



# Encouraging Self-organized Collaborations at an Interdisciplinary Research Institute



A Case Study of the Institute for  
Mathematics and its Applications

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# Research collaborations

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How?

How well?

Whether?

# Case Subject: Visiting Researcher Institute

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- NSF-funded university location
- annual interdisciplinary themes
- short-/long-term visitors
- intellectual autonomy



# Qualitative Case Study Methods

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- Participant interviews
- Thematic analysis of transcripts
- Collaboration model development
- Mapping institute roles

# Interview topic areas

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- IMA experience
- IMA practices/attributes
- collaboration factors
- IMA roles/strategies

# Intentional collaboration by 2-several individuals

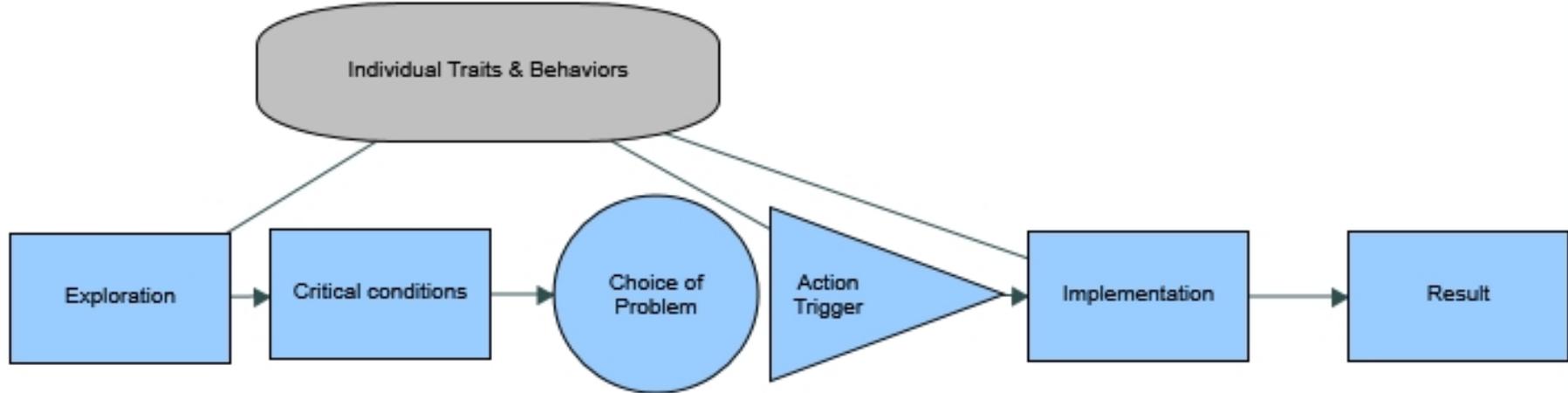
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## *integrative collaboration*

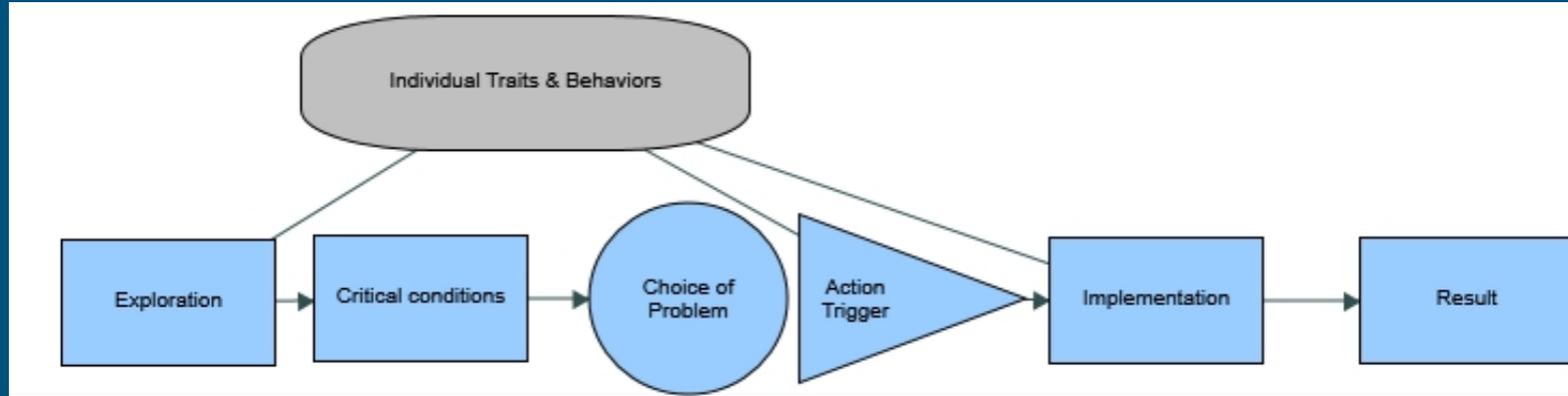
“requires individuals to work closely together throughout the research process in order to develop ideas, and challenge each other’s assumptions”

--Hara et al. (2003)

# Emergent Model for Self-organized Collaborations



# Other collaboration models?



Foundation/prehistory

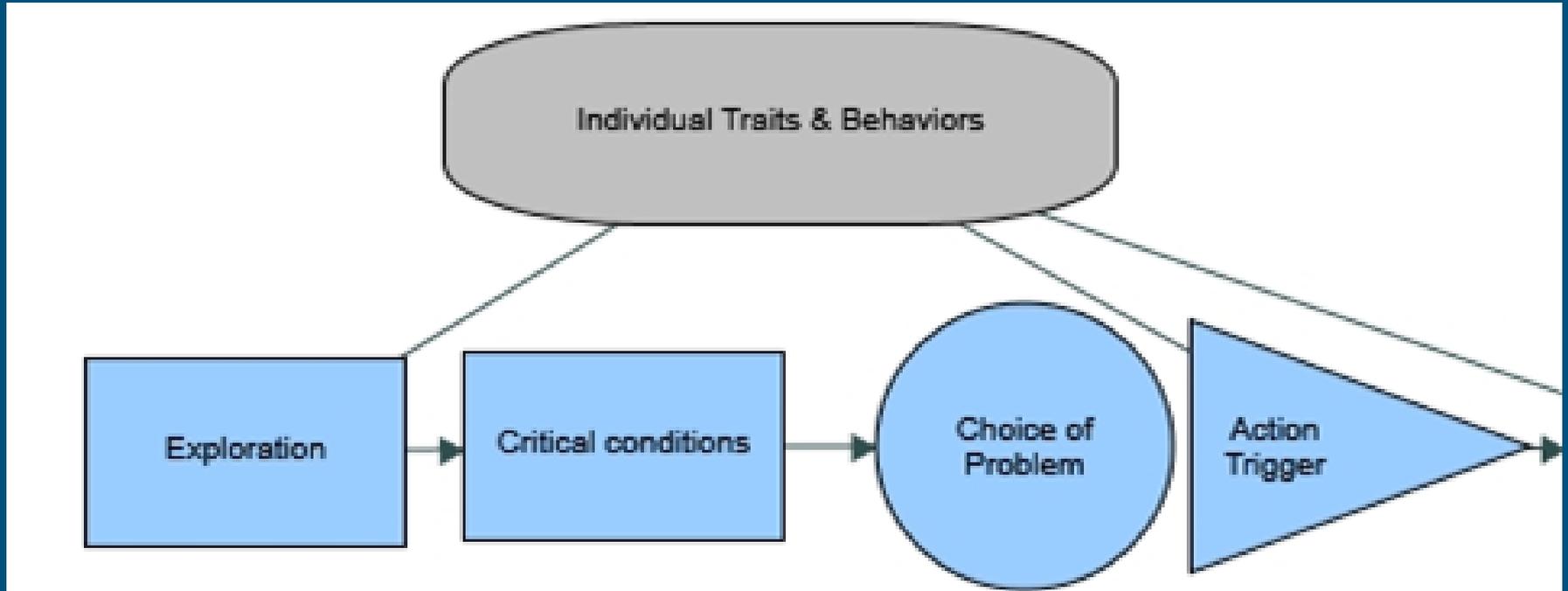
--Sonnenwald (2007)

→Formulation

→Sustainment

→Conclusion

# Whether a collaboration happens . . .



# Individual Traits and Behaviors

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- *“empathy” [Z]*
  - *“value” [G]*
  - *“openly talk” [J]*
  - *“Very Important Visitor” [W]*
- *“you pick the ones who are the most interactive” [Y]*
  - IMA Very Important Visitors

# Exploration

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- *“introductory talk” [C]*
- *“leaving the posters up” [R]*

- *“slowing down the speaker” [V]*
- Second Chances

# more Exploration

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- *“the nexus”* [E]

- *“lunches”* [R]
- *“one-on-one”* [K]



## yet more Exploration

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- *“Tell me about it.” [H]*

- *“putting everybody in an airplane” [V]*

# Critical Condition 1:

Identify an area of mutual interest

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- *“super-exciting” [X]*
- *“like playing pool” [R]*

- *“social engineering” [E]*
- *“not random” [E]*

## Critical Condition 2:

where each party can make a distinct contribution

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- *“knowledge” [H]*
- *“skill or tool or approach” [Y]*
- *“viewpoint” [R]*

- *“poised” [E]*
- *“is it time?” [O]*

# Choice of Problem

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- *“focused”* [A]
- *“good”* [J]

- *“organically”* [Y]

# Action Trigger

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- *“transition” [P]*
- *“the point is to work” [U]*

- funded time
- cultural reinforcement

# Whether a collaboration happens . . .

- Individual Traits & Behaviors
- Exploration
- Critical Conditions
- Choice of Problem
- Action Trigger



. . . at an interdisciplinary research institute

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*“fortuitous happenstance” [U]*

*“re-channel” [O]*

# References

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- Hall, Kara L. et al. “The Collaboration Readiness of Transdisciplinary Research Teams and Centers: Findings from the National Cancer Institute’s TREC Year-One Evaluation Study.” *Am J Prev Med.* 2008 Aug; 35(2 Suppl): S161–S172.
- Sonnenwald, Diane H. “Scientific Collaboration.” *Annual Review of Information Science and Technology* 41, no. 1 (January 1, 2007): 643–81. doi:10.1002/aris.2007.1440410121.

# Comments? Questions? Suggestions?

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