

# **Privilege, Power and Leadership in Academia** *towards inclusive communities of excellent scholarship*



**Nature Astronomy, December 2019**

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**Columbia University Astronomy**  
**CCA, Flatiron Institute**  
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FUN!

*If I were given one hour to  
the planet, I would spend 59  
minutes defining the problem  
and one minute resolving it.*

**Albert Einstein**

# Outline

I. Motivation

II. Preparation: challenges, perspectives and terminology

III. Academia as a dynamical system - unintentional individual/unit/organization effects

III. Academia as a dynamical system - intentional individual/unit/organization action

Privilege,  
Power,  
Leadership



# I. Motivation

- What is inclusion?
- What is “academia”?
- How are we doing?

# What is inclusion?

either/or

vs

and

# What is "academia"?

Aim: to further human knowledge

faculty  
power

Responsibility:

People = University

Fundamental:

thriving members = thriving institution

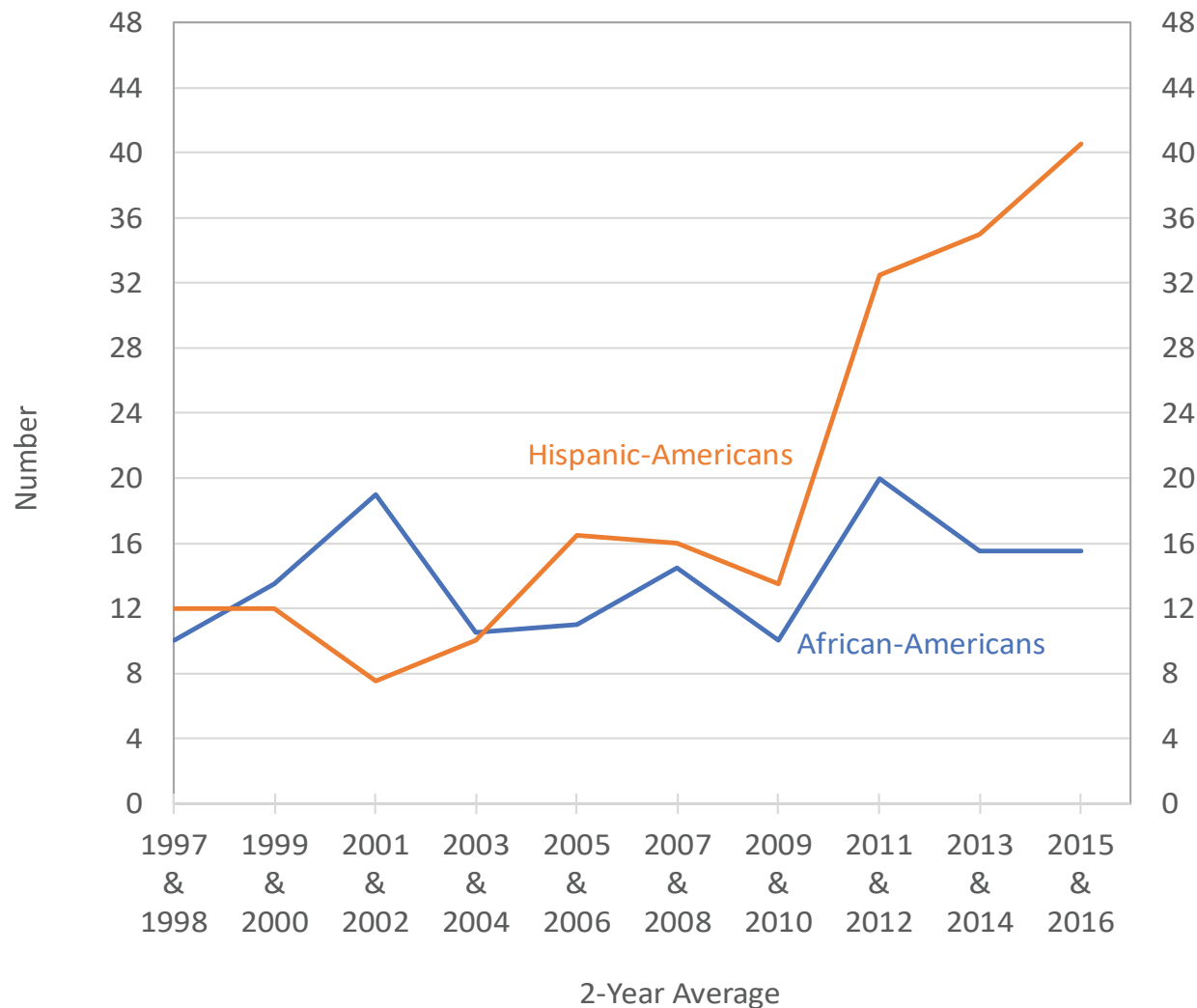
transparent  
meritocracy

enables  
individuals  
to fulfill  
potential

builds  
community  
of excellent  
scholarship

**Are we all thriving?**

## Number of Physics Doctorates Earned by African-Americans and Hispanic-Americans, Classes 1997 through 2016.



# Pipeline

e.g. PhD's in Physics

data from  
American Institute  
of Physics

~1800 physics  
PhD's awarded  
in US in 2012



# Leadership science at Columbia in 2016 - 2017



Provost



President



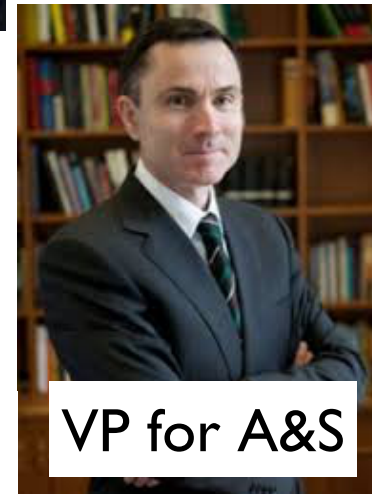
VP for Research



Dean of Science



Dean of  
Graduate  
School of A&S



VP for A&S



Dean of  
College



SCIENCE

CHAIRS

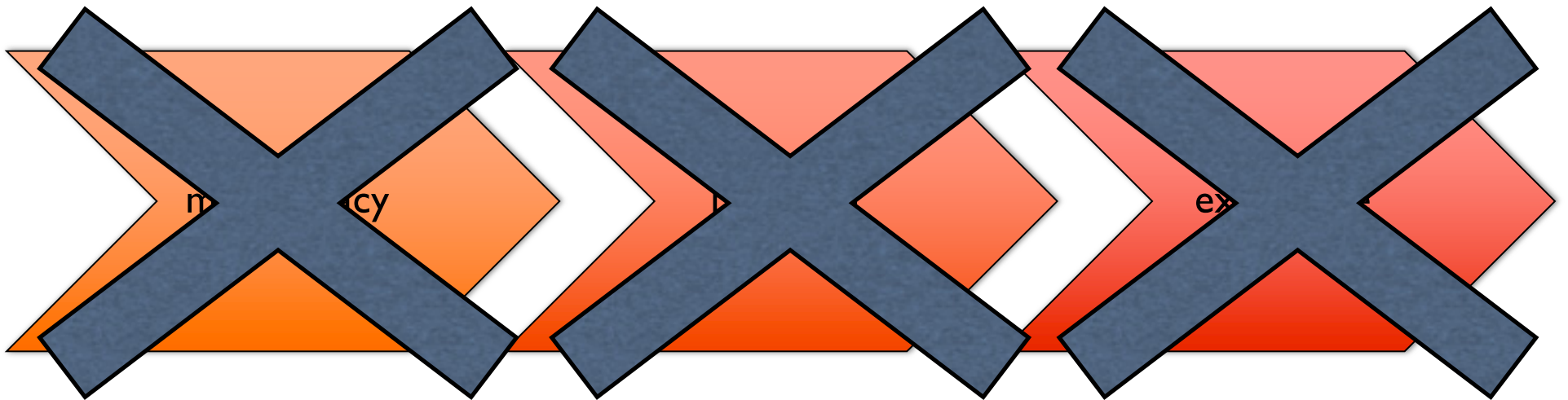
**authority of diverse leaders  
undermined if they  
“engage in diversity-valuing  
behavior”**

***Heckman, Johnson, Foo & Yang 2016,  
Academy of Management Journal***

**Are we all thriving?**

**NO!**

**Does it matter?**




**Why is it like this?**

**What can we do?**

***Don't just tell me  
about imposter  
syndrome. Stop  
making me feel like  
an imposter!***

**(appeal from minority graduate student in  
STEM)**

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# challenges

- ~~Change~~ **growth**
- Hard words: racism, sexism, homophobia
- Scope & complexity

# terminology

homophily – natural affinity of similar people

implicit bias – unconscious effects on attitudes, judgments and actions.

stereotype threat - minority status in context of negative stereotypes => discomfort, affects performance

imposter syndrome - doubt of accomplishments and fear of being exposed as a “fraud”



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# An Inclusive Academy

Achieving Diversity and Excellence

Abigail Stewart and Virginia Valian

Copyrighted Material

# Who am I?


Research: galactic dynamics

- BA in Maths, Cambridge
- PhD in Astronomy, UCSC
- Postdoc at the Institute for Advanced Study
- Tenure-track Professor, Wesleyan University
- Professor, Columbia University
  - Department Chair, 2014-2017
  - “Dynamics” Group Leader at the Center for Computational Astrophysics, Flatiron Institute



M81: Hubble Space Telescope

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Leadership

# Promoting Constructive Multicultural Attractors: Fostering Unity *and* Fairness From Diversity and Conflict

Peter T. Coleman<sup>1</sup>, Danielle Coon<sup>1</sup>, Regina Kim<sup>1</sup>,  
Christine Chung<sup>1</sup>, Rebecca Bass<sup>1</sup>, Bridget Regan<sup>1,2</sup>,  
and Robert Anderson<sup>1,3</sup>

The Journal

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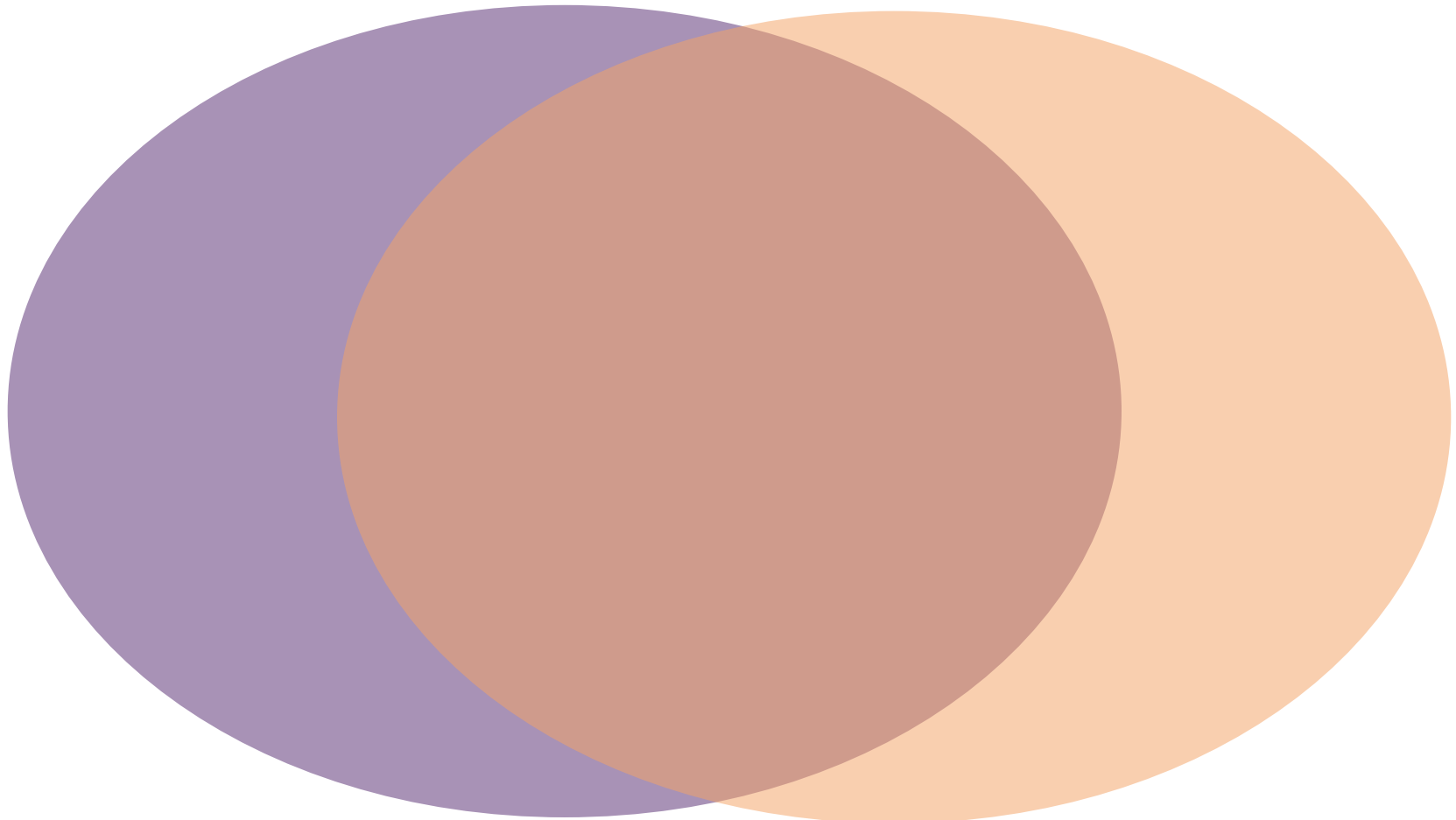
## Abstract

Enduring forms of bias and discrimination are well documented and pervasive in many organizations fueling costly patterns of destructive cross-cultural and multicultural conflict. Changes in these dynamics are often slow and beset with setbacks. In this article, we present a dynamical systems model of multicultural organizational change...

# Multi-cultural Dynamics



different groups .....



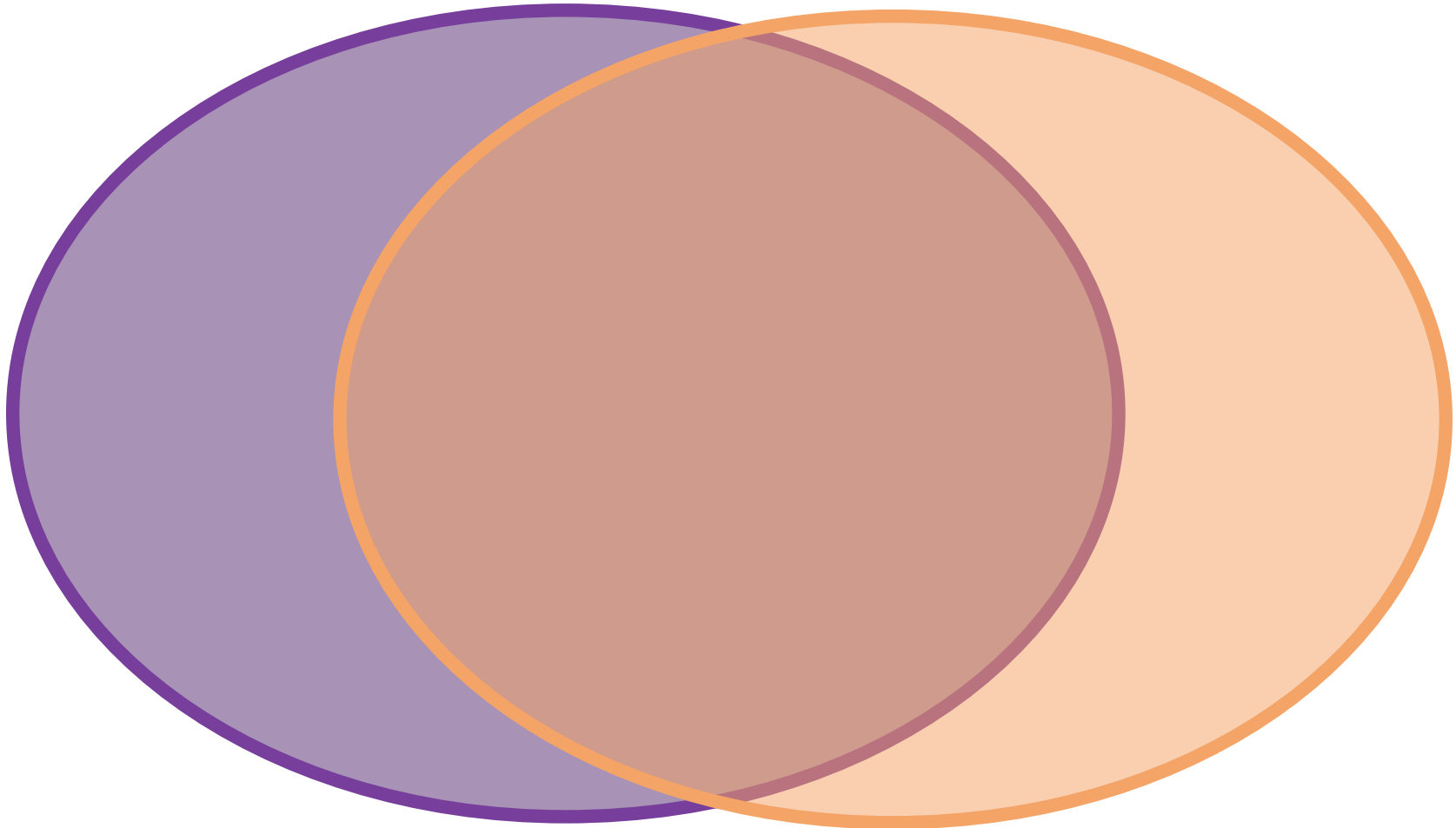
# Multi-cultural Dynamics





different groups...



same potential



# Multi-cultural Dynamics

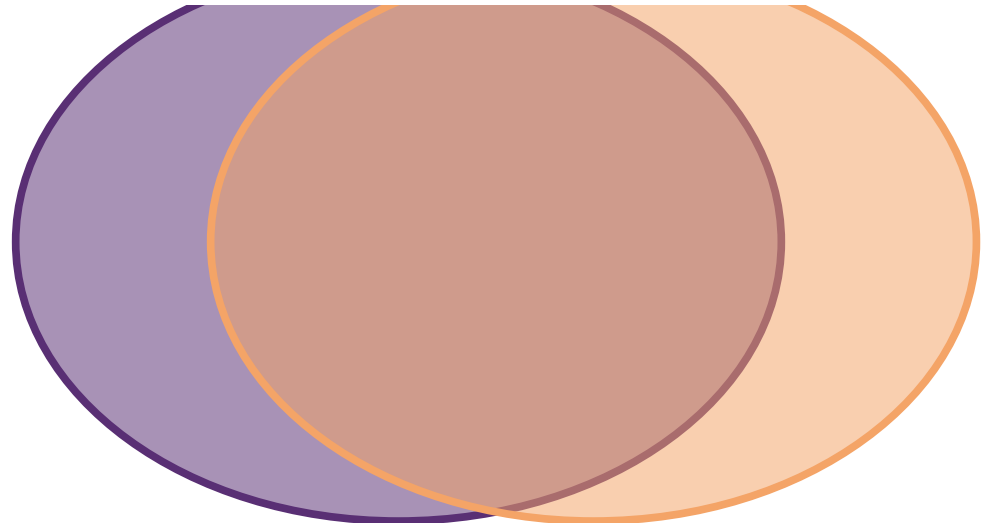
-  different groups...
-  same potential

limitation of “toy model”

reality = many groups with  
intersecting identities and  
cultures

# Multi-cultural Dynamics

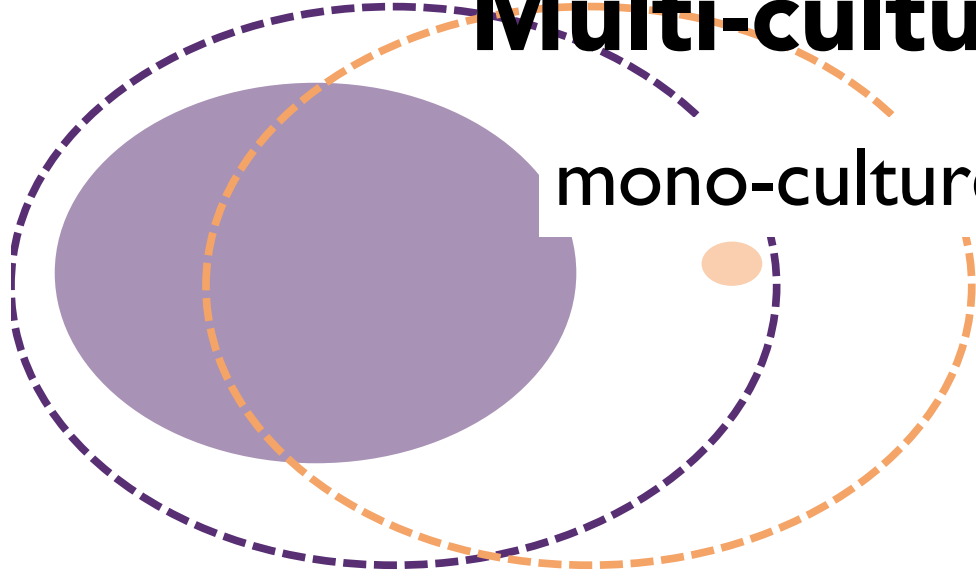
poly-culture = stable, inclusive





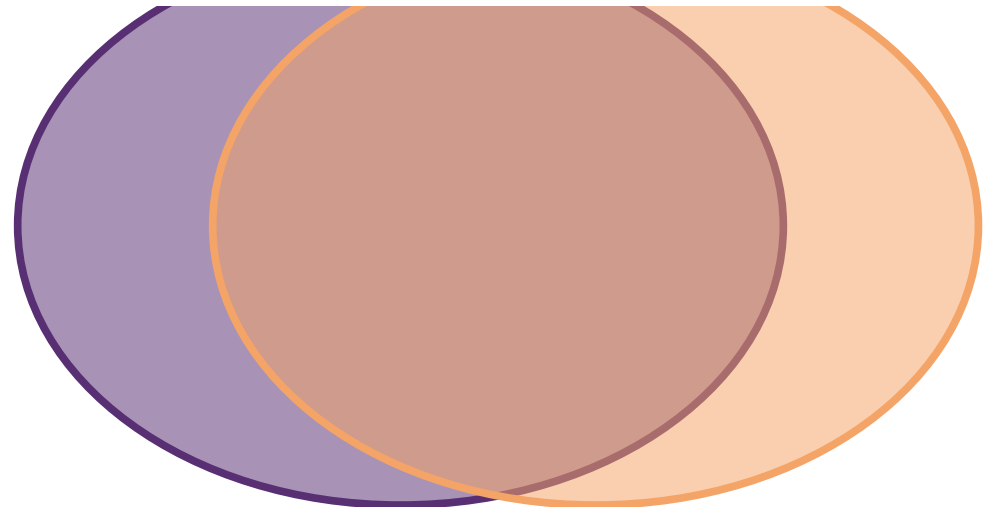
# Multi-cultural Dynamics

mono-culture = stable, exclusive



---- unfulfilled potential

poly-culture = stable, inclusive



# Multi-cultural Dynamics

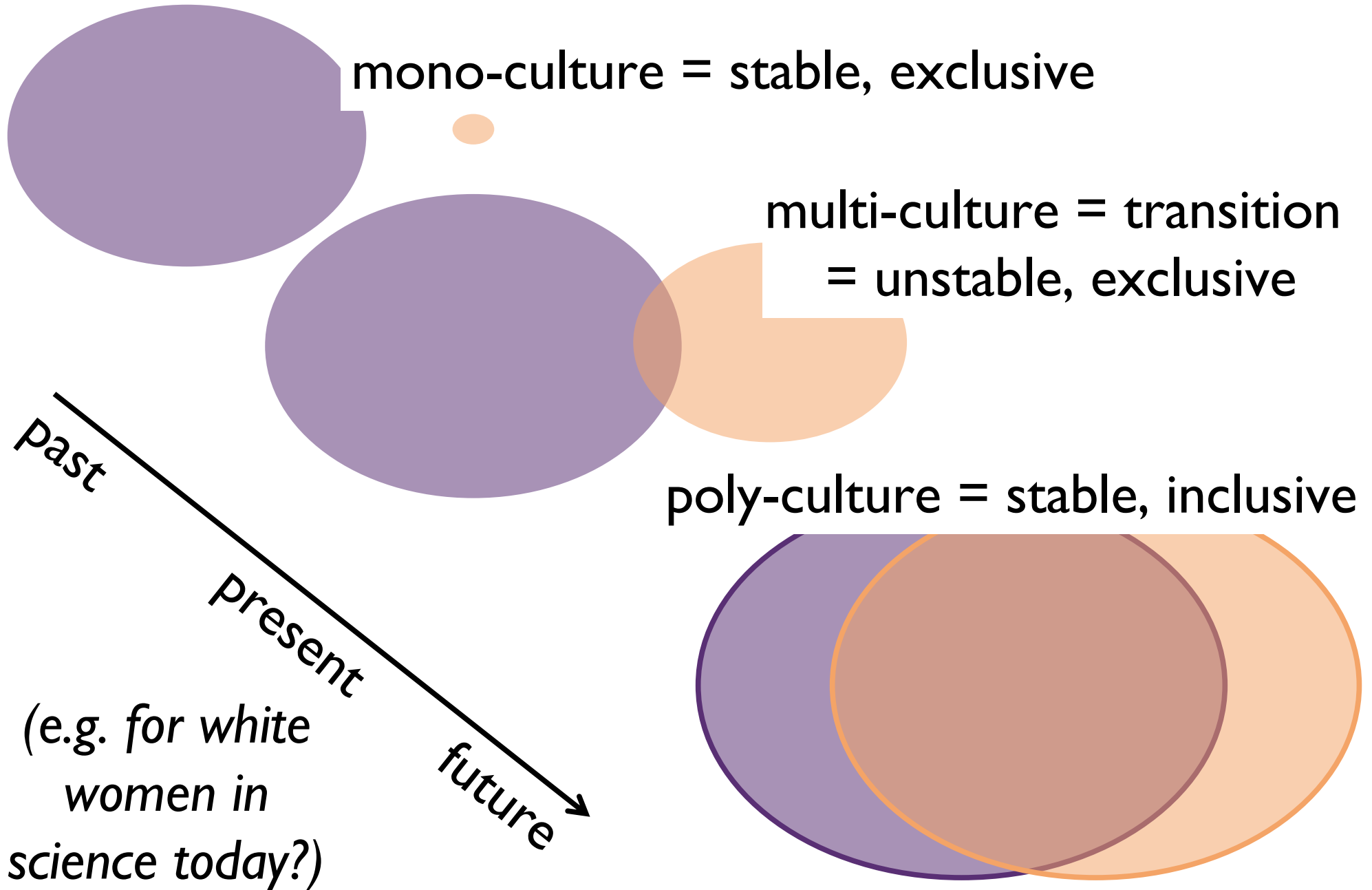
mono-culture = stable, exclusive

multi-culture = transition  
= unstable, exclusive

poly-culture = stable, inclusive

Past  
Present  
future

(e.g. for white women in science today?)



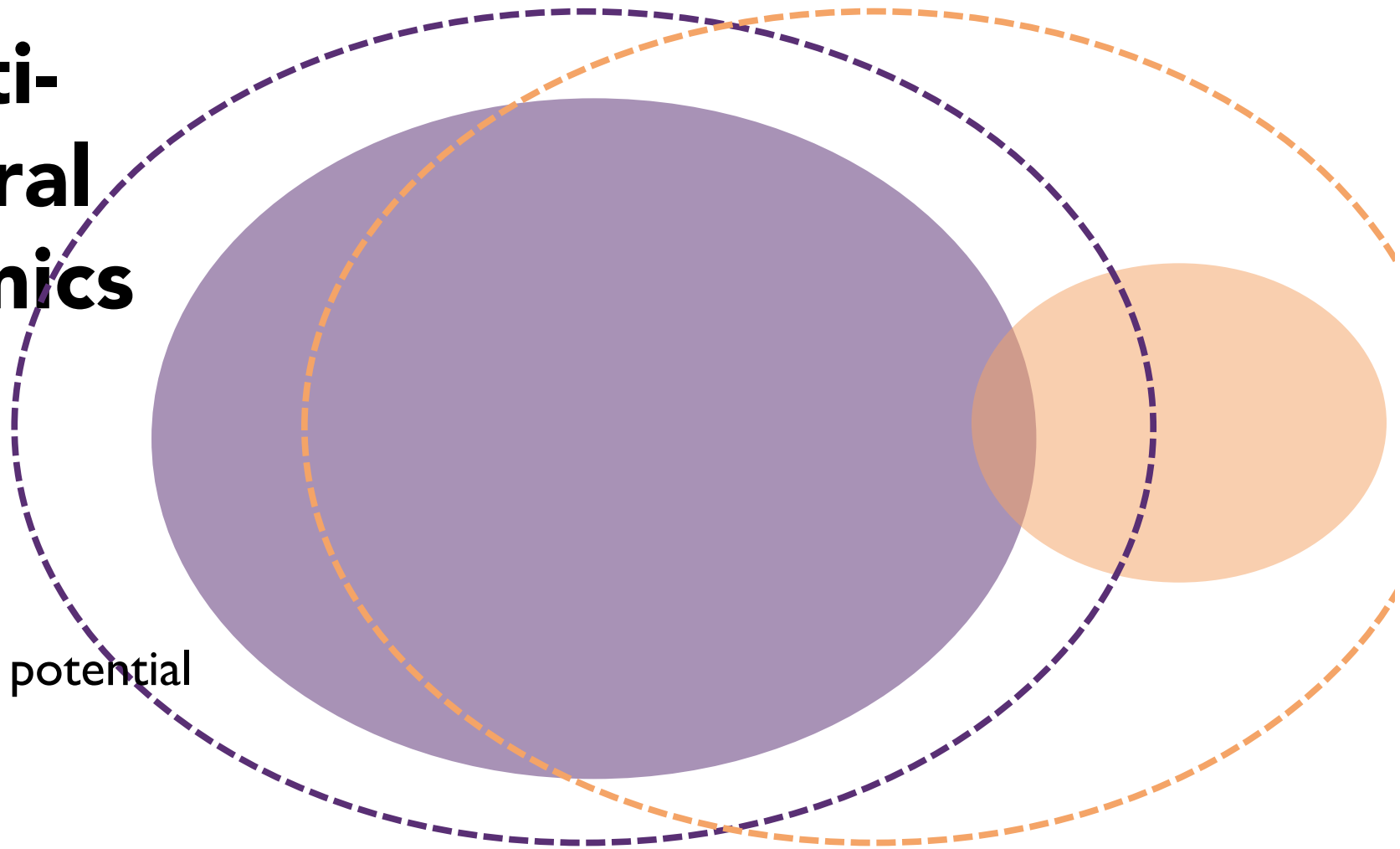
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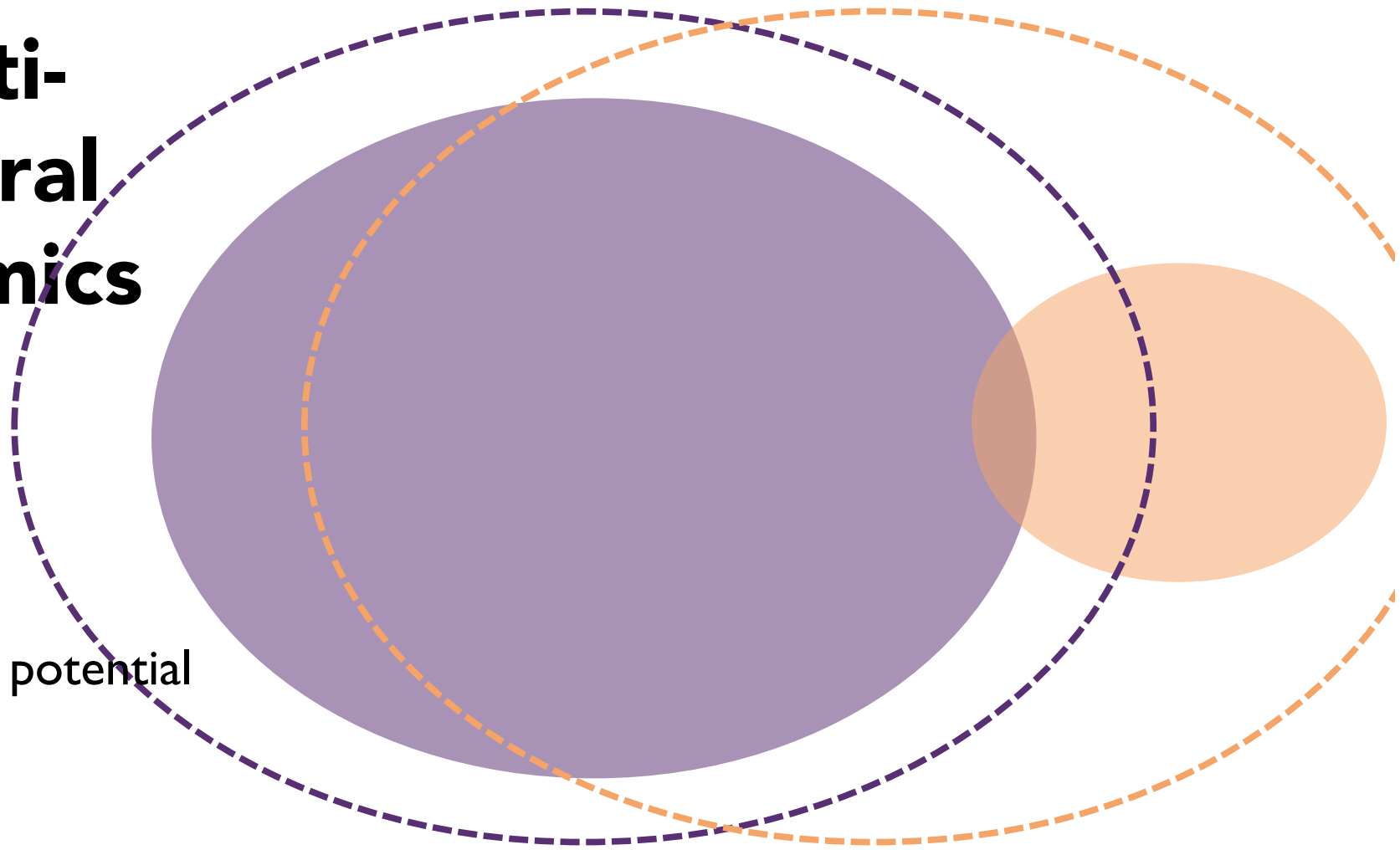
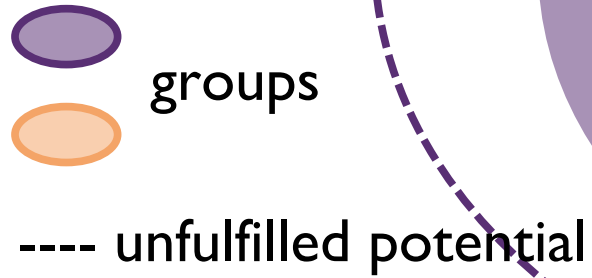
groups



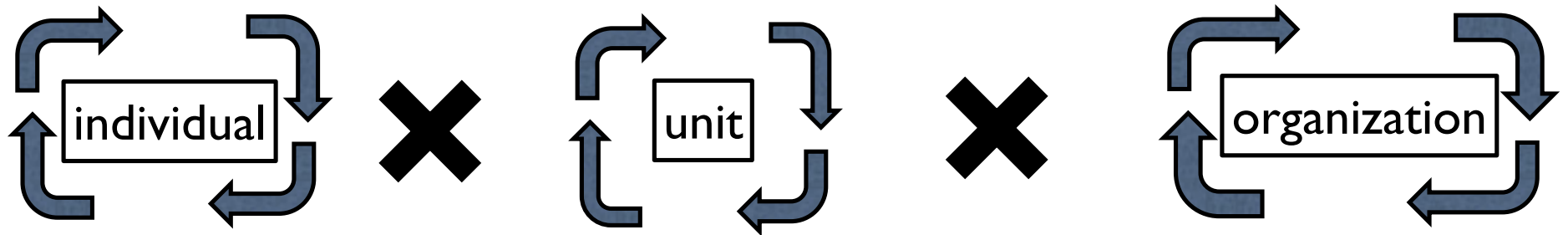
---- unfulfilled potential



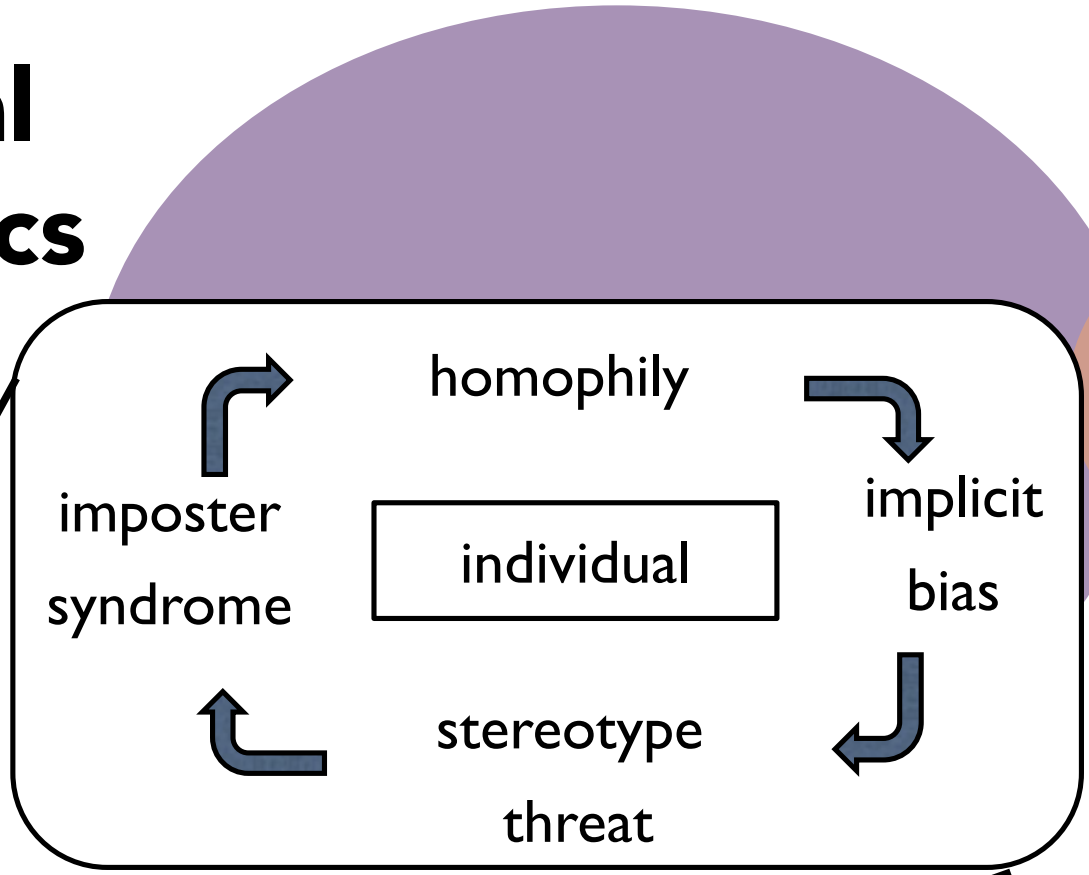
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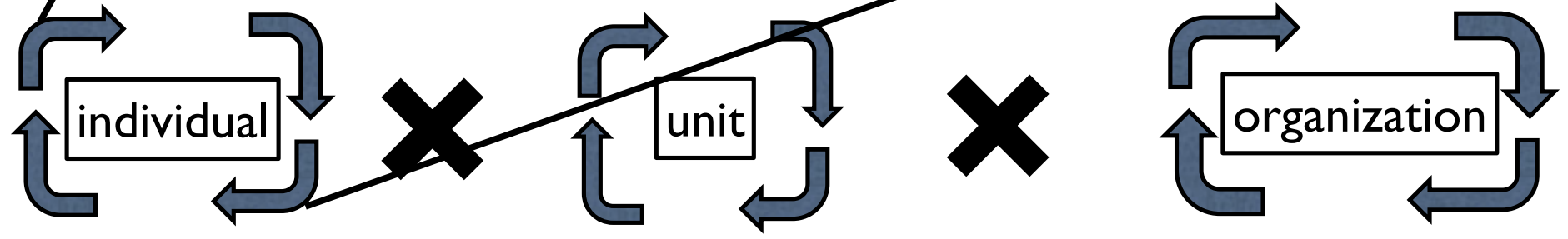
## Interactions:



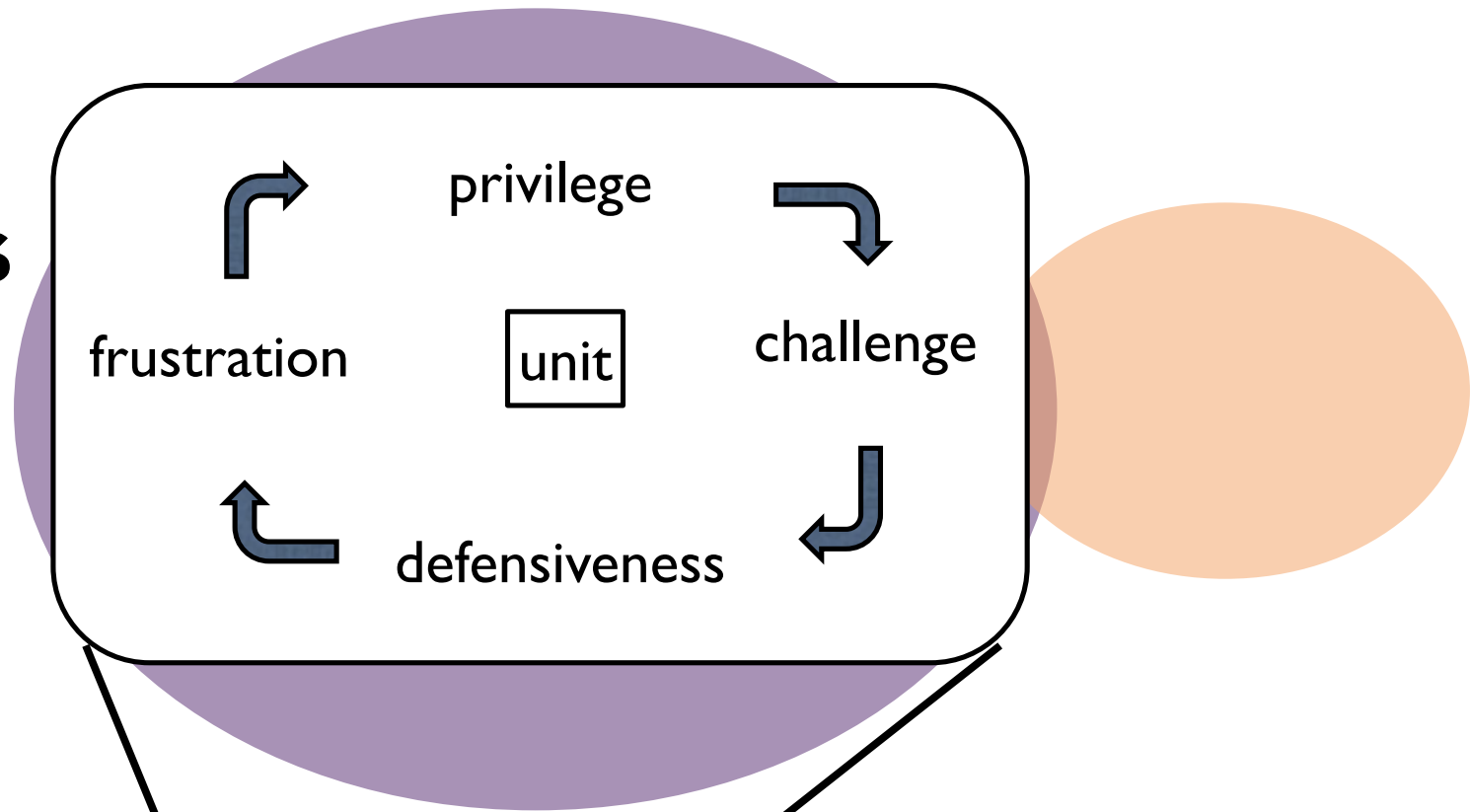
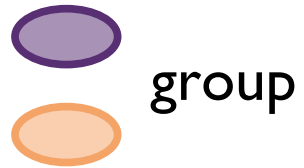
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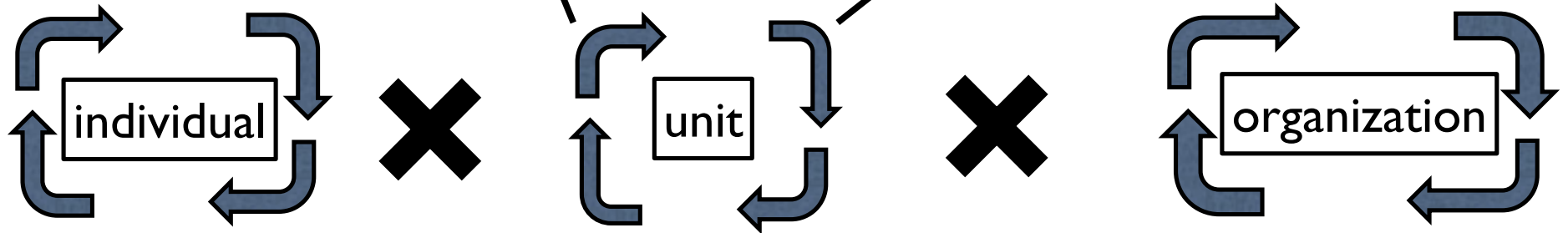
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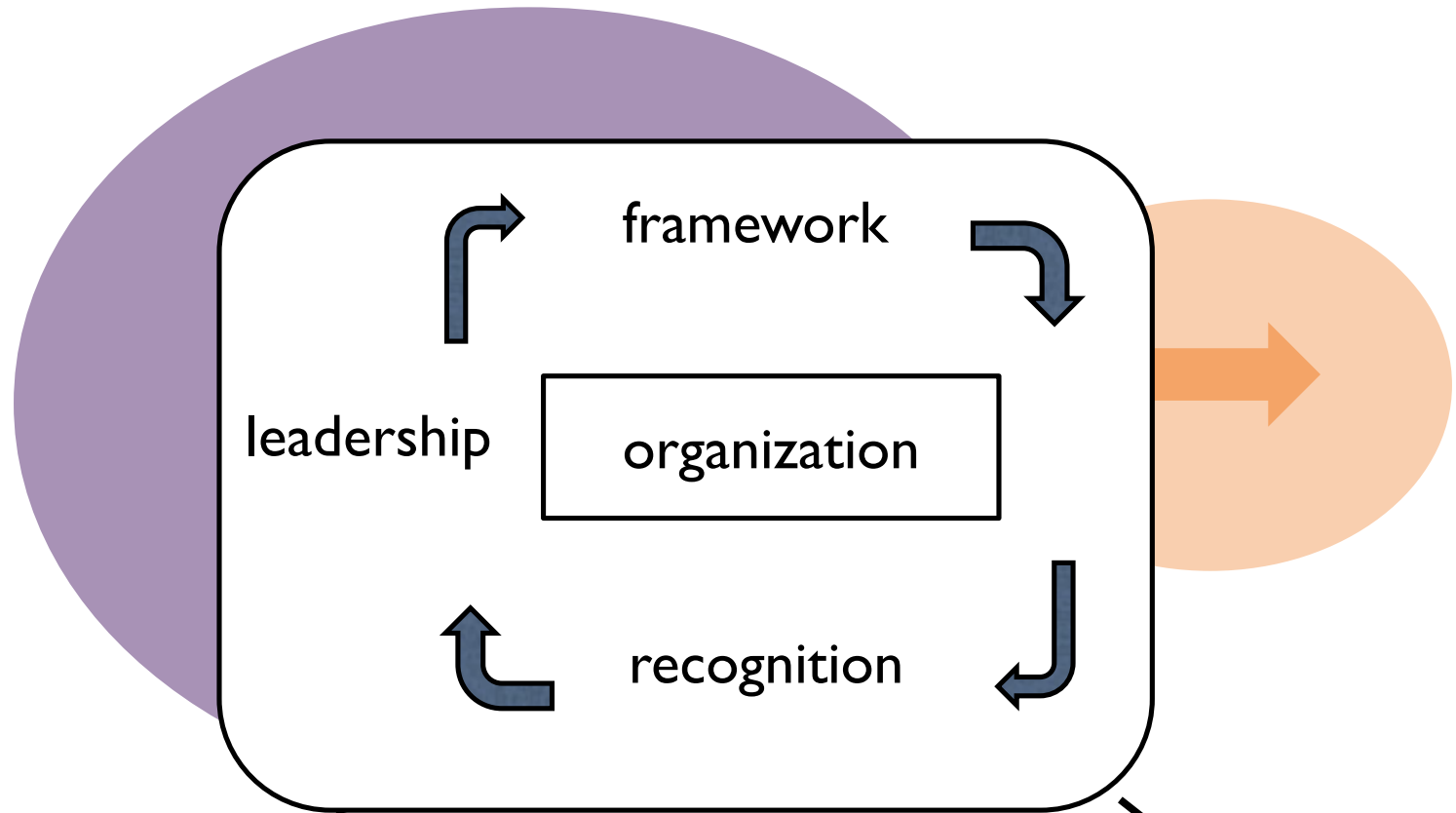
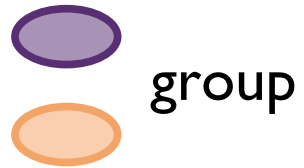
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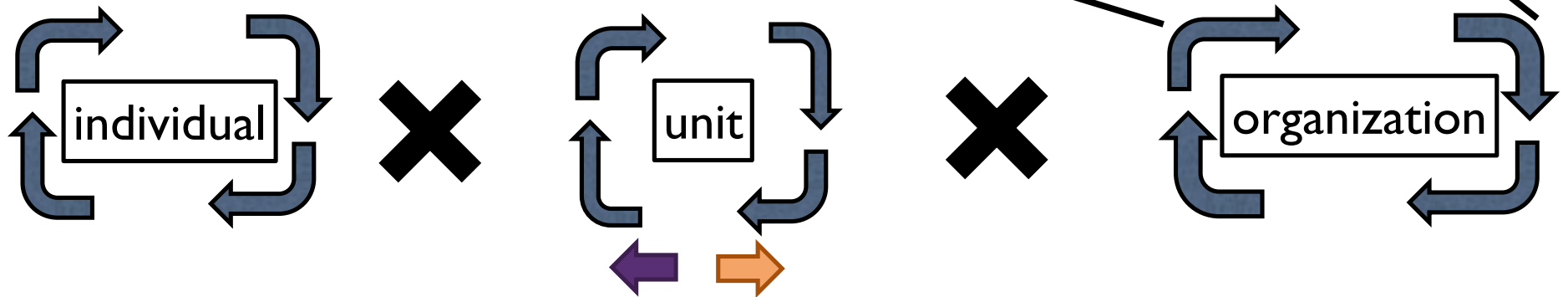
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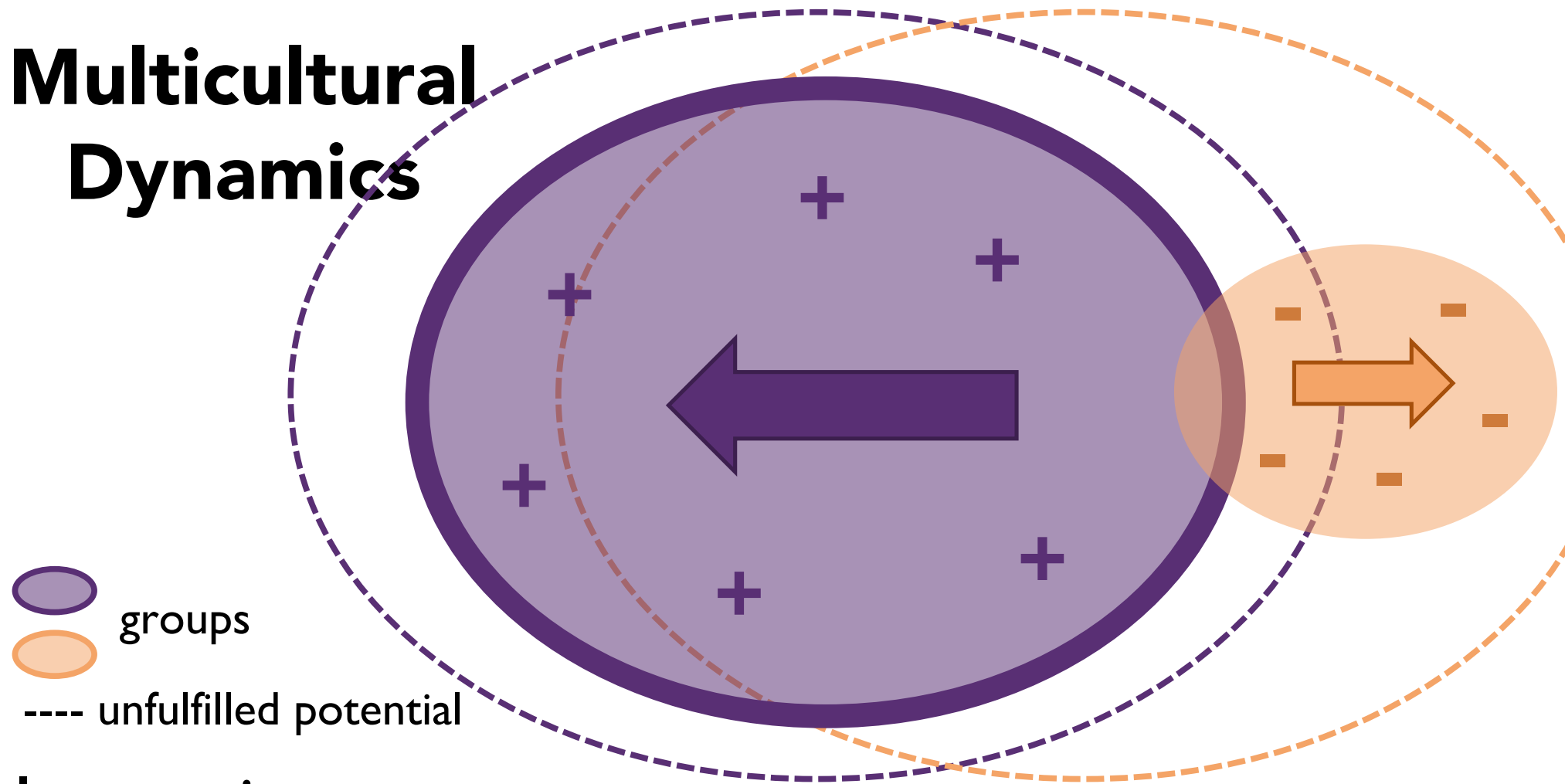
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## Interactions:



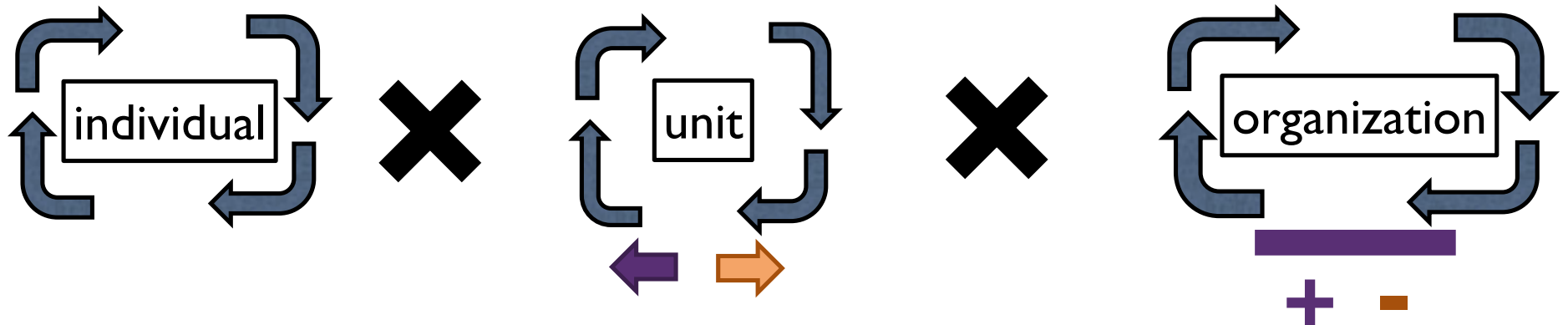
# Multicultural Dynamics



 groups


 unfulfilled potential

## Interactions:





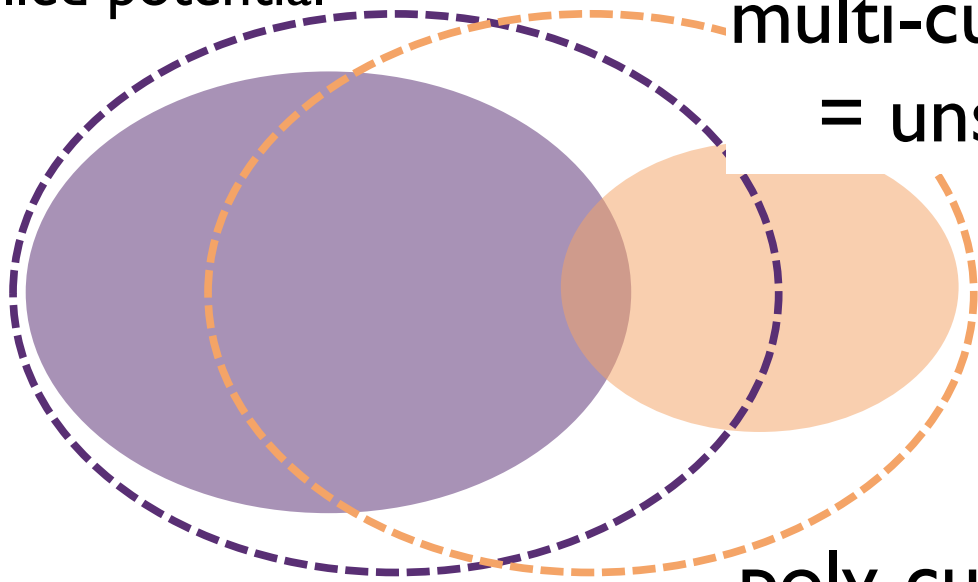
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- Privilege,  
Power,  
Leadership

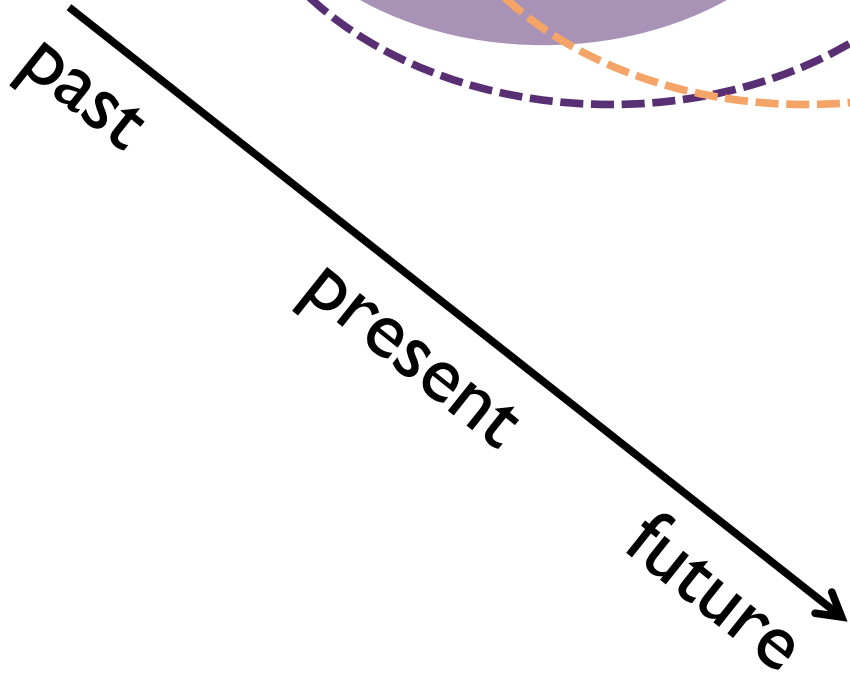
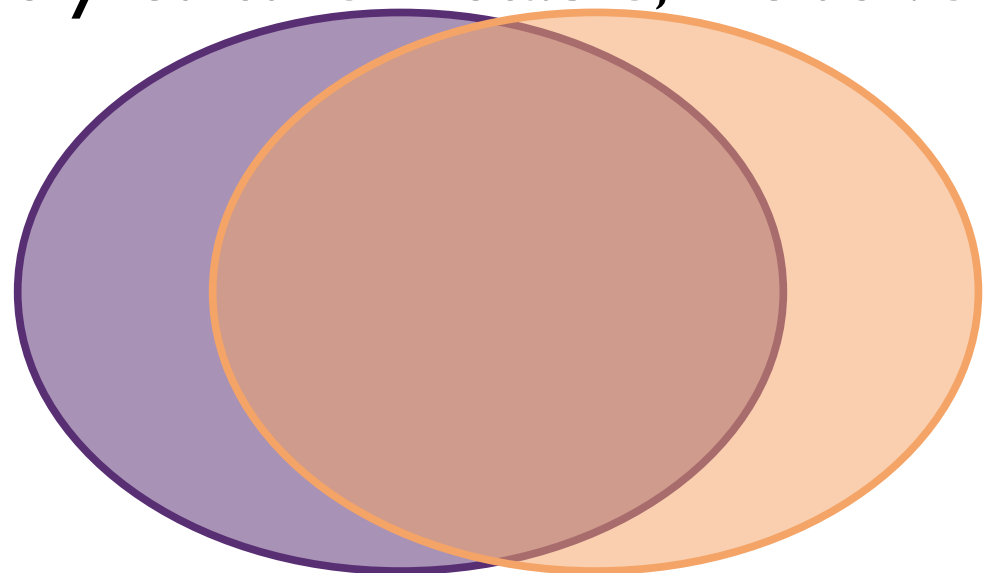
# Academia as a Dynamical System

---- unfulfilled potential

multi-culture = transition  
= unstable, exclusive

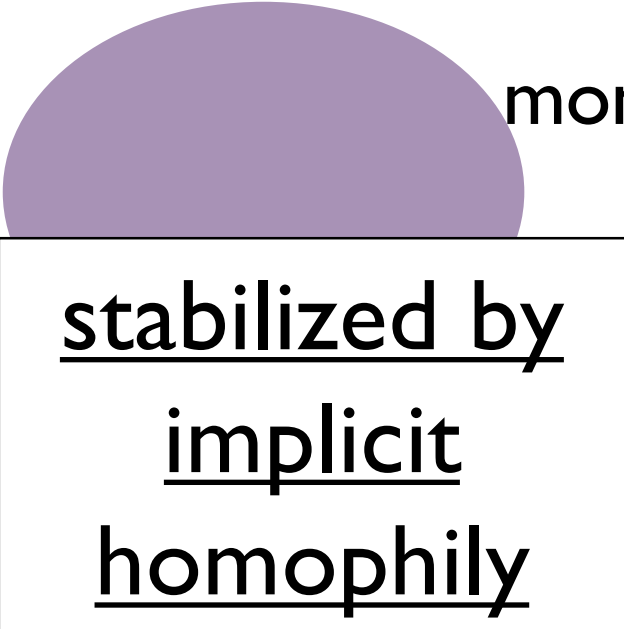


poly-culture = stable, inclusive



# Academia as a Dynamical System

mono-culture = stable, exclusive



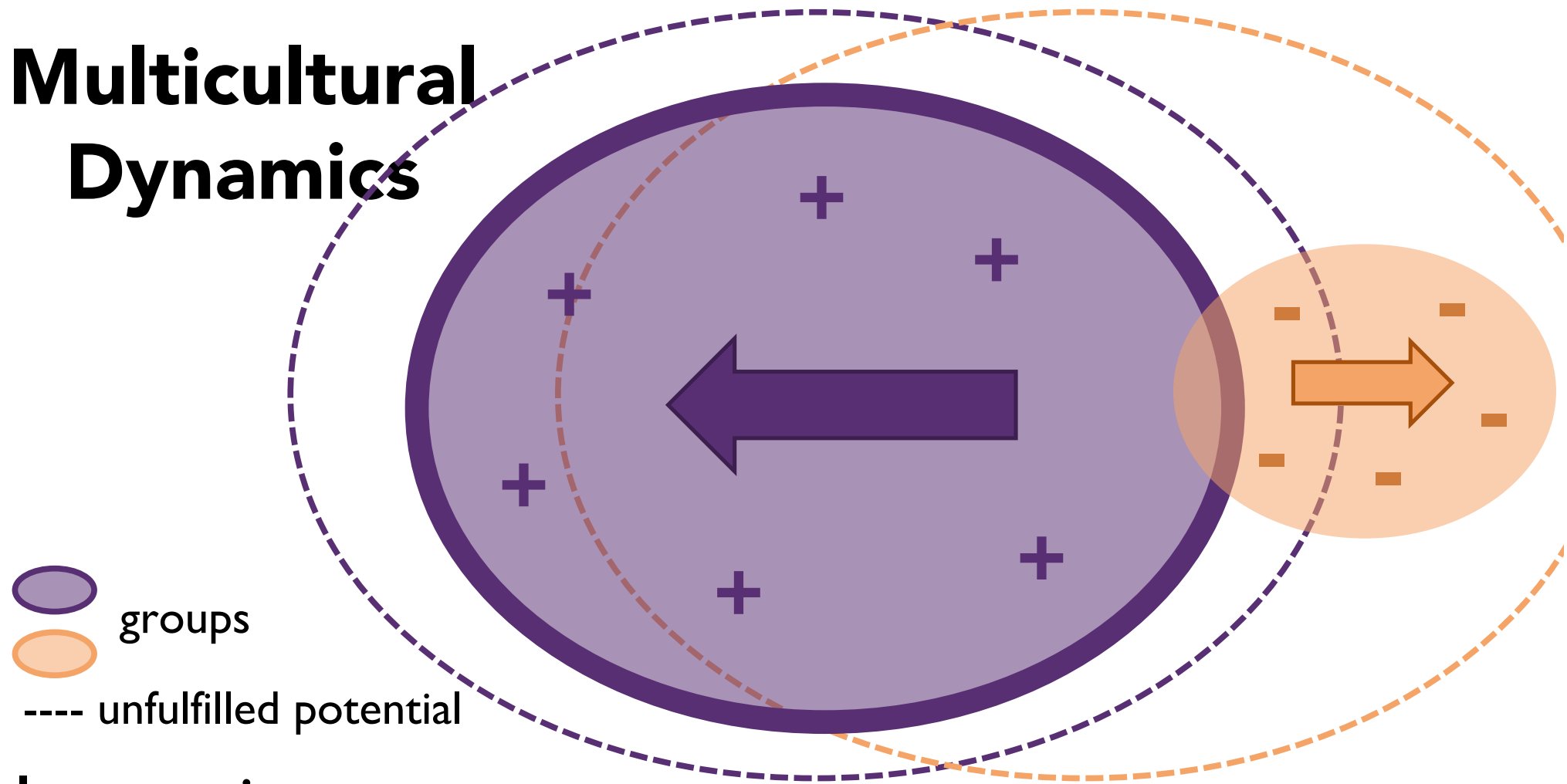
stabilized by  
implicit  
homophily

poly-culture = stable, inclusive



stabilized by  
explicit  
diversity

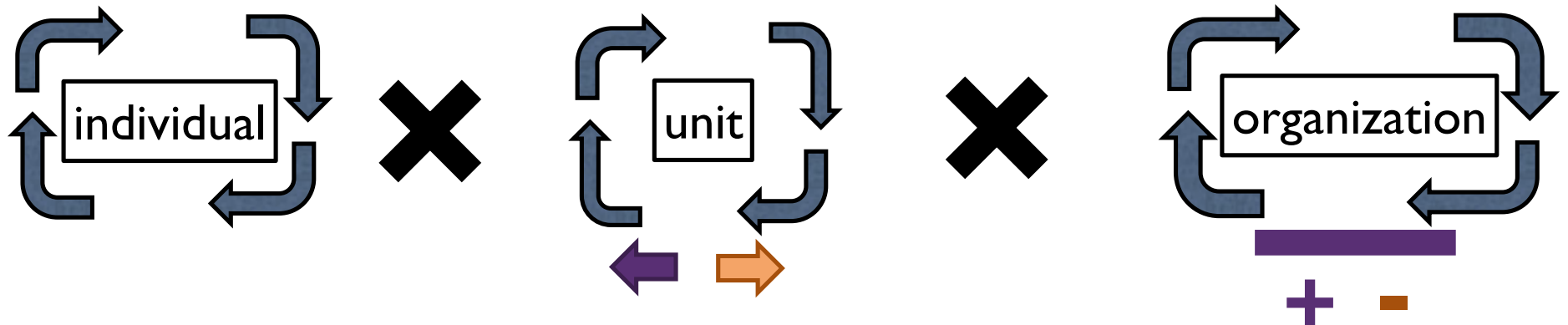
# Multicultural Dynamics



 groups

 unfulfilled potential

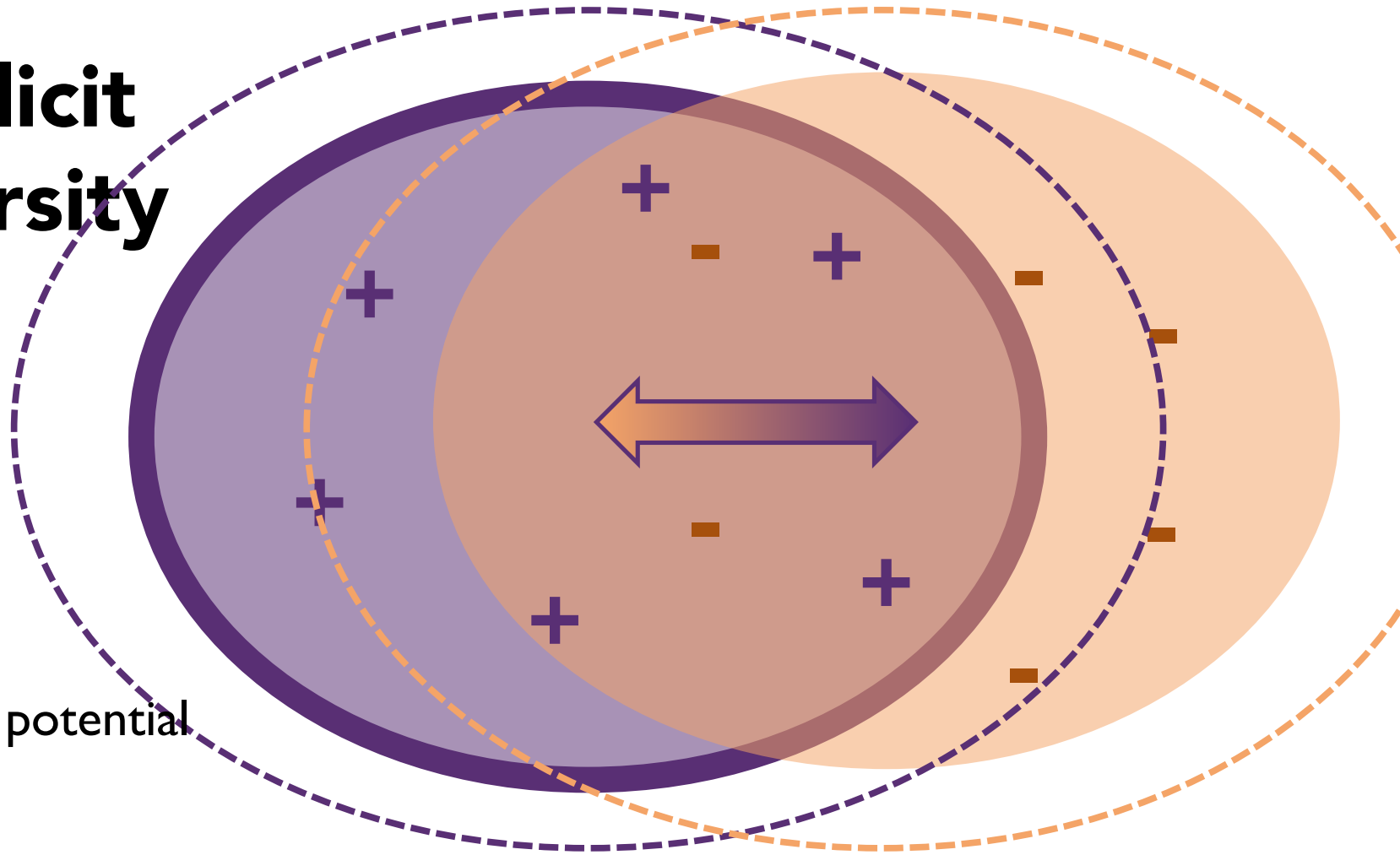
## Interactions:



# Explicit Diversity

 groups

 unfulfilled potential



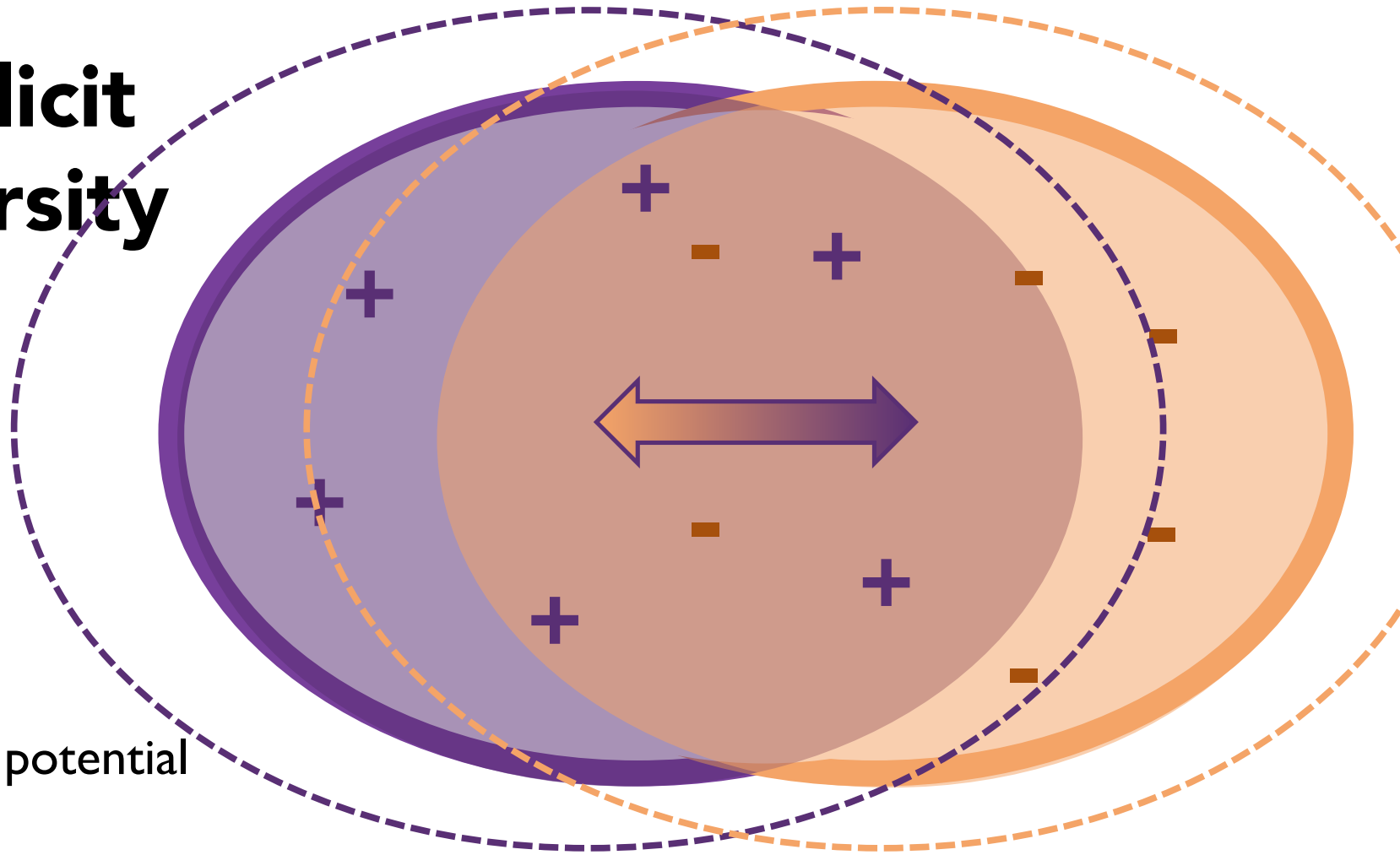
acknowledge  
dynamics



# Explicit Diversity

 groups  
 groups

---- unfulfilled potential






acknowledge  
dynamics

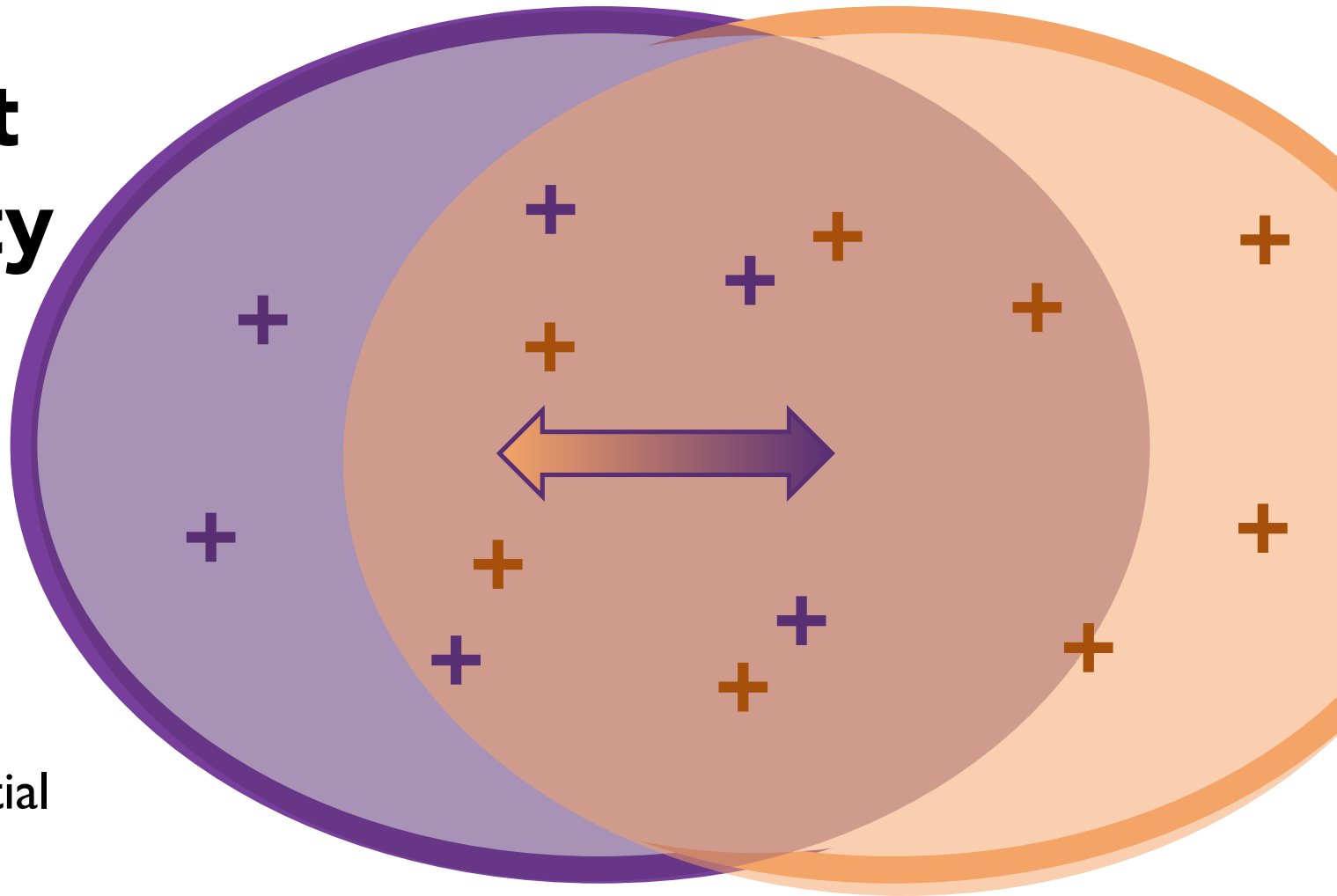


articulate  
vision



# Explicit Diversity

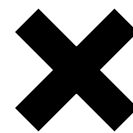
-  groups
-  groups
-  fulfilled potential



acknowledge dynamics



articulate vision



update framework



# Explicit diversity

## Acknowledge dynamics

- Silence is deafening
- Diversity is hard – ask for help

## Articulate vision

to encompass  
difference and build  
joint identity

- Change language
- Vision/Mission statements; codes of conduct
- Restorative mechanisms for redress

## Update framework

- Align institutional policies/actions with vision
- allocation of resources
  - hiring/promotions/tenure
  - training for diverse leadership and leadership on diversity

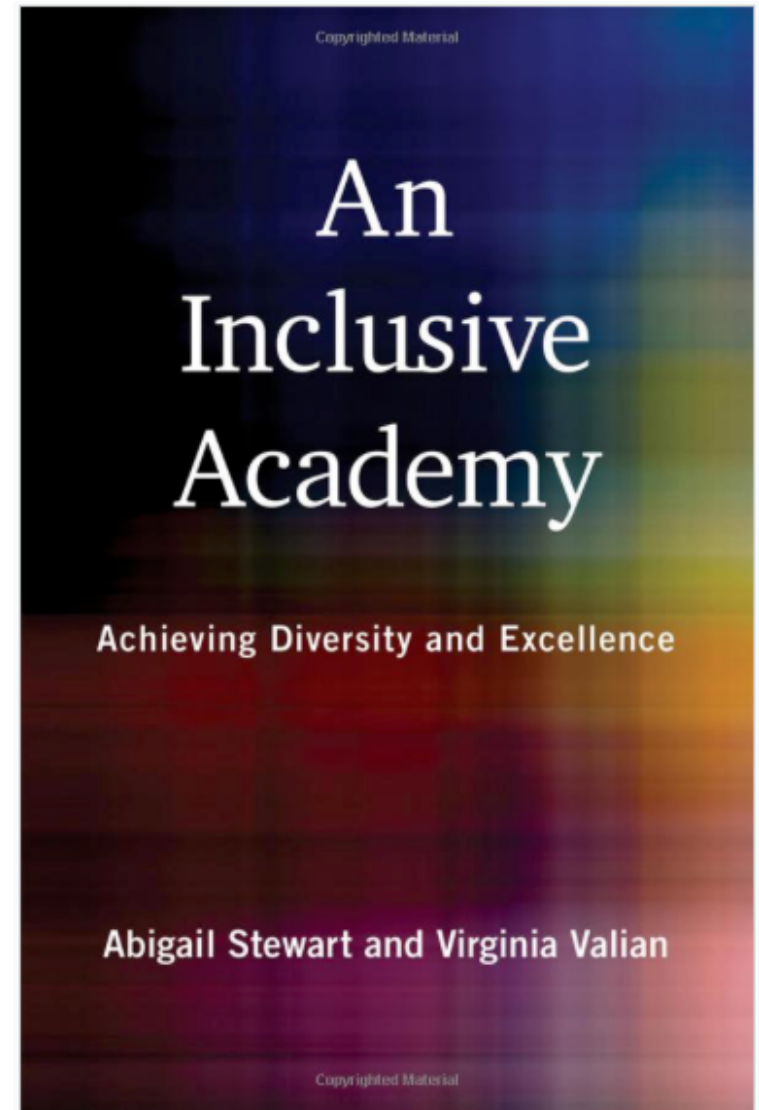
People = University  
hiring and inclusion in  
departments

- Personal perspective and power
- engage: advocacy/bystander training
  - department diversity committees
  - be aware of: homophily; implicit biases
  - value differences.....



# Help!

- Literature
- NSF ADVANCE programs: e.g. at Michigan, Wisconsin, Lehigh
- Growing number of coaches and consultants who specialize in academia
- E.g. NSF + Purdue/Washington + Kardia Group Consultants: [TECAID](#)
- Your diversity/equity/inclusion office



meritocracy

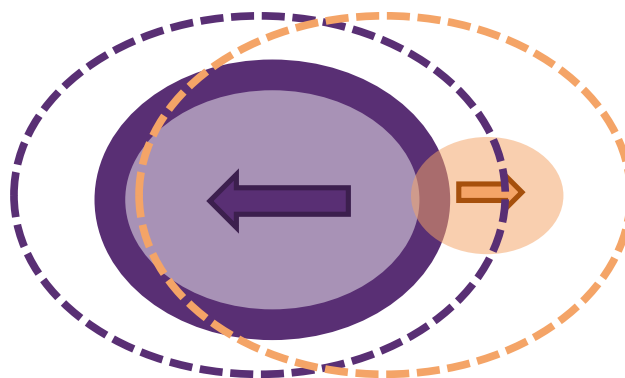
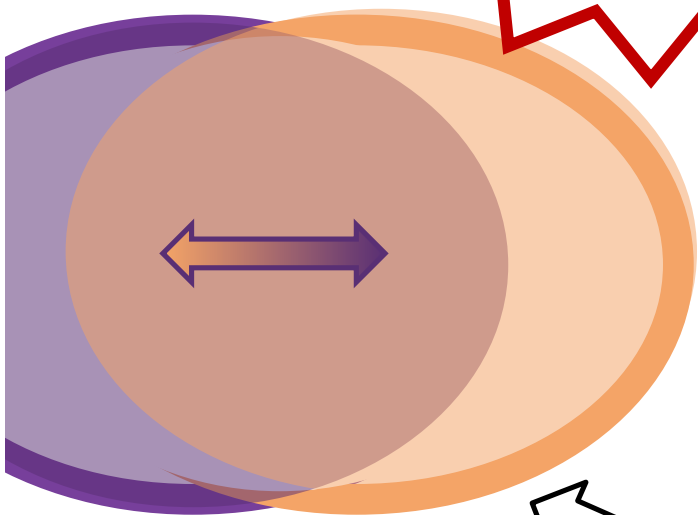
potential

excellence

faculty  
power

**Privilege,  
Power  
and  
Leadership in  
Academia**

People  
=  
University





**interesting challenge**

**strength as researchers:**

**complex problems**

**long horizon**

**teamwork**