

Snowflakes, Living Systems, and the Mystery of Giftedness

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Summary of Reading

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“Growth is the key ingredient for
the generation of snow-crystal
patterns.

Small corners grow into branches;
Complexity is born”

--Kenneth Libbrecht

A snowflake is the spontaneous creation of complex patterns.

Living systems share one thing in common with snowflakes:

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- ✓ They self-assemble and
 - ✓ Self-organize.

3- Basic Dimensions of Humans

Functional

Environmental functional relations i.e. An infant reaching for a toy constitute a functional relation.

Developmental

Qualitative changes on various timescales i.e. Infants engagement in motor acts promotes development of coordination skills.

Temporal

Dimension of a dynamic system i.e. Infant may initially fail to grasp toy, but will improve coordination over time.

Human beings are not just rigid, reactive creatures, but flexible, creative beings.

Many aspects of mental functioning show dynamic instability (like snowflakes)
😊

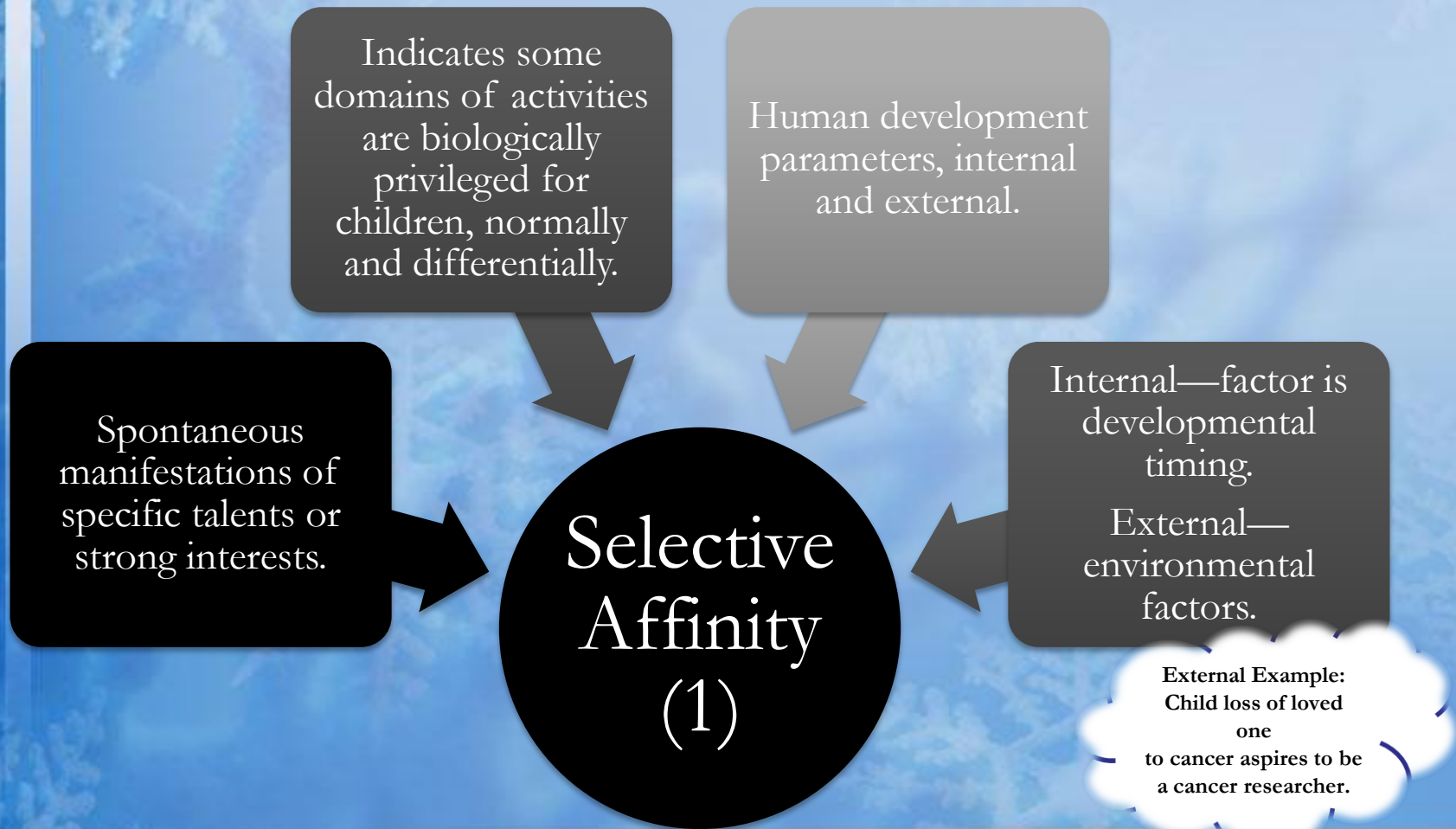
Contingent on environmental experience and learning, with early upbringing, socially structured activities, and encounters play a role.

Human beings are capable of regulating and directing one's own behavior according to one's intention and determination.



Balancing instability and stability

3 Dynamic Facets of Gifted Potential



MAXIMAL GRIP (2)

Even highly gifted children have to learn the hard way.

Ex: Mozart worked more than 10 years before he was able to produce his first masterpiece



Denotes a tendency or action toward the mastery of knowledge, skills to an optimal level.

Can be seen as more of an

intentional and deliberate mental action in response to demands and challenges.

Edge of Chaos (3)

Experience a
psychological
tension between
the KNOWN
and
UNKNOWN.

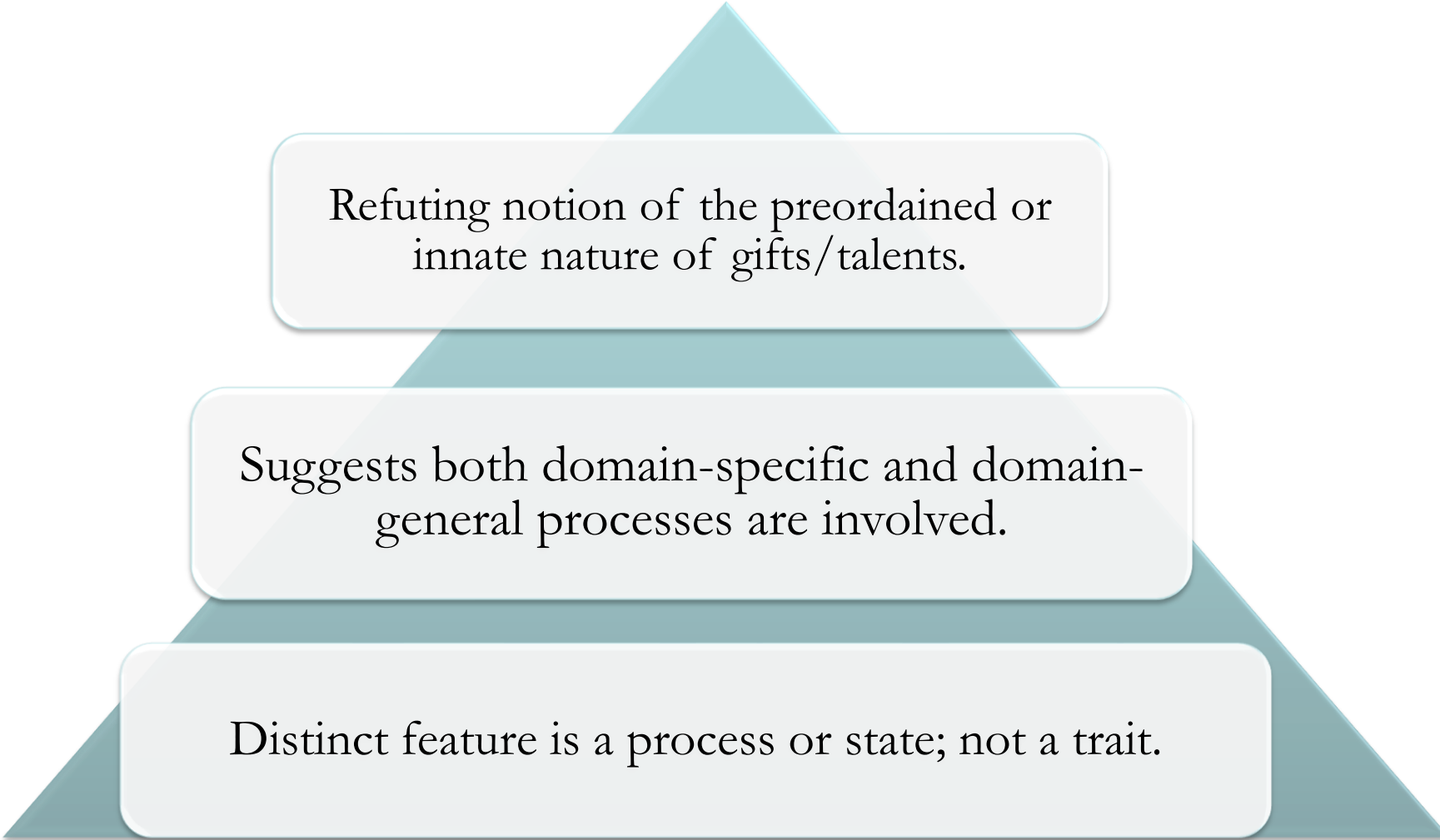
External forces— nurture an
inquisitive mind “it is
necessary to teach both to
accept and to reject the past
with a kind of balance that
takes considerable
skill”Feynman (1999)

- Internal forces— creative
person has to be able to
maintain both sensitivity to
new information and stability
to function with freedom to
explore new discipline and
remain committed to parts of
tradition.

Synopsis of Dynamic Effects

- **Selective Affinity**
 - Some gravitate toward conventional expertise
 - Others toward more innovation
- **Maximal Grip**
 - Ideally self-optimizing
 - May lead to Edge of Chaos as one chooses their path
- **Edge of Chaos**
 - A delicate balance between sensitivity and stability
 - Between freedom and discipline
 - Between Imagination and principled ways of thinking
 - Balance may tilt either way = various trajectories

Addressing the Issues



Refuting notion of the preordained or innate nature of gifts/talents.

Suggests both domain-specific and domain-general processes are involved.

Distinct feature is a process or state; not a trait.

- a) Identify relational property of person-task interaction
- b) Track temporal trajectories to show when development occurs
- c) Identify properties and how they feed into the process of further development
- d) Show differential developmental pathways and trajectories

TAKES A DEVELOPMENTAL APPROACH

Conclusion

Improving the way we think about gifted development.

The way we conduct research on them.

The way gifted education can be delivered to facilitate their optimal development.

Essentially that giftedness is made, Not born.....



Please answer the following questions on my blog----

1. Do you agree that giftedness is made, not born? Why, please explain.
2. Are Dai and Renzulli onto something with their theory and indication that gifted development and delivery needs further research.? Please support your response.