

Solo Status:
How low institutional diversity
affects members of
underrepresented groups

Denise Sekaquaptewa, Ph.D.
University of Michigan
Department of Psychology

A simple plan

- * Hire one African American faculty member in each department of the college
- * Five years later,
 - * 25 African American faculty hired
 - * But 18 left the university

- * **Solo status:** being the only member of a social category present in a group
- * Can be differentiated from:
 - * Minority status – one of few
 - * Token status – selected due to minority group membership
- * Solo status describes the situation of any individuals who find themselves to be the only representatives of their social category present

Demographics of science faculty (NSF, 2006)

- * Of 173,800 science tenure-track faculty
 - * 4% Asian American
 - * 2% African American
 - * 1% Hispanic
 - * 0.2% Native American/Alaskan Native
- * Women represent 26% of science-related workforce
- * Less than 10% of faculty at top math, engineering departments are women

Field and Lab Research on Solo Status

- * Reveals several consistent themes (Kanter, 1979)
 - * Heightened visibility
 - * Perceived scrutiny
 - * Contrast
 - * Being seen as very different from others
 - * Role encapsulation
 - * Being assimilated to stereotypic roles
- * Effects on performance and performance related outcomes

Solo Status Lab Research

* Advantages

- * Able to randomly assign individuals to solo and non-solo situations
- * Able to control behavior of others towards the solo individual so as to examine the experience of solo status per se

* Disadvantages

- * Not “real-world”
- * Issues of generalizability

- * Just one part of a multi-method approach that will increase understanding overall



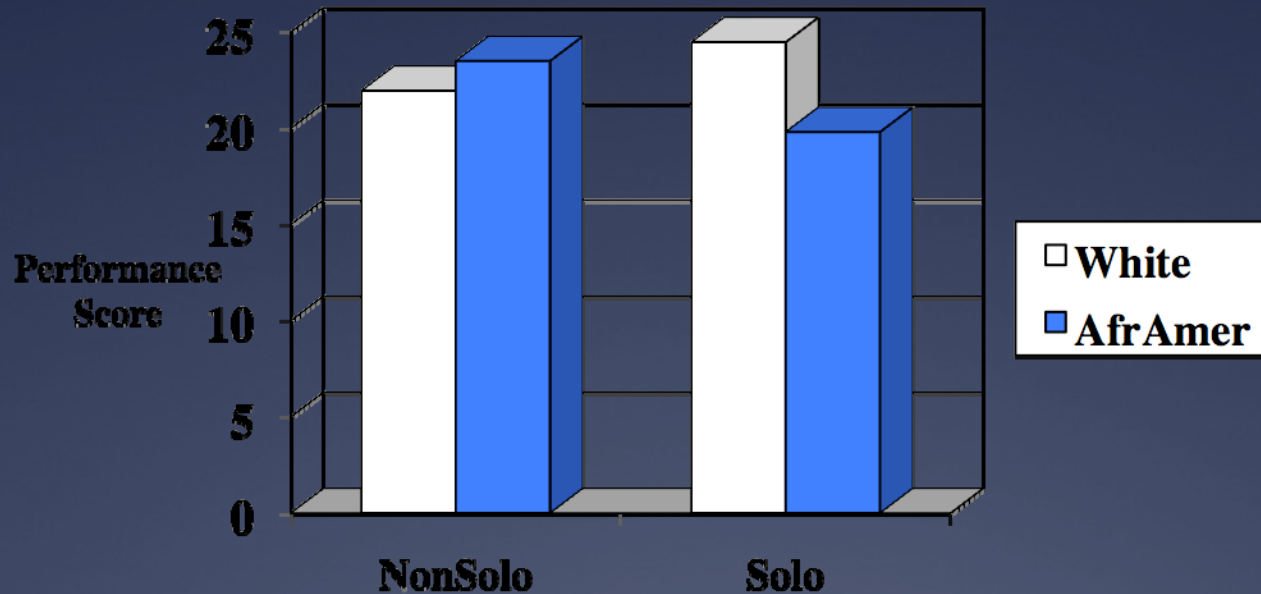
Solo Setup





Results - race solos

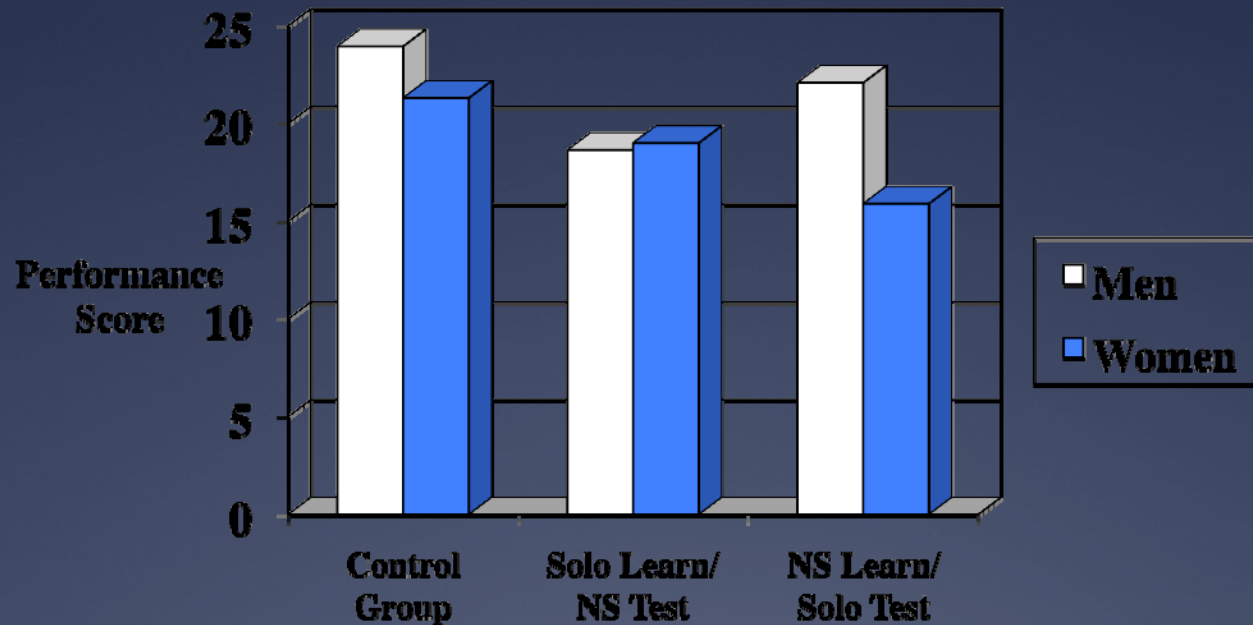
(Sekaquaptewa & Thompson, 2002 *PSPB*)



Interaction $F(1, 74) = 5.67, p < .02$

Results - gender solos

(Sekaquaptewa & Thompson, 2002 *PSPB*)



Interaction Contrast $t(1, 68) = 2.67, p < .001$



- * Women and racial minorities in non-traditional fields are likely to face solo status in conjunction with *negative stereotypes*.
- * Stereotype Threat: the situation in which individuals perceive that their actions could be seen as confirming a stereotype held about their group (Steele, Spencer, Aronson, others)



Stereotype Threat Research

- Members of stereotyped groups underperform when stereotypes are salient in the testing situation, compared to when stereotypes are minimized
- Are the effects of solo status compounded by stereotype threat?

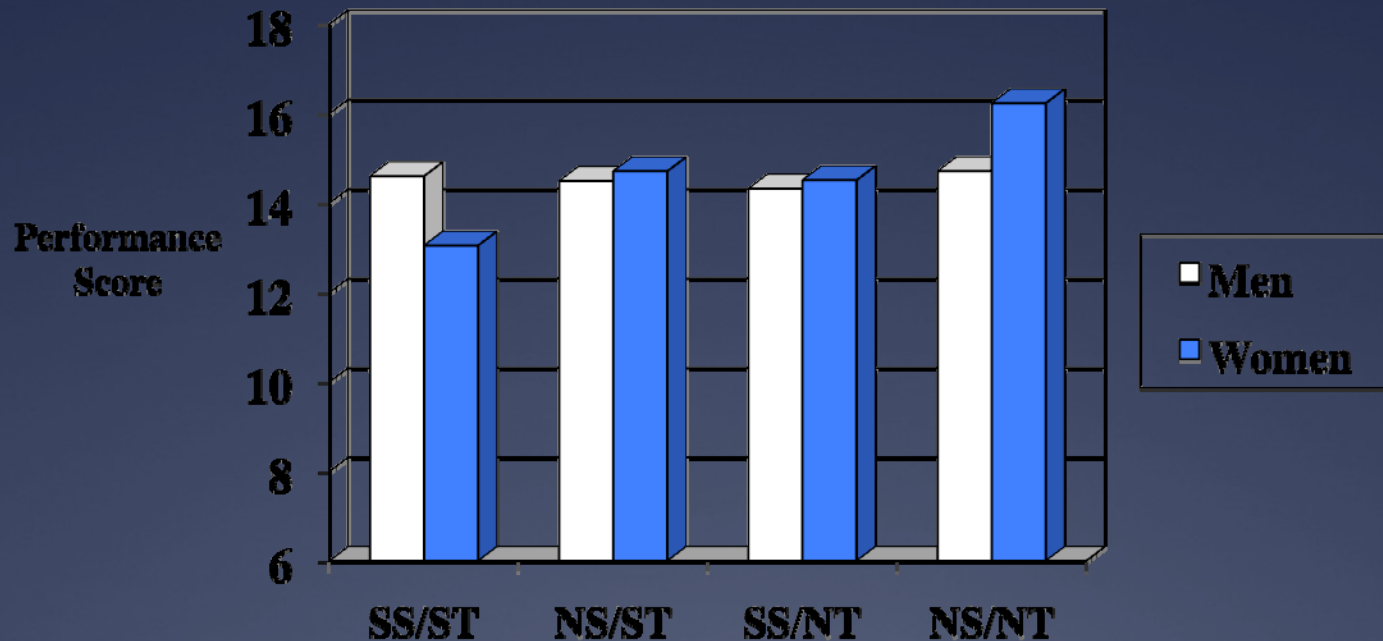
Solo Status and Stereotype Threat

- * 157 White men and women give an oral exam performance either as a gender solo or non-solo.
- * Test material was described as “traditional math” (ST condition) or as being gender-neutral (No Threat condition).
- * Oral exam performance scored for accuracy.



Results

(Sekaquaptewa & Thompson, 2003 *JESP*)



SS x gender $F(1, 148) = 4.06, p < .05$

ST x gender $F(1, 148) = 3.99, p < .01$

Other outcomes

(Sekaquaptewa, Waldman, & Thompson, 2007)

- * Race centrality
 - * "My racial/ethnic group is an important part of my self-image"
- * Race-reflection
 - * "Others might generalize my performance on the task to my race as a whole"
- * Race-representativeness
 - * "During this study, I felt like I had to represent my racial group"
- * Performance apprehension

Sekaquaptewa, Waldman, & Thompson, 2007

- * 156 participants (121 White, 35 African American)
- * Placed in race solo or non-solo status
- * Believed they would perform a group task with the others
- * Completed measures of race centrality, race reflection, race representativeness, performance apprehension

	Participant Race	Non-Solo	Solo	Interaction contrast t
Race-centrality	White	4.98	4.89	t(152) = 6.98, p < .001
	Afr Amer	7.25	7.82	
Race-reflection	White	1.60	1.92	t(152) = 5.22, p < .001
	Afr Amer	2.25	2.73	
Race-represent.	White	2.04	2.40	t(146) = 5.19, p < .001
	Afr Amer	2.66	3.52	
Performance apprehen.	White	3.55	3.49	t(152) = 6.84, p < .001
	Afr Amer	3.83	4.65	

Summary

- * Members of minority groups have more negative experiences as solos than majority group members
- * Being in solo status can impair performance for women and African Americans
- * Solo status can lead minority group members to feel like they represent their entire race

Intervention Research: Some promising leads

- * Creation of a “common ingroup identity”
- * Emphasizing the presence of in-group members in the field as a whole
- * Learning about solo status and stereotype threat research
 - * “Knowing is half the battle” (Schmader et al., 2005)
 - * “So its not just me!”

Conclusions

- * Because there are so few women and people of color in science, they are likely to experience solo status.
- * Experimental lab research demonstrates the significant negative effects of solo status on individuals randomly assigned to groups.
- * The negative effects of solo status on performance are unique to members of underrepresented groups.
- * We must consider the consequences of low diversity in academic science settings.

Thank you

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