

小孩和猩猩使用相同记忆法 PDF转换可能丢失图片或格式，
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https://www.100test.com/kao_ti2020/270/2021_2022__E5_B0_8F_E5_AD_A9_E5_92_8C_E7_c67_270083.htm Infants and Apes Remember Things Similarly Infants and apes apparently adopt the same tactics (1) for remembering where things are, but as children develop their strategies change, a new study shows. The findings might reveal in part how the minds of our distant ancestors shifted gears (2) to embark (3) on the road toward humanity. There are two basic strategies animals use to remember where things are. Either they remember a things features, such as whether it was a banana, or they remember its place in space, such as left. All animals scientists have tested seem to employ both strategies. However, if experiments are rigged (4) such that animals had to choose between the tactics, some species, such as chickens and toads (5) , prefer a feature-based strategy. Others, such as fish and dogs, favor a place-based strategy. Researcher Daniel Haun at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany and his colleagues investigated orangutans (6) , gorillas (7) , bonobos (8) , chimpanzees (9) and humans. They wanted to see whether humanity and its closest relatives all adopted the same strategies for remembering where things are. Any changes in strategy between species or within species would shed light on how they all evolved. At the Leipzig Zoo, the scientists hid rewards such as grapes, banana slices or toy animals under either a hollow piece of wood, an imitation (10) birds nest or an artificial hollow rock. At times, the

rewards were concealed (11) under the same object they were hidden beneath previously, whose place had changed. A feature-based strategy would best find these coveted items. At other times, the rewards were hidden at the same place they were concealed before, but under a different object. A place-based strategy would best discover these items. When human infants are a year old, they favor place-based strategies like all the other great ape species do. This suggests human and ape brains start out the same, at least when it comes to remembering where things are. The most recent common ancestors between humans and all the other great apes date back to about 15 million years ago, suggesting this common preference has been part of our brain structures since at least then. However, three-year-old children preferred a feature-based strategy. The researchers noted this shift in strategy coincided with a period when humans are first drawn into social life and acquire skills such as spoken language.

1. tactics : 战术、策略
2. gear : 齿轮
3. embark : 登上
4. rig : 操纵
5. toad : 癞蛤蟆
6. orangutans : 猩猩，一种大型的树栖类人猿，产于波罗门和苏门答腊，有稀疏的红棕毛皮、很长的臂且无尾
7. gorilla : 大猩猩，栖居在赤道非洲的最大的类人猿，体型粗壮，头发很粗，呈深棕色或黑色
8. bonobo : 产于非洲刚果河以南的倭黑猩猩
9. chimpanzee : 黑猩猩产于非洲热带地区的一种长有长长的黑毛群居类人猿，有一些栖于树上的生活习惯且表现出与人类相似的行为以及高等的智力
10. imitation : 仿造物
11. conceal : 隐藏

一项新的研究显示，小孩和猿使用同样的方法来记忆物品所在的地方，但是当孩子们越长越大，他们的方法就会改变。这些发现

也许能在一定程度上说明我们的远祖是如何转舵走上“人性”的道路。动物记忆物品位置的方法有两种。一种是通过记忆物品的特点，例如它是否是一个香蕉；另一种则是通过记忆物品所在的空间位置，例如是否在左边。受测的科学家们会同时采取两种方法。但是在同样的实验中，动物们则会选择其中一种，一些物种，例如鸡和蟾蜍会选择特点记忆法。其他的，例如鱼和狗更喜欢空间记忆法。德国莱比锡普朗克演化人类学研究所研究人员丹尼尔·坎和同事们分别对猩猩、大猩猩、倭黑猩猩、黑猩猩和人类进行了研究。他们希望了解人类是否会和他们最近的“亲戚”选择同样的记忆方法。不同物种之间和同一物种间的方法改变都能说明演化的过程。在莱比锡动物园，科学家们把如葡萄、香蕉片、动物玩具等奖品放入空木头、假鸟窝或者人造空石头里面。当研究人员用同样的掩饰物藏匿奖品，只是改变了它们的位置的时候，善用特点记忆法的动物很容易找到这些诱人的奖品。当研究人员没有移动物品，只是改变了藏匿物品的掩盖物的时候，善用空间记忆法的动物则能很快发现物品。一岁左右的小孩和猿类一样选择空间记忆法。这说明至少在物品位置记忆方面，人类和猿类大脑最初是一样的。可证明的人类和猿类拥有共同祖先的最近时间是1500万年前，也就是说至少从那个时候起，人类和猿类就拥有同样的记忆方法。但是，三岁的小孩就会选择特点记忆法。研究人员说这种转变正与人类刚刚步入社会生活相对应，那个时候人们学会了很多技能，例如说话。

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