

Paul J. Zak

The Moral Molecule

Digest

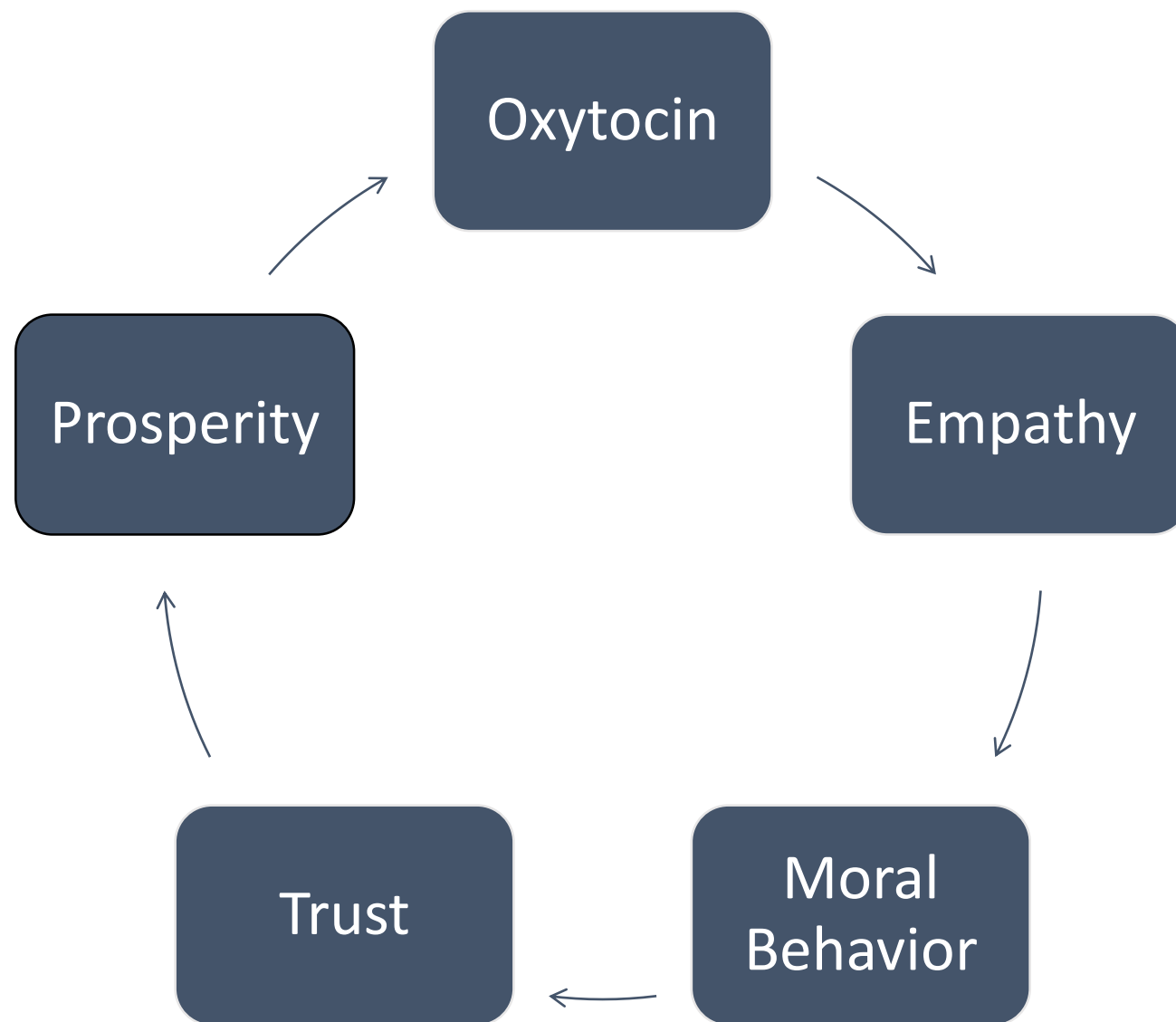
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In a nut shell

- Oxytocin level will rise when one feels trusted.
- Oxytocin makes one more empathetic and generous.
- At the same time, oxytocin triggers serotonin and dopamine secretion. The former reduces one's anxiety and makes one happier, while the latter reinforces generous behavior.
- As a result, one will be more and more trusted.
- The level of trust and generosity in a society closely correlates with how prosperous it is.

“Virtuous Cycle”



The Trust Game

- There are two players, A and B, who are given 10 dollars for each.
 - Player A decides how much money (possibly none) A will invest in player B.
 - B gets three times the amount of money that A invested.
 - B decides how much money B will return to A.
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- About 90% of the As gave some amount, and about 95% of the Bs returned some. On average As got 14 dollars and Bs 17.
 - The oxytocin level in B significantly correlated with the willingness to return.

The Trust Game

- If A's investment was based A's will, B's oxytocin level was 50% higher and the return was doubled.
- The oxytocin administered group invested 17% more money than the control group.

How to raise oxytocin level?

- Hug
- Massage
- Dance
- Being exposed to a tragic story
- Religious ritual
- Meditation

Why do we have oxytocin?

- As a result of evolution.
- Nature has selected cooperative group over competitive group.
- Some mechanisms is necessary which drives us to cooperative behavior.

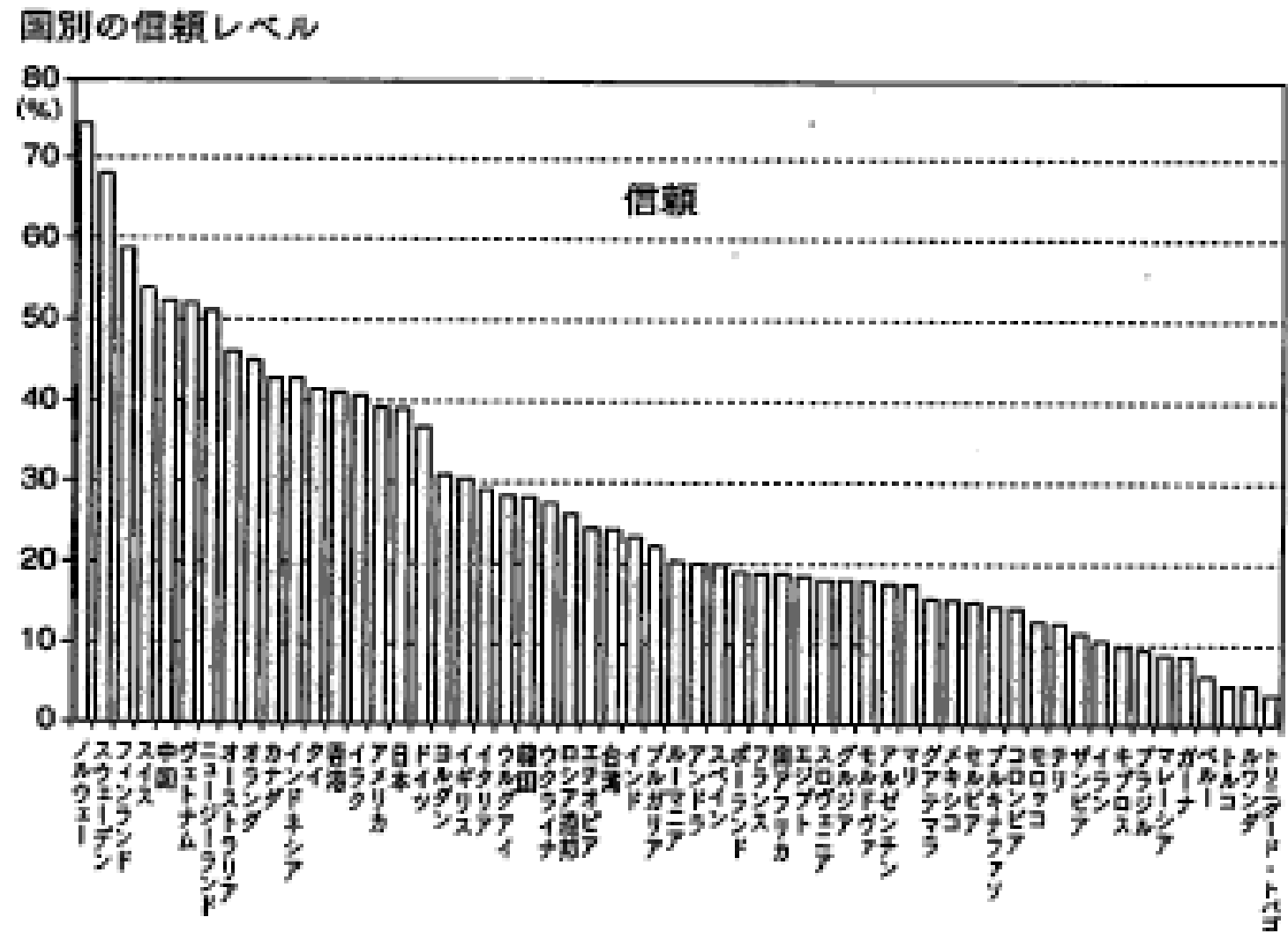
Balance is crucial

- To be too much trustful is dangerous.
- We have a hormone which counterbalances oxytocin: testosterone.
- Testosterone reduces one's empathy.
- Testosterone also urge people to punish anti-social people.

Oxytocin Deficiency Disorder is caused by

- Stress (temporary)
- Neglect or abuse in infancy (acquired)
- Genetic disorder such as autism (organic)
 - The oxytocin level is lower in autism patients, while that of testosterone is higher when patients are fetuses.

Trust and economic prosperity



How to make the society prosper

- Encouragement of communication
- Direct experience of diversity
- Fairness
- High quality education, especially in humanities.

Morality leads to happiness

- In the trust game, those players B who marked larger increase in oxytocin level did not only return more money, but also showed more satisfaction with their lives, more ability to recover from difficulty, and less symptoms of depression.

Prescription from ``Doctor Love''

- Eight hugs a day.

