

Radboud University Nijmegen





Behavioral Science Institute

• Complexity Science - Systems Biology

• Idiographic vs Nontheoretical scientific explanation

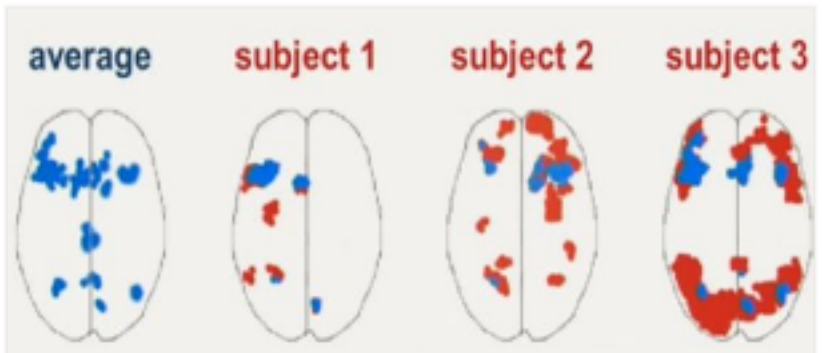


Idiographic Science



Principle of jaggedness

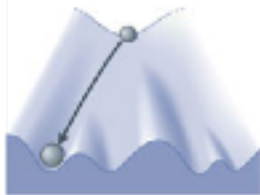
no individual corresponds to average



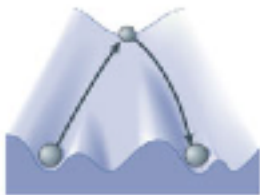
Principle of pathways

multiple trajectories to 'success'

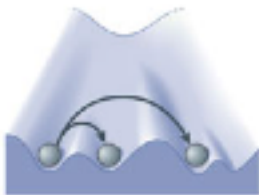
a Normal development



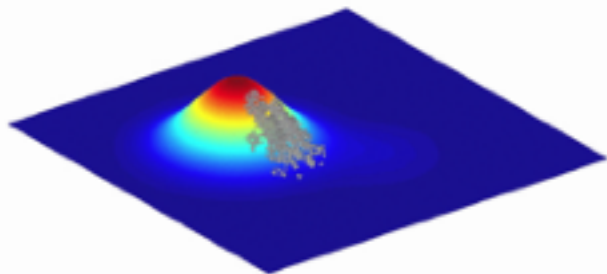
b Pluripotent reprogramming



c Direct conversion



Dynamic fitness landscape

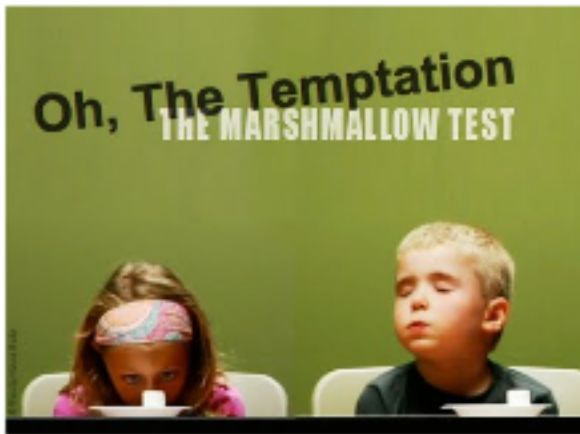


Population size, $N = 2,304$
Mutation rate, $\mu = 0.5$ per trait

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Principle of context

no behaviour is context independent



THE FAILERS...

struggled more in stressful situations

had more trouble paying attention

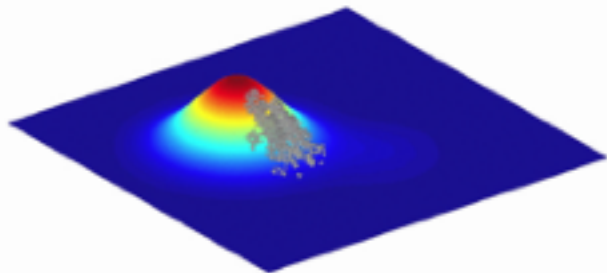
had greater difficulty maintaining friendships

scored lower on the S.A.T. (by over 200 points)

prone to a much higher higher body-mass index

were more likely to have drug addictions

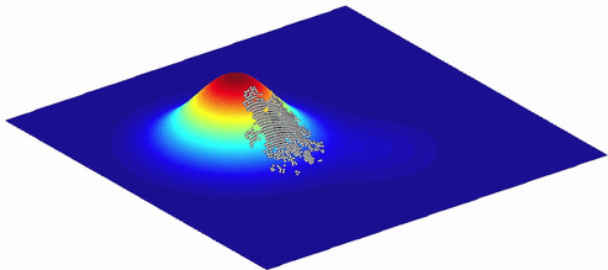
Dynamic fitness landscape



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Dynamic fitness landscape

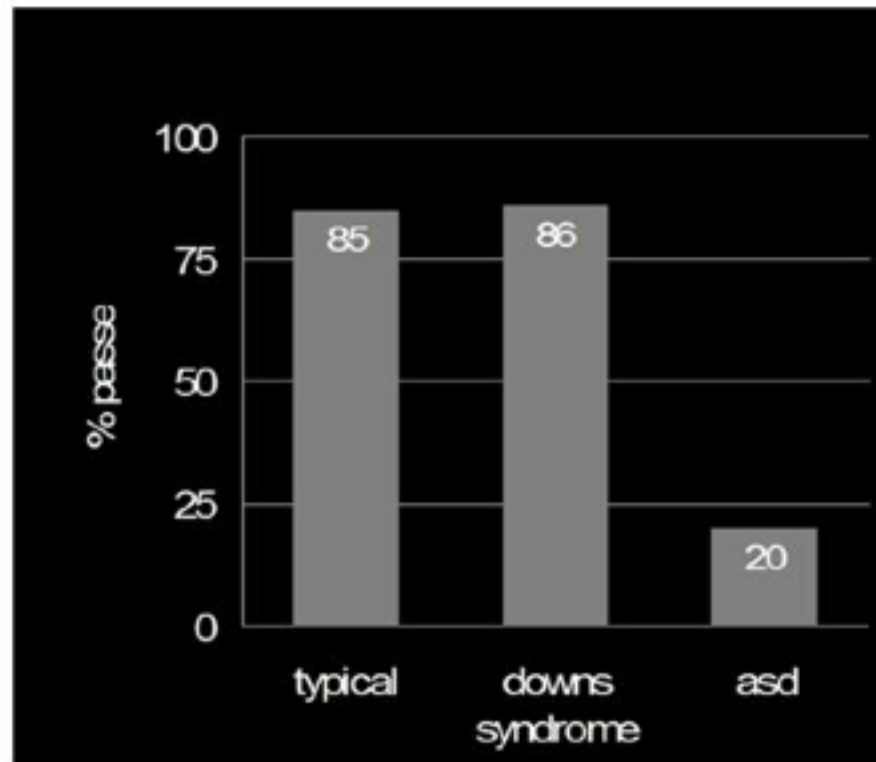


Population size, $N = 2,304$
Mutation rate, $\mu = 0.5$ per trait

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Sally-Anne problem



Baron-Cohen, Leslie, and Frith (1985)
Social and emotional problems secondary
to cognitive problem



**only four of the 20 autistic children
(20%) answered correctly**

theory of mind?

