

# Modern Dynamic Mentorship

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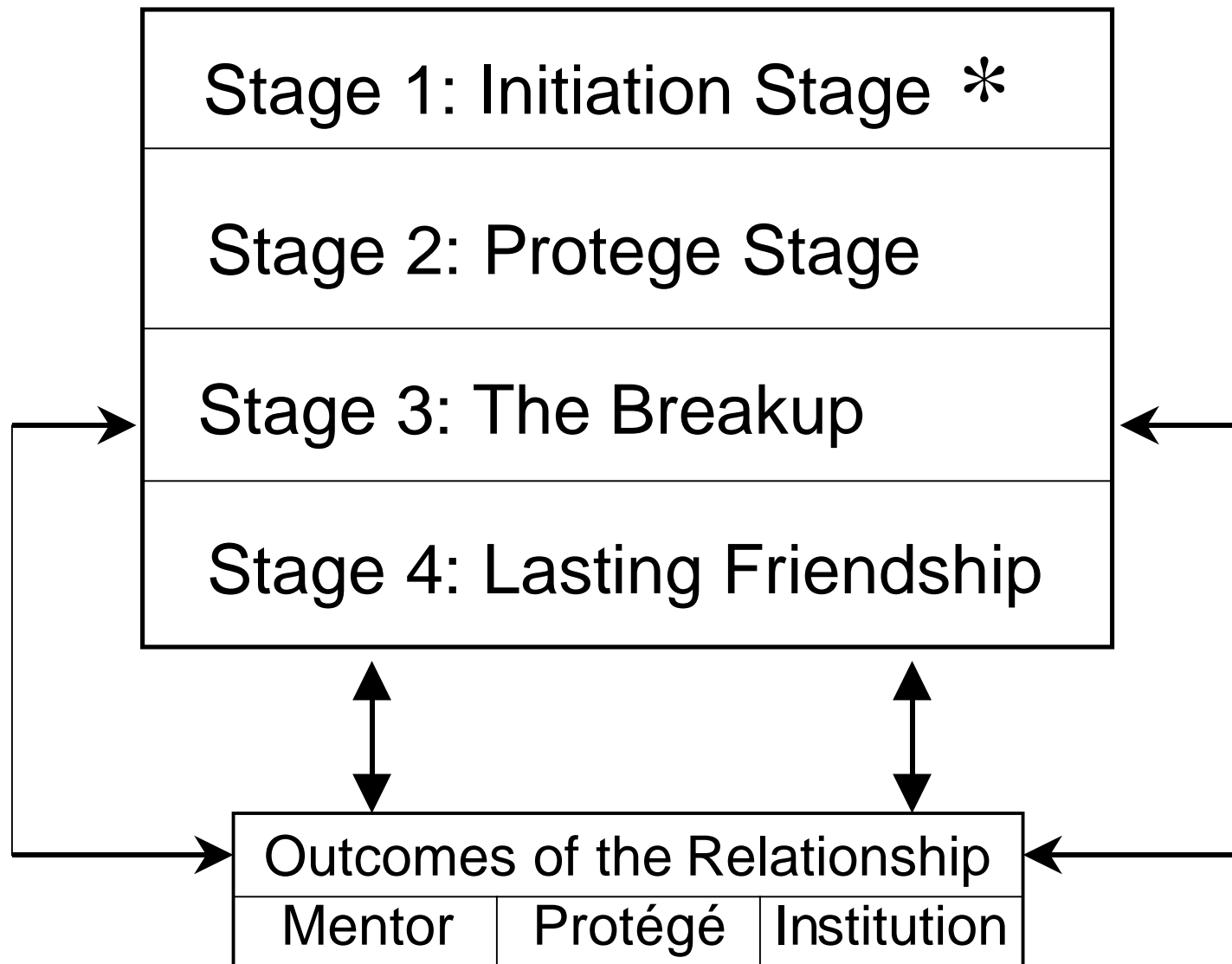




# Modern Mentorship

A dynamic reciprocal relationship in a work environment, between an advanced career incumbent (mentor) and a beginner (protégé), aimed at promoting the career development of both.

# Stages of Mentor-Protégé Relationship



# Why be a good mentor?

- Personal satisfaction
- Attract good students
- Stay on top of the science
- Strengthen professional network
- Change the face of science

Emerson writes:

*“(A mentor) is a mind that startles us, that elevates our feelings by sharing our views of life.”*



# Advice for New Mentors

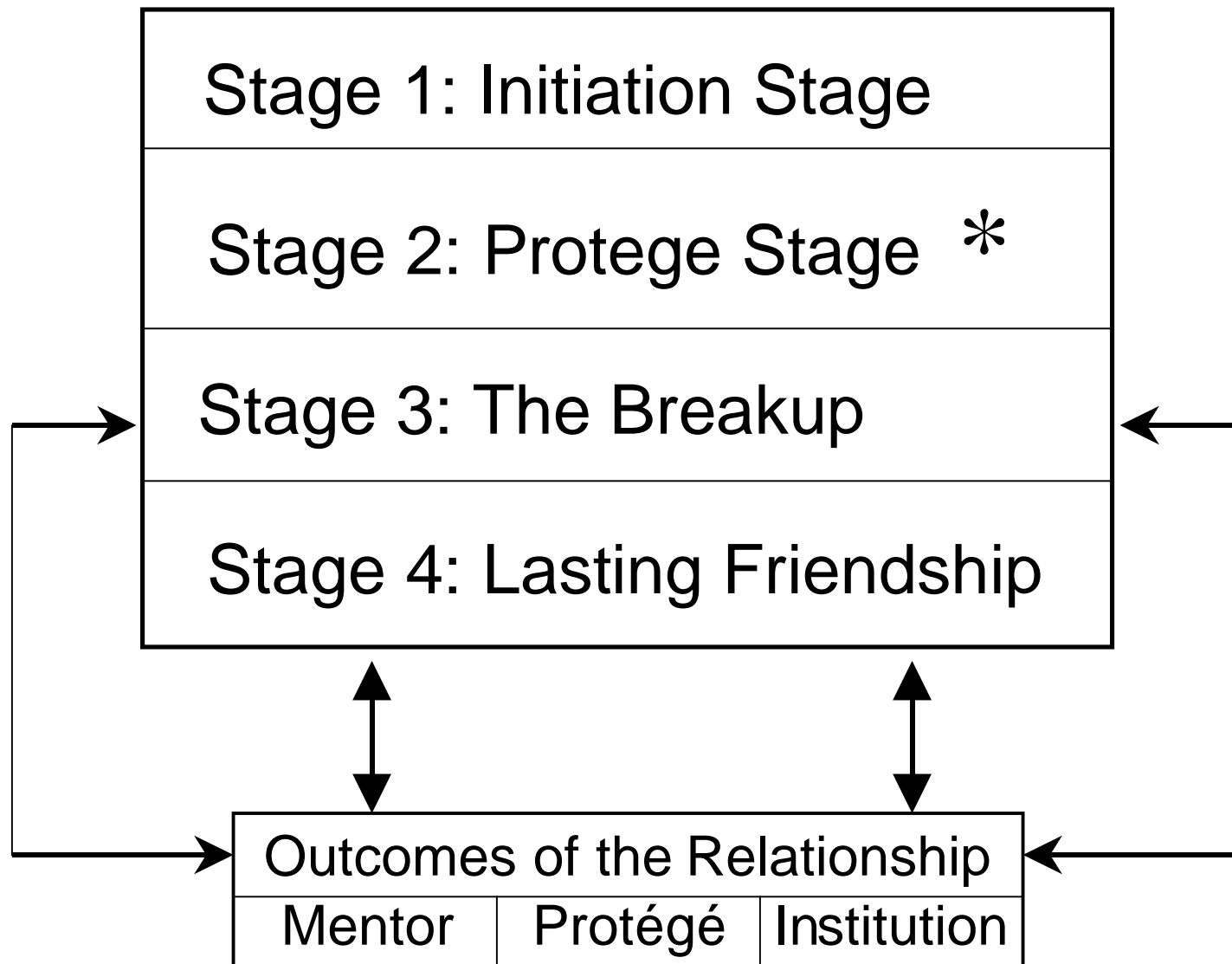
- Be a good listener
- Build a relationship
- Don't abuse your authority
- Foster independence
- Provide introductions
- Be constructive
- Find your own mentors

# Characteristics of Effective Mentoring

- Mutual trust
- Understanding
- Empathy

--Willingness to work together towards the career advancement of both.

# Stages of Mentor-Protégé Relationship



# The making of a protege

- Take students seriously
- Don't dictate answers
- Be frank and direct
- Help student build self-esteem
- Invite other mentors to help
- Address fears without belittling
- Meet on "neutral ground"

# Mentoring High School Student or Undergraduate

- Play active role in academic advising
- Allow student to get a “feel” for science, scientific careers, and potential projects
- As a research advisor:
  - Assign an appropriate research project
  - Set clear goals and strategies for achieving them
  - Define your responsibilities and mechanisms for students to maintain regular feedback
  - Promote students to the next level

# Mentoring a graduate student

- Plan appropriate curriculum
- Help student choose appropriate mentors
- As thesis advisor:
  - Allow student to **develop** appropriate project
  - Help put together a committee
  - Provide opportunities for additional training appropriate to student's career goal
  - Ensure students **publish**/present
  - **Incorporate** student into scientific network
  - Promote students to the next level

# Mentoring a Post-Doc

- Enable fellow to develop project that will ultimately be taken with them
- Help obtain appropriate funding for fellow
- Integrate fellow into **institutional activities**
- Keep on eye to the **career** market and keep fellow informed
- Support additional learning/training appropriate to career goals
- **Enable publish, present, participate in proposal writing.**
- Promote to next level

# Skills for All Levels

- Nonacademic abilities
- People skills
- Leadership
- Teamwork
- Creative thinking
- Effective communication



# Mentor Attributes

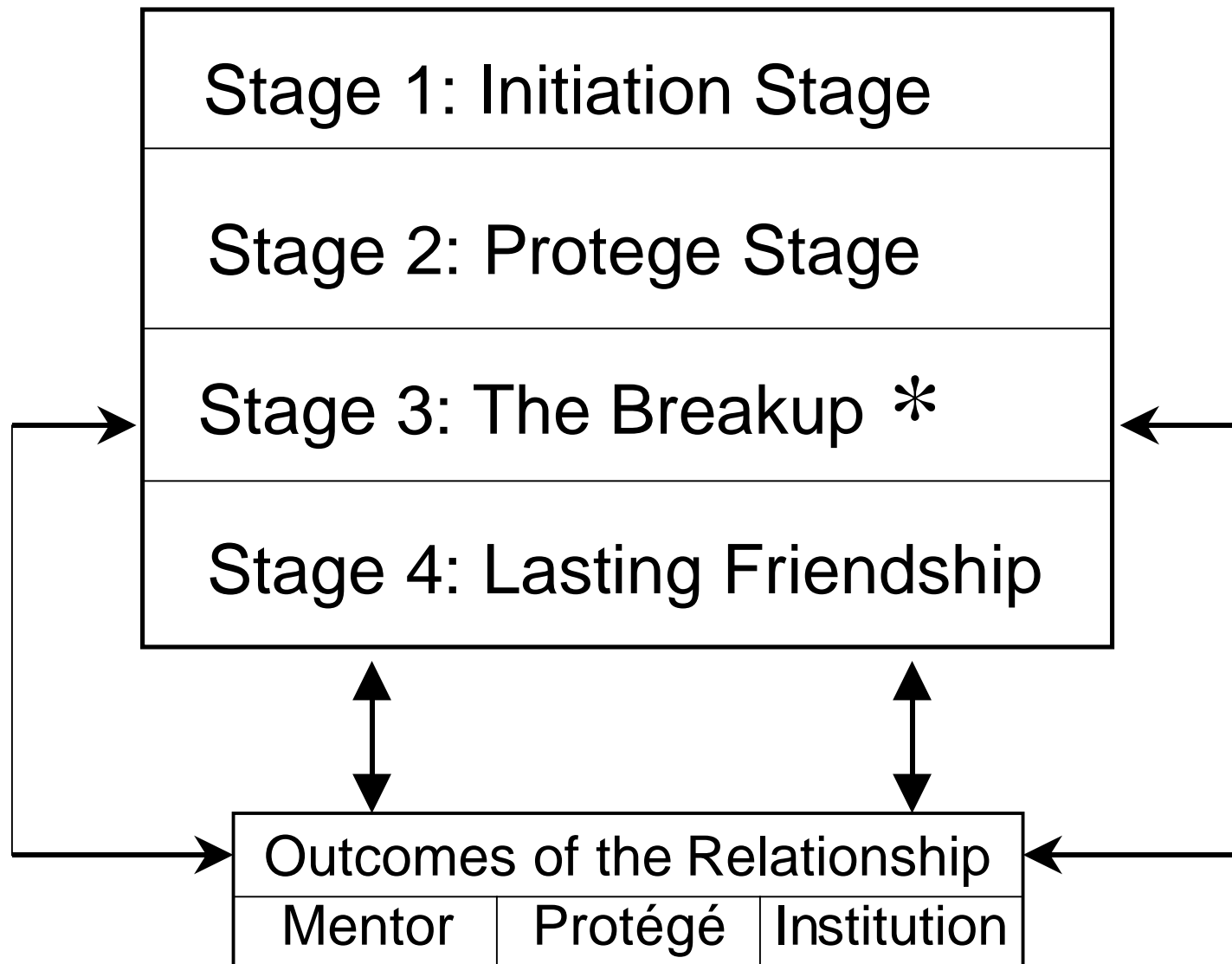
## Positive

- Available
- Intelligent
- Challenging
- Innovative
- Invites to Field
- Personable
- Renowned
- Enjoys Mentoring
- Sets clear goals
- Has necessary lab resources
- Attends conferences with students
- Willing to spend extra time with students
- Offers opportunities for community outreach
- Similar political views

## Negative

- Unavailable
- Poor Feedback
- Insensitive
- Arrogant
- Disorganized
- Not funded
- Fails to offer constructive criticism
- Expects too much
- Overworked
- Overly protective

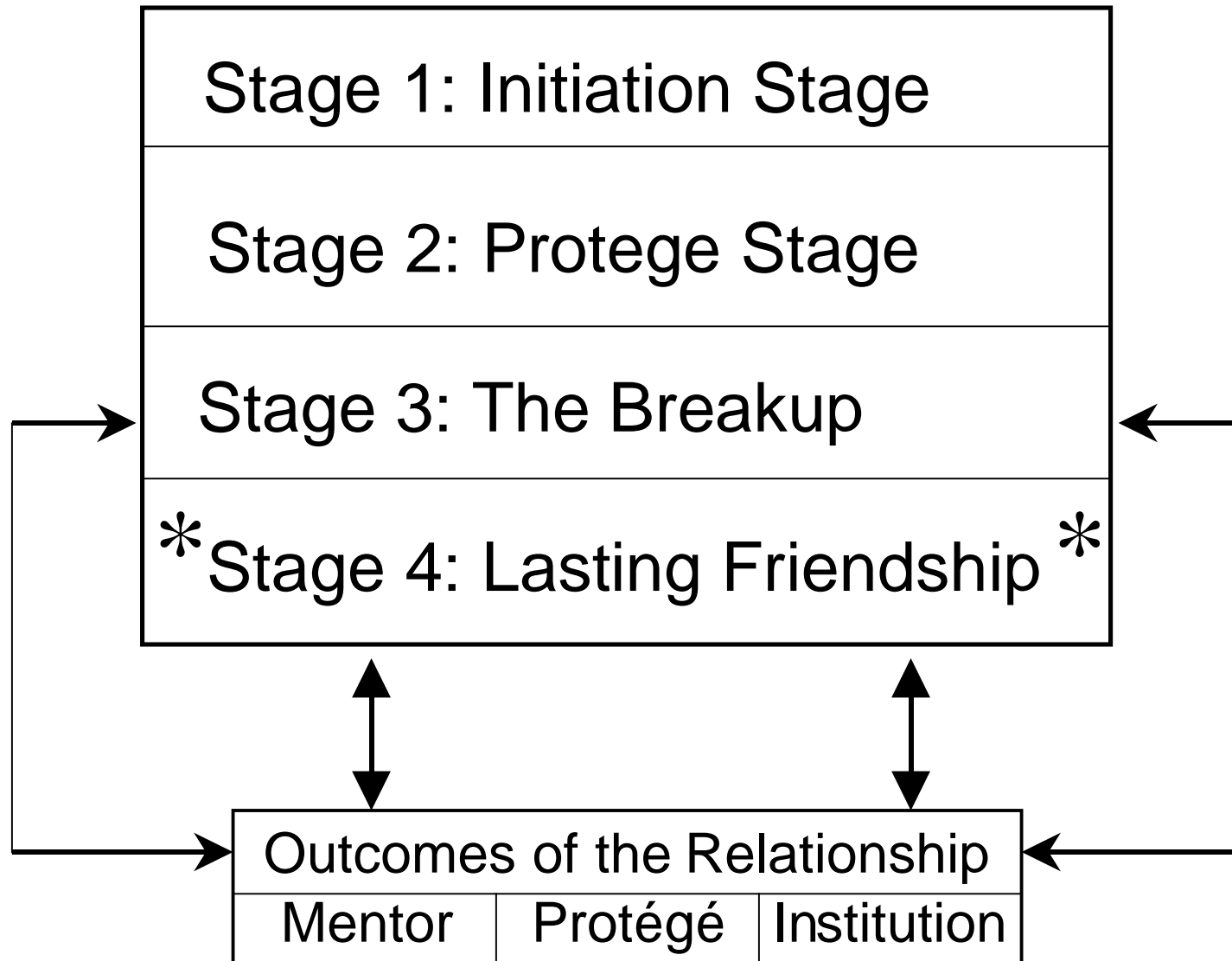
# Stages of Mentor-Protégé Relationship



# The Break-Up

*“Your primary obligation is the (mentoring) education of the student.”*

# Stages of Mentor-Protégé Relationship



# Topics for Break-Out

- What are appropriate measures of student success for the high school and/or undergraduate student?
- What is an appropriate project for the high school and/or undergraduate student?

# Further topics

- How do we overcome our negative attributes?
- How do we engender greater value for mentoring?

# Resources

- The Committee on Science, Engineering, and Public Policy's (COSEPUP) has on-line versions of useful resources including grad school planning guide, and responsible conduct in research (<http://www2.nas.edu/cosepup>)
- The National Research Council (CPC) (<http://www2.nas.edu/cpc>) has an on-line mentoring center, data on trends in the job market, and useful links to job, research, and funding listings.
- The AAAS *Science's NextWave* (<http://www.nextwave.org>) has open forums on topical issues, including alternative science careers, and practical science career advice.