

UNDERSTANDING HOW INCLUSIVE CHANGE HAPPENS IN THE ACADEMY

**Recommended Social and Psychological Theories
and Measures for to Assess Faculty Experiences**

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August 2017 || Laguna Beach, CA



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INTRODUCTION

ADVANCING SOCIAL SCIENCE THINK TANK OBJECTIVES

The goal of this Think Tank was to facilitate a unique collaboration among the selected social science attendees to share knowledge on theories, concepts, and mechanisms that can be used by change agents to understand and measure diversity-related transformation in higher education. Participants were invited because of their extraordinary theoretical and quantitative contributions to the understanding of how to change the culture of science, technology, engineering, and mathematics (STEM) fields to be more inclusive and engaging for underrepresented people.

The Think Tank created a space that allowed for discussing and sharing of various process measurements. Participants were asked to identify and bring measures they had used or thought would be useful to assess broadening participation mechanisms. Process measures presented in this summary are valid and reliable, and can be adopted for faculty participants working within higher education.

STATED MEETING OUTCOMES

- 1) Develop a list of constructs and measurement recommendations for change agents to consider for adoption to understand broadening participation of faculty efforts in academia.
- 2) Create a plan for dissemination of the list and possible collaboration/implementation of the measurements among the group and otherwise.

AIM AND FORMAT OF THIS WHITE PAPER

Section 1: THEORIES AND CONSTRUCTS identified by participants, a list of suggested readings for each theory and a list of theory-informed process mechanisms. Multiple theories point to similar mechanisms.

Section 2: MECHANISMS AND MEASUREMENT RECOMMENDATIONS including sample survey items, and citations for more survey information. All surveys listed are free to use and adapt, with proper citation.

THEORIES AND CONSTRUCTS

This list contains theories and constructs identified by the Think Tank participants that can be used to understand the *process* of transformation at the university level broadly, at the aggregate group level of faculty or department leaders, or at the individual level of faculty.

EXPECTANCY VALUE COST THEORY

Suggested Readings:

Barron, K. E., & Hulleman, C. S. (2015). Expectancy-value-cost model of motivation. In J. S. Eccles & K. Salmelo-Aro (Eds.), *International Encyclopedia of Social and Behavioral Sciences, 2nd Edition: Motivational Psychology* (pp. 261–271). Amsterdam, Netherlands: Elsevier.

Eccles-Parsons, J. (1983). Expectancies, values, and academic behaviors. In J.T. Spence (Ed.). *Achievement and achievement motivations* (pp. 75-121). San Francisco, CA: W. H. Freeman & Co.

Flake, J. K., Barron, K. E., Hulleman, C., McCoach, B. D., & Welsh, M. E. (2015). Measuring cost: The forgotten component of expectancy-value theory. *Contemporary Educational Psychology, 41*, 232–244.

Perez, T., Cromley, J. G., & Kaplan, A. (2014). The role of identity development, values, and costs in college STEM retention. *Journal of Educational Psychology, 106*(1), 315-329.

Summary:

Individuals will select and persist on a task when they expect to be successful, value the task, and perceive the task as involving low costs (Barron & Hulleman, 2015; Eccles et al., 1983). It follows that institutions should support faculty in their expectations to succeed on a task (e.g., getting tenure), support the various values an individual may have for their work, and where possible, mitigate the costs associated with their work (e.g., implementing family-friendly policies).

Theory Informed Mechanisms:

- Expectations for Fairness of Outcomes
- Costs
- Intrinsic Motivation
- Work/Life Policy Inventory
- Structural Inventory of Campus Climate
- Work Values

GOAL AFFORDANCE AND CONGRUITY

Suggested Readings:

Diekman, A.B., Steinberg, M., Brown, E.R., Belanger, A.L., & Clark, E.K. (2017). A goal congruity model of role entry, engagement, and exit: understanding communal goal processes in stem gender gaps. *Personality and Social Psychology Review*, 21, 142-175.

Diekman, A.B., Brown, E.R., Johnston, A.M., & Clark, E.K. (2010). Seeking congruity between goals and roles: A new look at why women opt out of science, technology, engineering, and mathematics careers. *Psychological Science*, 21, 1051-1057.

Summary:

Goal Congruity Theory, a meta theory within Social Role Theory (see below), posits that people are motivated to pursue careers and tasks that allow them to fulfill their valued goals (which are often influenced by social role norms around communion and agency). From the perspective of goal congruity theory, two inputs determine positivity toward a career: the work related goals a faculty member holds dear and the perceived opportunities for the job to meet those goals. These perceived “goal affordances” thus reflect beliefs about whether a career will offer opportunities to meet valued goals. Positive motivational outcomes occur the more a person’s work goals “fit” with their working conditions, (Brown, Thoman, Smith, & Diekman, 2015).

Theory Informed Mechanisms:

- Job affordance
- Intrinsic Motivation
- Work Values

IDEAL WORKER THEORY

Suggested Readings:

Acker, J. (1990). Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations. *Gender & Society*, 4, 139-158.

Acker, J. (2012). Gendered Organizations and Intersectionality: Problems and Possibilities. *Equality, Diversity and Inclusion: An International Journal*, 31(3), 214–224.

Morimoto, S. A. & Zajicek, A. M. (2014). Dismantling the Master’s House: Feminist Reflections on Institutional Transformation. *Critical Sociology*, 40(1),135-150.

Williams, J. (1999). *Unbending Gender: Why Family and Work Conflict and What To Do About It*. New York, NY: Oxford University Press.

Summary:

“The ideal worker is someone who works at least forty hours a week year round. This **ideal-worker** norm, framed around the traditional life patterns of men, excludes most mothers of childbearing age” (Williams, 1999, p. 2). The ideal worker is a cornerstone of Acker’s (1990, 2012) concept of “gendered organizations,” or the ways that organizations appear to be objective but, in practice, operate such that advantages accumulate to men and masculinity. A worker becomes ideal, therefore, when they organize their life around their profession, work long hours and travel or relocate to meet the demands of their job. Moreover, implicitly workers have no obligations or commitments outside of paid work and someone else is responsible for reproductive unpaid labor such as housework and childcare. Accordingly, the ideal worker is disembodied, primarily devoted to work and, as such, is signified as a (white, middle class, straight, masculine) man.

Theory Informed Mechanisms:

- Efficacy
- Identity
- Values
- Work/Life Policy Inventory
- Structural Inventory of Campus Climate

IMPLICIT ASSOCIATIONS THEORY

Suggested Readings:

Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review*, 109(1), 3-25.

Nosek, B. A., & Riskind, R. G. (2012). Policy implications of implicit social cognition. *Social Issues and Policy Review*, 6, 112-145.

Summary:

Individuals mentally represent attitudes and stereotypes at both an explicit or conscious level, and at an implicit or unconscious level. Importantly, because people are not aware of their implicit stereotypes and associated evaluations and knowledge, these representations can easily influence their thoughts and behaviors involving other stereotyped groups. Implicit evaluations associated with stereotypes particularly influence individuals’ evaluations and reactions to stereotyped people under situations in which individuals are uncertain, cognitively busy or tired, or responding under time pressure.

Theory Informed Mechanisms:

- Gender Bias Awareness
- Micro-/Macro-aggressions
- Modern Sexism

KINDNESS MATTERS THEORY

Suggested Readings:

Estrada, M., Eroy-Reveles, A., & Matsui, J. (in press). The influence of affirming kindness and community on broadening participation in STEM career pathways. *Social Issues Policy Review*.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, 117(3), 497-529.

Hicks, D. (2011). *Dignity: The essential role it plays in resolving conflict*. New Haven, CT: Yale University Press.

Summary:

Kindness is *an act or quality of action that conveys, in subtle and sometimes obvious ways, respect for the dignity of another person*. Behavioral science research and theory provide evidence that social contextual variables – specifically kindness cues affirming social inclusion – contribute towards the chronic historical underrepresentation of some groups within STEM career pathways. The kindness matters theory contends that the experience of being in a non-threatening social environment does not automatically result in one feeling kindness cues that affirm social inclusion. Measurement of inclusive academic environments (aka kind environments) includes low macro and micro aggression and high macro and micro affirmation. Academic environments that do not include these are either prejudiced or ambiguous, resulting in social, cognitive, emotional, and physiological costs.

Theory Informed Mechanisms:

- Micro-/Macro-inclusions
- Micro/Macro-affirmations
- Sense of Belonging
- Dignity
- Departmental Dynamics: Interdependence versus Conflict

SOCIAL COMMITMENTS THEORY

Suggested Readings:

Lawler, E. J. and Yoon, J. (1996). Commitment in Exchange Relations: Test of a Theory of Relational Cohesion. *American Sociological Review* 6, 89-108.

Lawler, E. J., Thye, S. R. & Yoon, J. (2009). *Social Commitments in a Depersonalized World*. New York, NY: Russell Sage Foundation.

Lawler, E. J., Thye, S. R. & Yoon, J. (2016). The Problem of Social Order in Nested Group Structures. Pp. 149-166 in *Handbook of Contemporary Sociological Theory*, edited by S. Abrutyn. Cham, Switzerland: Springer International Publishing.

Thye, S. R. & Yoon, J. (2015). Building Organizational Commitment in Nested Groups: Theory and New Evidence from South Korea. *Sociological Focus* 48, 249-270.

Summary:

Universities are part of the sociological phenomenon called *nested group contexts* wherein individuals interact with others in a local or immediate proximal group (e.g. department) that is nested within a larger more removed group or organization called the distal group (e.g. university). Such contexts create problems of *nested group commitments* wherein an individual displays greater commitment and loyalty to the group they believe is the primary source positive emotions. Differing levels of commitment to proximal versus distal groups create coordination problems that inhibit the resolution of social dilemmas (i.e., situations in which there is a conflict between individual and collective interest.). For instance, if faculty form stronger commitments to their departments than to the larger university, it is harder for the university to mobilize collective efforts on behalf of its overarching goals or sustain such progress over time. However, such problems can be overcome if 1) group tasks are structured such that they promote a sense of shared responsibility between proximal and distal groups or 2) individuals perceive a sense of organizational support from their distal group.

Theory Informed Mechanisms:

- Nested Group Commitments:
 - Attributions of positive emotions
 - Relational cohesion
 - Shared responsibility
 - Perceived organizational support

SELF DETERMINATION THEORY

Suggested Readings:

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Two Work Settings. *Journal of Applied Social Psychology, 34(10)*, 2045–2068.

Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry, 11(4)*, 227-268.

Deci, E. L., & Ryan, R. M. (2012). Motivation, Personality, and Development Within Embedded Social Contexts: An Overview of Self-Determination Theory. In R. M. Ryan (Ed.), *Oxford handbook of human motivation* (pp. 85-107). Oxford, UK: Oxford University Press.

Smith, J. L., Handley, I.M., Rushing, S., Belou, R., Kambich, L., Skewes, M. C., Shanahan, E.A., Honea, J., Intemann, K. (in press). Added Benefits: How Supporting Women Faculty in STEM Improves Everyone’s Job Satisfaction. *Journal of Diversity in Higher Education*.

Summary:

People thrive when they experience a job as “self-determined” (as opposed to controlling). To create a self-determined context, the theory posits and data support, that people must feel a sense of choice, efficacy, and a meaningful connection with others, which are the three psychological nutrients (*relatedness, autonomy, and competence*) needed for cultivating a self-determined working environment (Deci & Ryan, 2000, 2012).

Theory Informed Mechanisms:

- Psychological Need Satisfaction:
 - Autonomy
 - Competence
 - Relatedness
- Intrinsic motivation

SOCIAL COGNITIVE THEORY

Suggested Readings:

Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology*, 52(1), 1-26.

Latimer, M., J. K. Jackson, L. M. Dilks, J. Nolan, and L. Tower. (2014) Organizational Change and Gender Equity in Academia: Using Dialogical Change to Promote Positive Departmental Climates. *Advances in Gender Research* 19, 333-353.

Nolan, J., Jackson, J.K., Latimer, M., Tower L., and Borres, A. (2012). A dialogical change process for strategic planning to diversify academic departments. *Getting to the Heart of it All: Connecting Gender Research, WIE Programs, Faculty & Corporate Partners WEPAN Conference Proceedings*. Retrieved from https://www.wepan.org/resource/resmgr/Conference.../2012_Conference_Program.pdf

Summary:

Human agents are influenced by social structures and they act in ways that can reproduce or transform those structures. Relative to transforming institutional structures, Bandura identifies three types of agency: collective, proxy, and personal. Collective agency assumes everyone is involved in the effort of change. Proxy agency assumes some expert person or entity is responsible for change on behalf of the people, and personal agency assumes the individual can act in ways to transform the situation. Success in actually achieving change is related to efficacy beliefs in the collective, proxy agent, and self.

Theory Informed Mechanisms:

- Department Dynamics:
 - Dependence
 - Interdependence
 - Conflict
- Collective Efficacy

SOCIAL ROLE THEORY

Suggested Readings:

Heilman, M. E., Wallen, A. S., Fuchs, D. & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology*, 89, 416-427.

Eagly, A. H. (1997). Sex differences in social behavior: Comparing social role theory and evolutionary psychology. *American Psychologist*, 50, 1380-1383.

Eagly, A. H. and Diekmann, A. B. (2005) *What is the Problem? Prejudice as an Attitude-in-Context*. In J. F. Dovidio, P. Glick and L. A. Rudman (Eds.), *On the Nature of Prejudice: Fifty Years after Allport*. Oxford, UK: Blackwell Publishing Ltd.

Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Erlbaum.

Summary

Normative gender roles in US society influence the goals, expectations, and perceptions of “fit” for people entering into those roles (Eagly & Diekmann, 2005). For example, over time, men in breadwinner roles and women in caretaking roles result in prescriptions that what is required for success in those roles are masculine (e.g., agency, self-focused) or feminine (e.g., communion, or other-focused) traits (Eagly, Wood, & Diekmann, 2000). According to social role theory (Eagly & Diekmann, 2005), specific social roles “form an opportunity structure that individuals navigate as they pursue their goals”. Social role norms help inform how people are perceived by others when in a given role, and how they select into certain roles (e.g., women in leadership positions).

Theory Informed Mechanisms:

- Work/Life Policy Inventory
- Malleability of Role and Reward Structures

STRUCTURE VERSUS AMBIGUITY FRAMEWORK

Suggested Readings:

Mendoza-Denton, R., Patt, C., Fisher, A., Eppig, A., Young, I., Smith, A., & Richards, M. (2017). Differences in STEM doctoral publication by ethnicity, gender, and academic field at a large research university. *PLoS ONE* 12(4), e0174296.

Mendoza-Denton, R., Goldman-Flythe, M., Pietrzak, J., Downey, G., & Aceves, M. (2010). Group value ambiguity: Understanding the effects of academic feedback on minority students' self-esteem. *Social Psychological and Personality Science*, 1, 127-135.

Leslie, S. J., Cimpian, A., Meyer, M., & Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262-265.

Summary:

The mechanisms of prejudice, as well as the pernicious effects of stigma, both thrive under conditions of ambiguity. Under such conditions, individuals operate on the basis of pre-existing schemas and knowledge structures—such as stereotypes, prejudices, or expectations of being the target of discrimination. Yet, at all steps of the academic ladder, scholars encounter milestones and evaluations that are shrouded in ambiguity, with unclear guidelines about what one must do to succeed. From figuring out what one needs to do to publish as a graduate student to achieving tenure in one’s department, ambiguity is often embedded as part of a weeding out process, whereby only those who “have what it takes” rise to the top and “figure things out.”

Unsurprisingly, this ideology poses a disproportionate barrier for underrepresented scholars in a given field (e.g. women, underrepresented minorities in STEM), given that others use negative stereotypes to judge their performance and the scholars themselves are under attributional ambiguity with respect to their belonging. By contrast, environments where expectations and guidelines for success are equally articulated and applied for all of a community’s members are more likely to yield equitable outcomes, including the hiring and tenure of a diverse professoriate.

Theory Informed Mechanisms:

- Structural Inventory of Campus Climate
- Efficacy
- Expectations for Fairness of Outcomes
- Sense of Belonging
- Modern sexism

TRIPARTITE INTEGRATION MODEL OF SOCIAL INFLUENCE

Suggested Readings:

Estrada, M., Woodcock, A., Hernandez, P. R., & Schultz, P. W. (2011). Toward a model of social influence that explains minority student integration into the scientific community. *Journal of Educational Psychology, 203*, 206-222.

Estrada, M., Hernandez, P., & Schultz, W. (in press). A longitudinal study of how quality mentorship and research experience integrate underrepresented minorities into STEM careers. *CBE-Life Science Education*.

Estrada, M., Eroy-Reveles, A., Ben-Zeev, A., Baird, T. Jr., Domingo, C., Gómez, CA., Bibbins-Domingo, K., Parangan-Smith, A., & Márquez-Magaña, L. (in press). Enabling full representation in science: The San Francisco BUILD Project’s agents of change affirm science skills, belonging and community. *BMC Proceedings*.

Kelman HC. (2006). Interests, relationships, identities: Three central issues for individuals and groups in negotiating their social environment. *Annual Review of Psychology, 57*, 1–26.

Summary:

Kelman's research (2006) shows that there are three levels of influence – efficacy, identity, and values – that are marked by shifts in the target's internal orientation to the influencing agent. Yet regardless of orientation, the same behavior may be exhibited. For example, given the same context, different orientations may lead to different levels of persistence in conforming to community normative behavior (Estrada et al. 2011). For example, if a student is studying science because they feel consistently rewarded by good grades (i.e., they acquire efficacy), this student may not persist if they encounter difficult classes and less academic success. In contrast, students who value that science is integral to making meaningful contributions to society may persist, even when courses become difficult. Early research shows that these three orientations, measured in the final year of undergraduate education, do predict intention to pursue a science career and applications to graduate school. Further research shows that discipline identity (in this case science identity) predicts persistence in STEM fields four years after graduation (Estrada et al., in press). Currently, data regarding when efficacy, identity and values predict career persistence, productivity, and joy in work are being collected with early career faculty.

Theory Informed Mechanisms:

- Efficacy
- Identity
- Values

MECHANISMS AND MEASUREMENT RECOMMENDATIONS

Suggestions for quantitative measurement tools and sample items are provided.

COLLECTIVE EFFICACY

Following Bandura (2001), we think of collective efficacy as the shared belief of the collective in achieving its desired goals. Our particular concern was collective efficacy beliefs related to gender equity (Latimer et al. 2014).

Survey Item Samples:

Participants are given the following instructions: The following questions concern your feelings about your Department during the last year. (If you have been on this job for less than a year, this concerns the entire time you have been at this job.) If you have a joint appointment, please select the Department Head/Chair/Director/Area Head to rate for whom you have had the most interactions. Please indicate how much you agree with the following statements on a 1 to 5 scale (Strongly disagree to strongly agree)

I am confident that my Department is able to WORK TOGETHER to:

1. Advance qualified women faculty into leadership positions
2. Promote qualified women to Full Professor
3. Hire qualified women for faculty positions

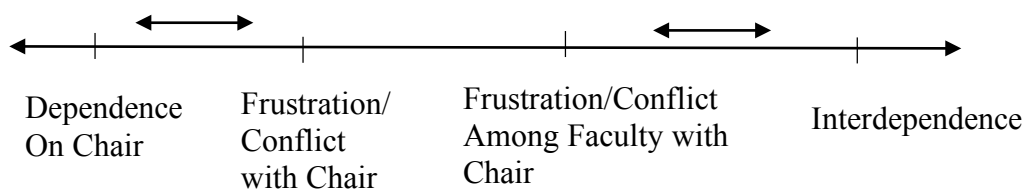
Citations:

Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology*, 52(1), 1-26.

Latimer, M., Jackson, K., Dilks, L., Nolan, J., & Tower, L. (2014). *Organizational change and gender equity in academia: Using dialogical change to promote positive departmental climates. In Gender Transformation in the Academy* (Vol. 19, pp. 333–353). Emerald Group Publishing Limited.

DEPARTMENT DYNAMICS: INTERDEPENDENCE, DEPENDENCE, AND CONFLICT

We use the term department dynamics to refer to the psycho dynamic processes that occur there.



The anchor points reflect basic expectations of faculty toward dependence (on chair) and interdependence (among faculty with chair). Frustration and conflict occur when expectations are not being met.

Survey Item Samples:

All are 5-point Likert scale items anchored at Strongly Disagree and Strongly Agree.

Interdependence

1. The goals and objectives of our department are clear to everyone.
2. Faculty members encourage high performance from each other.
3. Faculty members rely on each other to accomplish departmental goals.
4. There is a general spirit of cooperation among faculty.
5. The workload is distributed fairly in our department.
6. Faculty members give each other useful feedback on effectiveness and productivity.

Conflict

1. Faculty members seem to have different views about how things should be done.
2. Faculty members don't know each other well.
3. Faculty members avoid each other at times.
4. There are subgroups in our faculty who exclude others.
5. Only a few faculty members talk much at meetings.
6. Our faculty discussions are combative.
7. The Chair makes most of the decisions.

Dependence

1. Faculty members go along with what the Chair wants with little or no debate.
2. Most faculty members interact through the Chair.

Citation:

Latimer, M., Jackson, K., Dilks, L., Nolan, J., & Tower, L. (2014). *Organizational change and gender equity in academia: Using dialogical change to promote positive departmental climates*. In *Gender Transformation in the Academy* (Vol. 19, pp. 333–353). Emerald Group Publishing Limited.

COSTS

The role of psychological cost in motivation (Flake, Barron, Hulleman et al., 2015) are conceptualized along four distinct dimensions: task effort cost, outside effort cost, loss-of-valued-alternatives cost, and emotional cost. We draw on the measurement of these costs and their role in student motivation (Flake, Barron, Hulleman et al., 2015) to inform cost perceptions by faculty.

Survey Item Samples:

All items use a 6-point Likert scale anchored at Strongly Disagree and Strongly Agree. Items can be tailored to a particular event (e.g., tenure) or more general (e.g., “doing my job”).

Effort

1. When I think about the hard work needed to get [tenure??], I am not sure that it will be worth it in the end.
2. I am not sure if I've got the energy to [achieve tenure].
3. For me, [working toward tenure] just might not be worth the effort.
4. [Getting tenure] sounds like it really requires more effort than I'm willing to put into it.
5. This job requires too much effort.
6. This job demands too much of my time.

Opportunity

1. [Working towards tenure] takes a lot of time away from other activities that I want to pursue.
2. I'm concerned about losing track of some valuable relationships because of the work required [to get tenure].
3. I'm concerned that I have to give up a lot to [get tenure].
4. I'm concerned [getting tenure] requires that I give up a lot of other activities I enjoy.

Psychological

1. I'm concerned about being embarrassed if [I do not get tenure].
2. I'm concerned that my self-esteem will suffer if I am unsuccessful [at getting tenure].
3. I worry that others will think I am a failure if I do not do well in this biology course.
4. I worry too much about this class.
5. This class is too exhausting.
6. This class is emotionally draining.
7. This class is too frustrating.
8. This class is too stressful.
9. This class makes me feel too anxious

Outside Effort

1. I have so many other commitments that I can't put forth the effort needed for my job.
2. Because of the all the other demands on my time, I don't have enough time for my job.
3. I have so many other responsibilities that I am unable to put in the effort that is necessary for my job.
4. Because of other things that I do, I don't have time to put into my job.

Citations:

Battle A., & Wigfield, A. (2003). College women's value orientations toward family, career, and graduate school. *Journal of Vocational Behavior*, 62, 56-75.

Flake, J. K., Barron, K. E., Hulleman, C., McCoach, B. D., & Welsh, M. E. (2015). Measuring cost: The forgotten component of expectancy-value theory. *Contemporary Educational Psychology*, 41(Supplement C), 232-244.

Perez, T., Cromley, J. G., & Kaplan, A. (2014). The role of identity development, values, and costs in college STEM retention. *Journal of Educational Psychology*, 106(1), 315-329.

DIGNITY

Hicks' (2011) recent writing on dignity draws on evolutionary, social, and developmental psychology to support her approach. She describes how individuals experience deep violations when their dignity is not upheld in social interactions, which triggers a fight-or-flight response. She describes 10 essential elements of dignity and how dignity violations are experienced as deep discomfort. Further, violations convey a rejection of some aspect of a person and cues social exclusion and non-acceptance. The very human experience of a dignity violation includes obvious acts of discrimination to more subtle gestures of non-inclusion. The result for the person experiencing a violation are shifts in emotional states that can influence decision making, social judgments, perceptions, problem-solving, and social behaviors (Keltner & Lerner, 2010). This is an emerging area of research, but a review of current literature suggests that dignity violations in the context of STEM professional settings can potentially impact cognitive functioning related to academic success, such as learning, retention, recognition, and recall. Ultimately this may impact faculty retention, productivity, and persistence.

Survey Item Samples:

Dignity Self Assessment

Thinking about your current life, please read each of these statements and rate to what extent you feel this is true for you at work and then outside of work, on a scale of 1 (never) to 10 (always).

1. I feel my **identity** is **accepted**.
2. I feel **recognized** for my good efforts, thoughtfulness, and talents.

3. I feel **acknowledged** (seen, heard, listened to, validated and responded to about my concern).
4. I feel **included** (a sense of belonging).
5. I feel **safe** (both physically and psychologically).
6. I feel **treated fairly**.
7. I feel **autonomous** (free to make my own decisions and act on my own behalf).
8. I feel **understood**.
9. I feel I am given the **benefit of the doubt**.

Citations:

Hicks, D. (2011). *Dignity: The essential role it plays in resolving conflict*. New Haven, CT: Yale University Press.

Keltner D, Lerner JS. (2010). Emotion. In *The Handbook of Social Psychology*, ed. DT Gilbert, ST Fiske, G Lindzey, pp. 317-52. New York, NY: Wiley.

EFFICACY

Developed to assess confidence in partaking in science career related skills, this measure was validated with students and is currently being given to early career faculty. Previous research suggest efficacy is necessary for persistence, but not uniquely predictive of persistence. Current research can look at to what extent discipline efficacy predicts productivity, career persistence and joy in work. Items are modeled after research with students.

Survey Item Samples:

Indicate the extent to which you are confident you can successfully complete the following tasks. Please select the best answer on the scale from 1 (not at all confident) to 5 (absolutely confident).

I am confident that I can...

1. Use technical science skills (use of tools, instruments, and/or techniques).
2. Generate a research question to answer.
3. Figure out what data/observations to collect and how to collect them.
4. Create explanations for the results of the study.
5. Use scientific literature and/or reports to guide research.
6. Develop theories (integrate and coordinate results from multiple studies).

This section **assesses your confidence in your abilities to function in your academic career in {Field of Study Here}**.

Indicate the extent to which you are confident you can successfully complete the following tasks. Please select the best answer on the scale from 1 (not at all confident) to 5 (absolutely confident).

I am confident that I can...

1. teach undergraduate courses in my field of _____.
2. teach graduate courses in my field of _____.
3. develop a research program that contributes to the body of knowledge in my field.
4. use academic literature and/or reports to guide my research.
5. write research proposals to fund my work.
6. publish peer-reviewed journal article on my research results.
7. supervise engineering graduate students conducting research.

Citations:

Estrada, M., Woodcock, A., Hernandez, P. R., & Schultz, P. W. (2011). Toward a model of social influence that explains minority student integration into the scientific community. *Journal of Educational Psychology, 203*, 206-222.

EXPECTATIONS FOR FAIRNESS OF OUTCOMES

Expectations for fairness of outcomes in one's organization are most directly measured as perceived procedural or distributive organizational justice. Colquitt (2001) created a conceptual framework for connecting the types of organizational justice and created a validated measure with subscales to clarify the four types of organizational justice: procedural, distributive, interpersonal, and informational.

Note that these items focus on a specific procedure, such as tenure review, or and outcome, such as receiving tenure. The procedures or outcomes must be context-specific to obtain reliable measurement.

Survey Item Samples:

Procedural justice

The following items refer to the procedures used to arrive at your (outcome). To what extent:

1. Have you been able to express your views and feelings during those procedures?
2. Have you had influence over the (outcome) arrived at by those procedures?
3. Have those procedures been applied consistently?
4. Have those procedures been free of bias?
5. Have those procedures been based on accurate information?
6. Have you been able to appeal the (outcome) arrived at by those procedures?
7. Have those procedures upheld ethical and moral standards?

Distributive justice

The following items refer to your (outcome). To what extent:

1. Does your (outcome) reflect the effort you have put into your work?
2. Is your (outcome) appropriate for the work you have completed?
3. Does your (outcome) reflect what you have contributed to the organization?
4. Is your (outcome) justified, given your performance?

Interpersonal justice

The following items refer to (the authority figure who enacted the procedure). To what extent:

1. Has (he/she) treated you in a polite manner?
2. Has (he/she) treated you with dignity?
3. Has (he/she) treated you with respect?
4. Has (he/she) refrained from improper remarks or comments?

Informational justice

The following items refer to (the authority figure who enacted the procedure). To what extent:

1. Has (he/she) been candid in (his/her) communications with you?
2. Has (he/she) explained the procedures thoroughly?
3. Were (his/her) explanations regarding the procedures reasonable?
4. Has (he/she) communicated details in a timely manner?
5. Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?

Citation:

Colquitt, J.A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 386-400.

GENDER BIAS AWARENESS

The extent to which a community of people are aware of their own biases, they can then work to correct them, advocate for a bias free working or learning environment, and are more likely to engage with diverse people (Perry, Dovidio, Murphy & Ryan, 2015). Bias awareness items can be tailored for ethnicity or gender or other target groups with different levels of specificity as sampled below.

Survey Item Samples:

Participants are asked to rate how much they agree with each of 4 items on a 1 (strongly disagree) to 5 (strongly agree) Likert scale. Sample items include:

1. Even though I know it's not appropriate, I sometimes feel that I hold unconscious negative attitudes toward women in STEM.
2. When talking to women in STEM, I sometimes worry that I am unintentionally acting in a prejudice way.
3. Even though I like Black people, I still worry that I have unconscious biases toward them.
4. I never worry that I may be acting in a subtly prejudice way toward Black people.

Citation:

Perry, S. P., Murphy, M. C., & Dovidio, J. F. (2015). Modern prejudice: Subtle, but unconscious? The role of Bias Awareness in Whites' perceptions of personal and others' biases. *Journal of Experimental Social Psychology*, 61, 64-78.

IDENTITY

The science identity measure was developed to assess to what extent a person identifies with their science community and/or STEM community. The measure was validated with students and is currently being given to early career engineering faculty. Below is the current measure being used. Previous research suggest identity is a uniquely predictive of persistence even four years after assessment. Current research looks at to what extent discipline identity predicts productivity, career persistence and joy in work.

Survey Item Samples:

The following questions ask **how you think about yourself and your discipline identity**. Please select the best answer on the scale from 1 (strongly disagree) to 7 (strongly agree).

1. I have a strong sense of belonging to the community of XX.
2. I derive great personal satisfaction from working on an XX team.
3. I have come to think of myself as a XX.
4. I feel like I belong in the field of XX.
5. The daily work of a XX is appealing to me.

Note: XX are modified for the STEM discipline of the early career faculty person.

Citation:

Estrada, M., Woodcock, A., Hernandez, P. R., & Schultz, P. W. (2011). Toward a model of social influence that explains minority student integration into the scientific community. *Journal of Educational Psychology, 203*, 206-222.

INTRINSIC MOTIVATION

Intrinsic motivation refers to the extent to which the experience of working on or engaging in an activity is sufficient to motivate initial engagement or persistence without additional external supports or rewards. Intrinsic motivation can be derived from one's personal value for doing a task (see Work Values Section), but is more directly measured by items tapping into the experience of interest while working on a given task and future interest in learning more about the topic. To measure intrinsic motivation, items must include the focal topic or activity of interest.

Survey Item Samples:

Items below are adapted from Smith, Sansone, & White (2007), to be a more generic measure.

Please answer the following questions using the scale from 1 = Strongly Agree to 7 Strongly Disagree.

1. I think the [topic or activity] is very interesting
2. [topic or activity] fascinates me
3. I'm excited about [topic or activity]
4. To be honest, I just don't find [topic or activity] interesting
5. I think [topic or activity] is boring
6. I see how I can apply what we are learning about/in [topic or activity] to real life
7. Learning about or doing [topic or activity] has been a waste of my time
8. I don't like [topic or activity] very much
9. I enjoy doing or learning about [topic or activity]
10. Doing or learning about [topic or activity] really seem to drag on forever

Citation:

Smith, J. L., Sansone, C., & White, P. H. (2007). The stereotyped task engagement process: The role of interest and achievement motivation. *Journal of Educational Psychology, 99*(1), 99–114.

JOB AFFORDANCE OPPORTUNITIES

Different jobs or careers are perceived as providing opportunities to fulfill (or afford) different kinds of important goals. Short measures of job affordances focus on broad types of affordances, such as the extent to which jobs are perceived to afford agentic or communal goals. Longer measures separate the types of agentic and communal affordances and theory-driven research often focuses on a specific subscale or set of the subscales.

Survey Item Samples:

These two items are adapted from Diekmann, et al., 2010. Faculty are asked to rate their perception of a faculty career on a 1 (not at all) to 7 (extremely) scale:

1. How much do you believe a faculty career fulfills goals such as power, achievement, and seeking new experiences or excitement?
2. How much do you believe a faculty career fulfills goals such as working with people, helping others, and serving the community?

These next 12 items measure communal and agency perceptions of a given field/career. Items are adapted from Pohlmann, 2001.

Instructions: A career in _____ {topic/field of study] allows for the opportunity to:

The 5-point scale goes from 1 = Not at all to 5 = Very Much.

- a) Serve the community:
- b) Have power:
- c) Help others:
- d) Have achievements:
- e) Work with other people:
- f) Self-promote:
- g) Attend to others' needs:
- h) Get financial awards:
- i) Care for others:
- j) Have high status:
- k) Develop a connection with others:
- l) Get recognition:

Citation:

Pohlmann, K. (2001). Agency- and communion-orientation in life goals: Impacts on goal pursuit strategies and psychological well-being. In P. Schmuck & K. M. Sheldon (Eds), *Life goals and well-being: Towards a positive psychology of human striving* (pp 68–84). Gottingen, Germany: Hogrefe & Huber.

Diekman, A.B., Brown, E.R., Johnston, A.M., & Clark, E.K. (2010). Seeking congruity between goals and roles: A new look at why women opt out of science, technology, engineering, and mathematics careers. *Psychological Science, 21*, 1051-1057.

MALLEABILITY OF ROLE AND REWARD STRUCTURES

Idiosyncrasy credit refers to the credit a person has in a group that enables them to deviate from the group norms without sanction (Hollander, 1958; Estrada et al., 1995). Using a type of network analysis, each person in the group rates all other group members to determine their IC.

Survey Item Samples:

Scale was 1 (none) to 8 (extreme).

1. How much latitude would you give XX to be different from the group?
2. How seriously you would consider an idea proposed by xx?
3. How much latitude would the group give XX to be different from the group?
4. How seriously the group would consider an idea proposed by XX?

Citation:

Estrada M., Lee, F., & Brown, J. (1995). Who gets the credit? A study of idiosyncrasy credit. *Small Group Research, 26*, 56-76.

Hollander, E. P. (1958). Conformity, status, and idiosyncrasy credit. *Psychological Review, 65*, 117-127.

MICRO-/MACRO-AGGRESSIONS

Micro-aggressions are casual verbal or behaviors expressions that slight, or subtly denigrate a member of another group. Even among people who generally consider themselves fair minded and un-biased, micro-aggressions can emerge in subtle ways that have a far reaching impact. Unlike the overt behavior or policy of macro-aggressions, micro-processes are small and their subtle nature allows them to be easily overlooked as inconsequential. However, such aggressions accumulate, building up over time to create broader inequitable trends, such as, for example, women being less likely to advance in academia because their ideas are dismissed as less important or rigorous (Vailan, 2004). Moreover, micro-aggressions signal an exclusionary and chilly climate that is dismissive of anyone outside of the powerful and mainstream, isolating and devaluing underrepresented faculty (Sue, 2010).

Survey Item Samples:

Participants are asked to indicate how often they experience a particular microaggression on a 4-point Likert scale (0 = never, 1 = a little/rarely, 2 = sometimes/a moderate amount, 3 = often/frequently) or rate the extent to which they experienced a particular reaction to a microaggression (0 = not at all, 1 = a little, 2 = moderate level, 3 = high level).

Sample items include:

1. Other people deny that people of my race face extra obstacles when compared to Whites.
2. Other people assume that I am successful because of affirmative action, not because I earned my accomplishments.
3. I feel invisible because of my race.
4. I am ignored in school or work environments because of my race.
5. My contributions are dismissed or devalued because of my racial background.

Citations:

Sue, D. W. (2010). *Microaggressions in everyday life: Race, gender, and sexual orientation*. Hoboken, N.J.: John Wiley & Sons Incorporated.

Torres-Harding S. R., Andrade A. R., Romero Diaz C. E. (2012). The Racial Microaggressions Scale (RMAS): A new scale to measure experiences of racial microaggressions in people of color. *Cultural Diversity & Ethnic Minority Psychology, 18*, 153–164.

Valian V. (2004). Beyond gender schemas: Improving the advancement of women in academia, *NWSA Journal* 16, 207.

MICRO-/MACRO-AFFIRMATIONS

The micro-affirmation measure is currently being administered with faculty to assess their perceptions of the campus climate (Estrada et al., unpublished). This measure, in a modified version, was previously validated with university students and broke into two factors.

Survey Item Samples:

Micro-Affirmation Measure

Micro-affirmations -- Small acts, which may be hard-to-see, which occur wherever people wish to help others to succeed.

Take a few minutes to think about the concept of micro-affirmations, especially as you experience them in your workplace. With this in mind, please estimate how often you have experienced the following micro-affirmations over the past month using the following scale.

0	1	2	3	4	5	6
Never		Weekly		Daily		Always

1. Affirmations that you can complete tenure.
2. Affirmations that you belong at the institution.
3. Affirmations that you are an engineering faculty member.
4. Affirmations that people of your gender identity are important contributors to advancing knowledge.
5. Affirmations that people of your ethnicity are important contributors to advancing knowledge.
6. Affirmations that people of your culture are important contributors to advancing knowledge.
7. Affirmations that people of your sexual orientation are important contributors to advancing knowledge.

MICRO-/MACRO-INCLUSIONS

Micro-/macro-inclusions measure a person's sense of obligation and competency in making others feel included – in big or small ways. This work is based in research by Walton & Cohen (2007).

Survey Item Samples:

Participants are asked to complete statements on a 1 (not at all true) to 5 (completely true) scale, with the target group and context specified. For example:

1. It is part of my duty to get others to accept women faculty at University Name
2. It is a mystery to me how to help women faculty at University Name.
3. I want to help faculty of color fit in well at University Name.

Citation:

Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92(1), 82–96.

MODERN SEXISM

Modern sexism is a subtle negative attitude about women's experiences. In part, modern sexism reflects attitudes and beliefs that a respondent might think are actually favorable—such as wanting to protect or help women—without realizing such attitudes are sexist and patronizing. The purpose of the modern sexism scale is to measure several facets of how sexism manifests, all in a non-obvious fashion (Swim, Aikin, Hall, & Hunter, 1995).

Survey Item Samples:

Participants respond on scales anchored from 1 (Strongly Disagree) to 7 (Strongly Agree) regarding items such as:

1. Society has reached the point where women and men have equal opportunities for achievement.
2. It is rare to see women treated in a sexist manner on television.
3. It is easy to understand the anger of women's groups in America.

Citations:

Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology*, 68(2), 199-214.

NESTED GROUP COMMITMENTS

Ongoing research from West Virginia University ADVANCE reveals a significant connection between change efforts at the department-level and perceptions of equity at the university-level. These results are inline with the predictions from Social Commitments Theory (Lawler et al. 2009). However, these processes have not been measured explicitly with scales from Social Commitments Theory. The survey items included below are suggestions for explicit measurement of the processes outlined in Social Commitments Theory.

Survey Item Samples:

Positive Emotion

“Think about your feelings toward your [department or university]. How would you describe your FEELINGS on each of the following?”

- *Pleasure/satisfaction index:*
 - pleased/displeased
 - happy/unhappy
 - satisfied/not satisfied
 - contented/discontented
 - joyful/not joyful.
- *Interest/excitement index:*
 - enthusiastic/unenthusiastic
 - excited/bored
 - energetic/tired
 - motivated/unmotivated
 - interested/not interested.

Relational Cohesion

All are Likert scale items anchored by the bipolar adjectives listed.

“Think about the relationship you and your [department or university] have. How would you describe the RELATIONSHIP on each of the following?”

- cooperative/conflictual
- integrating/fragmenting
- divisive/ cohesive
- team oriented/self-oriented

Commitment

All are Likert scale items anchored at Strongly Disagree and Strongly Agree.

University commitment

- I speak highly of [university name] to my friends.
- I don't care about the fate of [university name] in which I work. (reverse-coded)
- I am proud to tell others I am a faculty member at [university name].
- I feel very little loyalty to [university name]. (reverse-coded)

Department commitment

- I speak highly of my department to my friends.
- I don't care about the fate of the department in which I work. (reverse-coded)
- I am proud to tell others I am a faculty member in this department.
- I feel very little loyalty to this department. (reverse-coded)

Job Satisfaction

All are Likert scale items anchored at Strongly Disagree and Strongly Agree.

- I am contented with my job itself.
- I like my current job.
- I often think my job is very good.
- I find enjoyment in my job.
- I am losing interest in my job. (reverse-coded)

Moderators

All are Likert scale items anchored at Strongly Disagree and Strongly Agree.

Perceived organizational support

- My university really cares about me.
- My university is willing to help me when I need a special favor.
- My university does not care about my opinions. (reverse-coded)
- My university feels that anyone could perform my job as well as I do. (reverse-coded)

**Note that these questions can be tailored to academia-specific types of institutional support such as promotion and tenure policies, availability of mentoring, travel/research/teaching support, work/life supports, etc.

Perceived sense of shared responsibility

- My university and my department have similar goals.
- My university and my department both care about [specific goal/action item].
- My university and my department work well together.

**Note that this moderator has yet to be measured. These items are strictly speculative.

Citation:

Lawler, E. J., Thye, S. R. & Yoon, J. (2009). *Social Commitments in a Depersonalized World*. New York: Russell Sage Foundation.

PSYCHOLOGICAL NEED SATISFACTION

Psychological need satisfaction is made up of three constructs: *autonomy* is the experience of control, flexibility, and volition; *competence* is the experience of effectiveness and mastery; *relatedness* is the experience of connection, caring, and involvement with other people.

Survey Item Samples:

Participants are asked to rate “how true” each of 9 items on a 1 (not at all true) to 7 (very true) Likert scale. Sample items included:

1. I feel like I can make a lot of inputs into deciding how my job gets done (autonomy)
2. I do not feel very competent when I am at work (reverse scored, competence)
3. I get along with people at work (relatedness)

Measured using the Basic Need Satisfaction survey by Deci et al. (2001) and used with a faculty sample by Smith, Handley, et al (in press).

Citations:

Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need Satisfaction, Motivation, and Well-Being in the Work Organizations of a Former Eastern Bloc Country: A Cross-Cultural Study of Self-Determination. *Personality and Social Psychology Bulletin*, 27(8), 930–942.

Smith, J. L., Handley, I.M., Rushing, S., Belou, R., Kambich, L., Skewes, M. C., Shanahan, E.A., Honea, J., Intemann, K. (in press). Added Benefits: How Supporting Women Faculty in STEM Improves Everyone’s Job Satisfaction. *Journal of Diversity in Higher Education*.

SENSE OF BELONGING

People vary in the extent to which they feel they belong with, are included in, are relate with, an institution and its members. This construct relates to the above need of relatedness, and a sense of belonging relates to job satisfaction and retention.

Survey Item Samples:

Participants are asked to rate the extent to which they agree or disagree with each of 14 items on a 1 (strongly disagree) to 7 (strongly agree) Likert scale. Sample items include:

1. Other people understand more than I do about what is going on at [Institution].
2. I fit in well at [Institution].
3. People at [Institution] are a lot like me.

Citation:

Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92(1), 82–96.

STRUCTURAL INVENTORY OF CAMPUS CLIMATE

Campus climate is an important structural feature that impacts higher education institutions ability to recruit and retain diverse students and faculty (Hurtado, et.al, 2012). The measures below come from the Higher Education Research Institution Faculty Survey.

Survey Item Samples:

Please indicate the extent to which you agree or disagree with the following statements. This institution: (Strongly Agree, Somewhat Agree, Disagree Somewhat, Disagree Strongly)

Lacks strategic diversity goals and plans

Has a long-standing commitment to diversity

Has standard reporting procedures for incidents of harassment or discrimination

Please indicate how often at this institution you have: (Very Often, Often, Sometimes, Seldom, Never)

Assisted a student who had experienced discrimination

Counseled a student who had been sexually assaulted

Witnessed discrimination

Reported an incident of discrimination to a campus authority

Reported an incident of sexual harassment to a campus authority

Been discriminated against or excluded from activities because of my:

Race/ethnicity

Gender

Sexual orientation

Other identity

Heard insensitive or disparaging racial remarks

Heard insensitive or disparaging remarks about women

Heard insensitive or disparaging comments about LGBTQ individuals

How satisfied are you with the following aspects of your institution? (Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied)

Atmosphere for political differences

Atmosphere for religious differences

Atmosphere for differences in sexual orientation

Administrative response to:

Incidents of discrimination

Reports of sexual assault

Student concerns about exclusion or marginality

Please rate your satisfaction with your department
in each area:

(Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied)

- Collegiality among faculty
- Tolerance of different faculty opinions and beliefs
- Representation of women faculty
- Representation of racial/ethnic minority faculty
- Acceptance of differences in sexual orientation
- Student respect for my role in the classroom

Citations:

Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M. & Arellano, L. (2012). A model for Diverse Learning Environments: The scholarship of creating and assessing conditions for student success. *Higher Education: Handbook of Theory and Research*, 27, 41-122.

Eagan, K., Stolzenberg, E. B., Lozano, J. B., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). *Undergraduate teaching faculty: The 2013–2014 HERI faculty survey*. Higher Education Research Institute, UCLA.

VALUES

Performance, task engagement, and career plans are influenced by the values someone attaches to the task. Value-related beliefs include utility value, attainment value, and interest value. The perceived value of any task is influenced by how closely it relates to a person's identity, social roles, and both short-and long-term goals. When a faculty member for example says, "I can do this, but I don't want to" such a choice likely reflects the relative perceived (low) value of the task. Participants are asked to rate "how much" each of the items are on a 1 (not at all) to 7 (extremely) Likert scale. Sample items adapted for faculty include:

Attainment

1. [Being a tenured faculty member/Getting tenure] is important to me.
2. [Being a tenured faculty member] is an important part of who I am.

Interest

1. How interesting do you find...?
2. In general, I find working on [research projects...]
3. I enjoy being a [faculty member].
4. [Being a faculty member] is exciting to me.

Utility

1. I like [being a faculty member].
2. Getting tenure will be useful form me later in life.

Citations:

Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109-132.

Hulleman, C. S., Durik, A. M., Schweigert, S. A., & Harackiewicz, J. M. (2008). Task values, achievement goals, and interest: An integrative analysis. *Journal of Educational Psychology*, 100, 398-416.

WORK/LIFE POLICY INVENTORY

Work/life satisfaction policies are seen as key to recruiting, retaining, and advancing high quality faculty. Tower and Dilks (2015) ranked two categories of work/life policy. First, *new parent policies* are those aimed at faculty members who are new parents or guardians (e.g. parental leave, adoption leave, availability of adoption subsidies, extension of the tenure clock for birth mothers, lactation). Second, *family support policies* focus on provisions for dependents, spouses/partners and elders (e.g. availability of childcare and eldercare, tuition remission, dual-career supports).

Survey Item Samples:

Policy Rating Key for Sampled Work-Life Policies (Tower and Dilks 2015; Table 2)

Policy	Rating System	Score Definition
<i>Parental Leave</i> ¹	0	FMLA
	1	FMLA & accrued sick/disability payment, and/or pay dependent on years of service
	2	Four weeks paid leave; or Partial pay
	3	6 - 8 weeks paid leave
	4	Modified duties individually negotiated or a single course release
	5	6 – 8 week paid leave and teaching release for one semester
<i>Adoption Leave</i>	0	Different leave policies from biological parents
	1	Same leave policies as biological parents
<i>Adoption Subsidy</i>	0	No cash benefit to offset adoption costs
	1	Cash benefit to offset adoption costs
<i>Tenure Clock Extension</i> ²	0	Less than one year/no policy
	1	One year special circumstances (no mention of parenting)
	2	One year upon request (parenting mentioned)
	3	One year guaranteed if one follows rules

<i>Lactation</i>	4	One year automatically
	0	AHCA only - ability to express milk when needed
	1	One lactation room at university
	2	List of rooms (not necessarily dedicated lactation rooms, but locations where pumping maybe possible; e.g., reserving a conference room)
	3	State-of-the-art accessible lactation rooms, as defined by DHHS*
<i>Childcare Options</i>	0	No direct affiliation with child care centers
	1	Off campus affiliations and referrals, some financial aid available
	2	No infant care at on-campus Center
	3	Off and on campus affiliation and referrals or more than one on-campus Center
	4	Guaranteed spot at on-campus facility
<i>Subsidized Childcare</i>	0	No
	1	Yes
<i>Emergency or Backup Childcare</i>	0	No
	1	Yes
<i>Childcare Grants for Travel</i>	0	No
	1	Yes
<i>Eldercare Options</i>	0	Nothing available
	1	Referral, leave policies and workplace flexibility; On-site elder-care fair; Long-term care insurance and flexible spending accounts
	2	Elder care in home assessment or assisted living assessment
	3	Geriatric care manager evaluates needs and identifies and coordinates resources; Access to back-up elder care for unexpected event; Care Center on-campus
<i>Emergency/Backup Eldercare</i>	0	No
	1	Yes

Tuition Remission³

0	No support
1	Partial bachelor tuition, less than 50%
2	Partial bachelor tuition, 50 to 99%
3	Full tuition

Dual Career Supports⁴

0	No supports
1	Job search assistance for non-academic job
2	Offer full-time non-tenure track appointment (visiting)
3	Create tenure-track position; Job search assistance (academic & community) with no time limit

Notes:

¹ These policies are rated three times for their applicability to a mother, father and second parent.

² This policy is rated only for its applicability to birth mothers.

³ These policies are rated three times for their applicability to a child, legal spouse, or domestic partner.

⁴ These policies are rated twice for their applicability to a spouse or domestic partner.

Citation:

Tower, L. & Dilks, L. (2015). Work/Life Satisfaction Policy in ADVANCE Universities: Assessing Levels of Flexibility. *Journal of Diversity in Higher Education*, 8(3), 157-174.

WORK VALUES

Individuals seek jobs for different reasons. When considering what jobs to apply to, for example, people think about what is important to them and what they look for in their work. Work values are useful to understand “fit” within a specific job (e.g., a faculty position) especially when considered with the Job Affordance Opportunity items (see goal congruity theory above). Different institutions or departments may be more or less effective at retaining individuals who value different goals to the extent that they can provide opportunities for faculty to fulfill those goals.

Survey Item Samples:

Instructions: Different people may look for different things in their work. Below is a list of some of these things. Please read each one, then indicate how important these things are for you (not important, a little important, pretty important, very important)

Extrinsic Rewards

1. A job where the chances for advancement and promotion are good
2. A job which provides you with a chance to earn a good deal of money
3. A job that most people look up to and respect
4. A job that has high status and prestige

Security

1. A job that offers a reasonably predictable, secure future
2. A job which allows you to establish roots in a community and not have to move from place to place

Influence

1. A job where you get a chance to participate in decision making
2. A job where most problems are quite difficult and challenging

Intrinsic Rewards

1. A job which is interesting to do
2. A job which uses your skills and abilities—lets you do things you can do best
3. A job where you can see the results of what you do
4. A job where the skills you learn will not go out of date
5. A job where you can learn new things, learn new skills
6. A job where you have the chance to be creative

Altruistic rewards

1. A job that gives you an opportunity to be directly helpful to others
2. A job that is worthwhile to society

Social rewards

1. A job that gives you a chance to make friends
2. A job that permits contact with a lot of people

Leisure

1. A job which leaves a lot of time for other things in your life
2. A job which leave you mostly free of supervision by others
3. A job where you have more than two weeks' vacation
4. A job with an easy pace that lets you work slowly

Communal Prosocial

1. A job that allows you to give back to your community
2. A job that gives you an opportunity to be directly helpful to others
3. A job that is worthwhile to society

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FUTURE DIRECTIONS

The group outlined several activities to consider in the future:

- Publish this actionable list of flexible, context-specific theories that inspire institutions to adopt them with an accessible clearinghouse for recommendations, validated measures, and data.
- Measurement studies to test measures with faculty and collect data. The goal is to identify measures that predict faculty success.
- Collaborate on writing a paper and/or grant on mechanisms and test why they work.
- Create or find partners to host this list on a website.

REFERENCES

- Acker, J. (1990). Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations. *Gender & Society, 4*, 139-158.
- Acker, J. (2012). Gendered Organizations and Intersectionality: Problems and Possibilities. *Equality, Diversity and Inclusion: An International Journal, 31*(3), 214–224.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Two Work Settings. *Journal of Applied Social Psychology, 34*(10), 2045–2068.
- Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology, 52*(1), 1-26.
- Barron, K. E., & Hulleman, C. S. (2015). Expectancy-value-cost model of motivation. In J. S. Eccles & K. Salmelo-Aro (Eds.), *International Encyclopedia of Social and Behavioral Sciences: Motivational Psychology* (2nd Ed., pp. 261–271). New York, NY: Elsevier.
- Battle A., & Wigfield, A. (2003). College women’s value orientations toward family, career, and graduate school. *Journal of Vocational Behavior, 62*, 56-75.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497-529.
- Brown, E. R., Thoman, D. B., Smith, J. L., & Diekmann, A. B. (2015). Closing the Communal Gap: The Importance of Communal Affordances in Science Career Motivation. *Journal of Applied Social Psychology, 45*(12), 662-673.
- Colquitt, J.A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*, 386-400.
- Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry, 11*(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2012). Motivation, Personality, and Development Within Embedded Social Contexts: An Overview of Self-Determination Theory. In R. M. Ryan (Ed.), *Oxford handbook of human motivation* (pp. 85-107). Oxford, UK: Oxford University Press.
- Diekmann, A.B., Brown, E.R., Johnston, A.M., & Clark, E.K. (2010). Seeking congruity between goals and roles: A new look at why women opt out of science, technology, engineering, and mathematics careers. *Psychological Science, 21*, 1051-1057.
- Diekmann, A.B., Steinberg, M., Brown, E.R., Belanger, A.L., & Clark, E.K. (2017). A goal congruity model of role entry, engagement, and exit: understanding communal goal processes in stem gender gaps. *Personality and Social Psychology Review, 21*, 142-175.
- Dobbin, F. & Kalev, A. (2016). Why Diversity Programs Fail. *Harvard Business Review, 94*(7), 52–60.
- Eagan, K., Stolzenberg, E. B., Lozano, J. B., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). *Undergraduate teaching faculty: The 2013–2014 HERI faculty survey*. Higher Education Research Institute, UCLA.
- Eagly, A. H. (1997). Sex differences in social behavior: Comparing social role theory and evolutionary psychology. *American Psychologist, 50*, 1380-1383.
- Eagly, A. H. and Diekmann, A. B. (2005) *What is the Problem? Prejudice as an Attitude-in-Context*. In J. F. Dovidio, P. Glick and L. A. Rudman (Eds.), *On the Nature of Prejudice: Fifty Years after Allport*. Oxford, UK: Blackwell Publishing Ltd.

- Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Erlbaum.
- Eccles-Parsons, J. (1983). Expectancies, values, and academic behaviors. In J.T. Spence (Ed.). *Achievement and achievement motivations* (pp. 75-121). San Francisco, CA: W. H. Freeman & Co.
- Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109-132.
- Estrada M., Lee, F., & Brown, J. (1995). Who gets the credit? A study of idiosyncrasy credit. *Small Group Research*, 26, 56-76.
- Estrada, M., Eroy-Reveles, A., & Matsui, J. (under review). The influence of affirming kindness and community on broadening participation in STEM career pathways. *Social Issues Policy Review*.
- Estrada, M., Eroy-Reveles, A., Ben-Zeev, A., Baird, T. Jr., Domingo, C., Gómez, CA., Bibbins-Domingo, K., Parangan-Smith, A., & Márquez-Magaña, L. (in press). Enabling full representation in science: The San Francisco BUILD Project's agents of change affirm science skills, belonging and community. *BMC Proceedings*.
- Estrada, M., Hernandez, P., & Schultz, W. (in press). A longitudinal study of how quality mentorship and research experience integrate underrepresented minorities into STEM careers. *CBE-Life Science Education*.
- Estrada, M., Woodcock, A., Hernandez, P. R., & Schultz, P. W. (2011). Toward a model of social influence that explains minority student integration into the scientific community. *Journal of Educational Psychology*, 203, 206-222.
- Flake, J. K., Barron, K. E., Hulleman, C., McCoach, B. D., & Welsh, M. E. (2015). Measuring cost: The forgotten component of expectancy-value theory. *Contemporary Educational Psychology*, 41, 232-244.
- Granovetter, M. (1983). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), 1360-80.
- Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review*, 109(1), 3-25.
- Heilman, M. E., Wallen, A. S., Fuchs, D. & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology*, 89, 416-427.
- Hicks, D. (2011). *Dignity: The essential role it plays in resolving conflict*. New Haven, CT: Yale University Press.
- Hollander, E. P. (1958). Conformity, status, and idiosyncrasy credit. *Psychological Review*, 65, 117-127.
- Hulleman, C. S., Durik, A. M., Schweigert, S. A., & Harackiewicz, J. M. (2008). Task values, achievement goals, and interest: An integrative analysis. *Journal of Educational Psychology*, 100, 398-416.
- Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M. & Arellano, L. (2012). A model for Diverse Learning Environments: The scholarship of creating and assessing conditions for student success. *Higher Education: Handbook of Theory and Research*, 27, 41-122
- Johnson, M.K. (2002) Social origins, adolescent experiences, and work value trajectories during the transition to adulthood. *Social Forces*, 80, 1307-1341

- Kelly, E. L., Ammons, S., Chermack, K., Moen, P. (2010). Gendered Challenge, Gendered Response: Confronting the Ideal Worker Norm within a White-Collar Organization. *Gender & Society*, 24, 281–303.
- Kelman, HC. (1956). Compliance, identification, and internalization: A theoretical and experimental approach to the study of social influence. Unpublished manuscript.
- Kelman, HC. (2006). Interests, relationships, identities: Three central issues for individuals and groups in negotiating their social environment. *Annual Review of Psychology*, 57, 1–26.
- Keltner D, Lerner JS. (2010). Emotion. In *The Handbook of Social Psychology*, ed. DT Gilbert, ST Fiske, G Lindzey, pp. 317-52. New York, NY: Wiley.
- Latimer, M., J. K. Jackson, L. M. Dilks, J. Nolan, and L. Tower. (2014) Organizational Change and Gender Equity in Academia: Using Dialogical Change to Promote Positive Departmental Climates. *Advances in Gender Research*, 19, 333-353.
- Latimer, M., Jackson, K., Dilks, L., Nolan, J., & Tower, L. (2014). *Organizational change and gender equity in academia: Using dialogical change to promote positive departmental climates*. In *Gender Transformation in the Academy* (Vol. 19, pp. 333–353): Emerald Group Publishing Limited.
- Lawler, E. J. and Yoon, J. (1996). Commitment in Exchange Relations: Test of a Theory of Relational Cohesion. *American Sociological Review*, 61, 89-108.
- Lawler, E. J., Thye, S. R. & Yoon, J. (2009). *Social Commitments in a Depersonalized World*. New York, NY: Russell Sage Foundation.
- Lawler, E. J., Thye, S. R. & Yoon, J. (2016). The Problem of Social Order in Nested Group Structures. Pp. 149-166 in *Handbook of Contemporary Sociological Theory*, edited by S. Abrutyn. Cham, Switzerland: Springer International Publishing.
- Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: implications for African American students' college experience. *Journal of Personality and Social Psychology*, 83(4), 896-918.
- Misra, J., Hickes Lundquist, J., Holmes, E., & Agiomavritis, S. (2011). The ivory ceiling of service work. *Academe*, 97(1), 22.
- Morimoto, S. A. & Yang, S. (2013). What Friendship Entails: An Empirical Analysis of Graduate Students' Social Networks. *Sociological Spectrum*, 33, 1-13.
- Morimoto, S. A. & Zajicek, A. M. (2014). Dismantling the Master's House: Feminist Reflections on Institutional Transformation. *Critical Sociology*, 40(1), 135-150.
- Nolan, J., Jackson, J.K., Latimer, M., Tower L., and Borres, A. (2012). A dialogical change process for strategic planning to diversify academic departments. *Getting to the Heart of it All: Connecting Gender Research, WIE Programs, Faculty & Corporate Partners WEPAN Conference Proceedings*. Retrieved from https://www.wepan.org/resource/resmgr/Conference.../2012_Conference_Program.pdf
- Nosek, B. A., & Riskind, R. G. (2012). Policy implications of implicit social cognition. *Social Issues and Policy Review*, 6, 112-145.
- O'Meara, K.A. (2002). Uncovering the values in faculty evaluation of service as scholarship. *The Review of Higher Education*, 26(1), 57-80.
- Perez, T., Cromley, J. G., & Kaplan, A. (2014). The role of identity development, values, and costs in college STEM retention. *Journal of Educational Psychology*, 106(1), 315-329.
- Perry, S. P., Murphy, M. C., & Dovidio, J. F. (2015). Modern prejudice: Subtle, but unconscious? The role of Bias Awareness in Whites' perceptions of personal and others' biases. *Journal of Experimental Social Psychology*, 61, 64-78.

- Pohlmann, K. (2001). Agency- and communion-orientation in life goals: Impacts on goal pursuit strategies and psychological well-being. In P. Schmuck & K. M. Sheldon (Eds), *Life goals and well-being: Towards a positive psychology of human striving* (pp 68–84). Gottingen, Germany: Hogrefe & Huber.
- Raggins, B. R. & Cotton, J. L. (1999). Mentor Functions and Outcomes: A Comparison of Men and Women in Formal and Informal Mentoring Relationships. *Journal of Applied Psychology, 84*(4), 529.
- Smith, J. L., Handley, I.M., Rushing, S., Belou, R., Kambich, L., Skewes, M. C., Shanahan, E.A., Honea, J., Intemann, K. (in press). Added Benefits: How Supporting Women Faculty in STEM Improves Everyone’s Job Satisfaction. *Journal of Diversity in Higher Education*.
- Smith, J. L., Sansone, C., & White, P. H. (2007). The stereotyped task engagement process: The role of interest and achievement motivation. *Journal of Educational Psychology, 99*(1), 99-114.
- Stainback K., Kleiner, S. & Skaggs, S. (2015). Women in Power: Undoing or Redoing the Gendered Organization? *Gender & Society, 3*(1), 109-135.
- Sue, D. W. (2010). *Microaggressions in everyday life: Race, gender, and sexual orientation*. Hoboken, N.J.: John Wiley & Sons Incorporated.
- Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology, 68*(2), 199-214.
- Thoman, D.B., Brown, E.R., Mason, A.Z., Harmsen, A.G., & Smith, J.L. (2015). The role of altruistic values in motivating underrepresented minority students for biomedicine. *BioScience, 65*, 183-188
- Thye, S. R. & Yoon, J. (2015). Building Organizational Commitment in Nested Groups: Theory and New Evidence from South Korea. *Sociological Focus, 48*, 249-270.
- Torres-Harding S. R., Andrade A. R., Romero Diaz C. E. (2012). The Racial Microaggressions Scale (RMAS): A new scale to measure experiences of racial microaggressions in people of color. *Cultural Diversity & Ethnic Minority Psychology, 18*, 153–164.
- Tower, L. & Dilks, L. (2015). Work/Life Satisfaction Policy in ADVANCE Universities: Assessing Levels of Flexibility. *Journal of Diversity in Higher Education, 8*(3), 157-174.
- Valian, V. (2004). Beyond Gender Schemas: Improving the Advancement of Women in Academia. *NWSA Journal, 16*(1), 207-220.
- Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology, 92*(1), 82–96.
- Watanabe, M., Olson, K., & Falci, C. (2015). Social Isolation, Survey Nonresponse, and Nonresponse Bias: An Empirical Evaluation Using Social Network Data within an Organization. *Social Science Research, 63*, 324-338.
- Williams, J. (1999). *Unbending Gender: Why Family and Work Conflict and What To Do About It*. New York, NY: Oxford University Press.

AGENDA

DAY 1: SUNDAY, AUGUST 6, 2017

	ACTIVITY	SPEAKER
9:00 AM	Welcome and Introduction	Jessi Smith
	Presentations and Discussions: Theories, Constructs, Mechanisms and Measures	All participants
5:30 PM	Closing	Jessi Smith

DAY 2: MONDAY, AUGUST 7, 2017

	ACTIVITY	SPEAKER
9:00 AM	Introduction	Jim Nolan
	Visioning, Prioritizing, and Planning Facilitation	All participants Facilitated by Jessi/Jim
5:00 PM	Closing	Jessi Smith