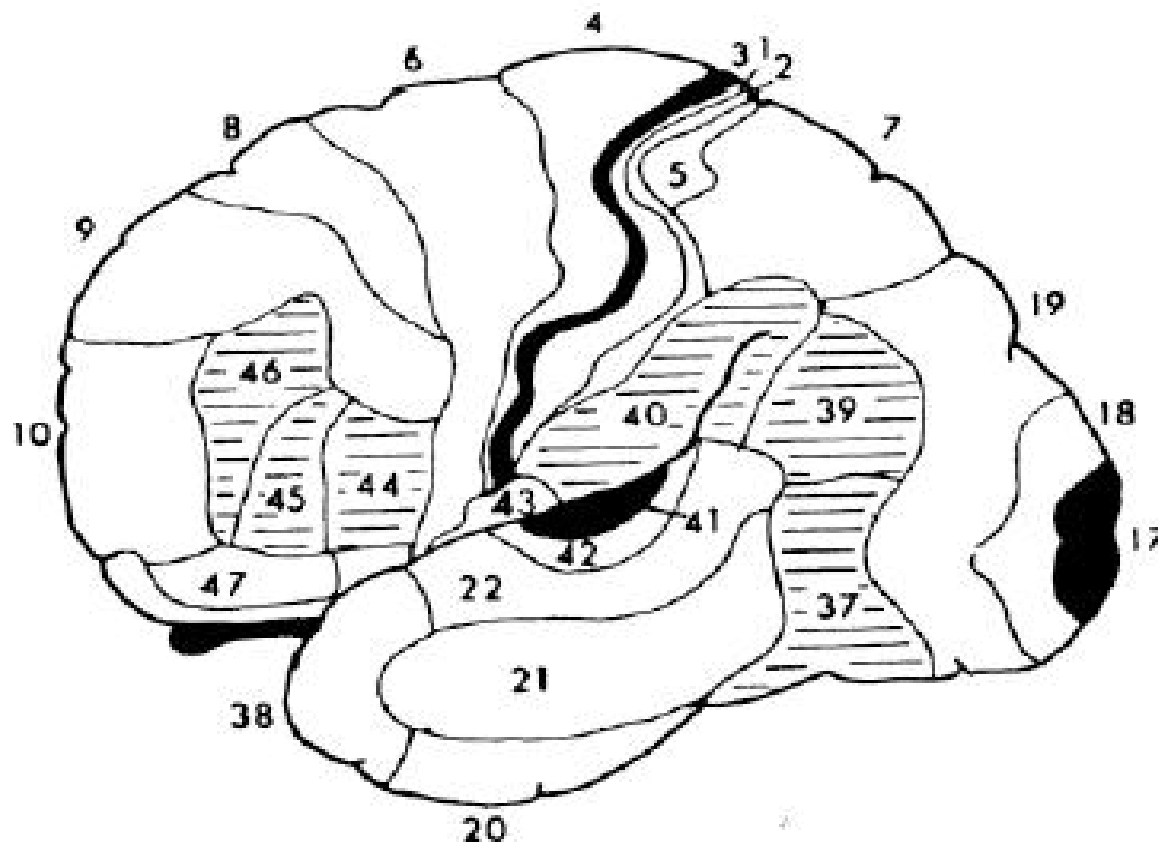
HOW BRAINS EXPRESS INTEREST WITH AFFECTION

大脑如何具有情感地表达兴趣



The parts that grow most in childhood are those that are needed for learning skills, including language.

在童年期发展最多的大脑部分, 是负责学习技能的部分, 包括言语技能



But these parts are already adapted to their tasks in a young baby, and ready to engage with other persons' expressive behaviours.

在一个小婴儿那里, 这些部分已经适应了它们的任务, 并且准备与其他人的表达行为互动.



证道心理精彩课程

扫描二维码了解详情



精神分析核心概念 与临床技术 18 讲

Vamik Volkan

五次获诺贝尔和平奖提名
美国精神分析学院前主席
弗洛伊德奖和西格尼奖双料获得者
连续 15 年荣膺美国最佳医生



关系创伤的动力学治疗 全过程及临床操作步骤

Janet Bachant

创伤治疗顶尖专家
纽约精神分析中心督导师
纽约灾难咨询联合会主席



复杂发展创伤的形成 及如何治疗

Janet Bachant

创伤治疗顶尖专家
纽约精神分析中心督导师
纽约灾难咨询联合会主席



识别二维码查看课程列表

精神分析·创伤治疗 儿童青少年治疗

三大系列，正在热招！

证道