

**BE***works*

Unleashing The Power  
Of Human Connection



“Every generation is called to take on challenges that threaten the underpinnings of society.

Addressing the crisis of loneliness and isolation is one of our generation’s greatest challenges.”

DR. VIVEK MURTHY,  
US Surgeon General

Loneliness is the negative feeling we experience when our needs for rewarding contact or relationships are not met.

When we feel lonely, there is a mismatch between the quality and/or quantity of interactions we have versus those that we desire.

VanderWeele, T. J., Hawkey, L. C., & Cacioppo, J. T. 2012. On the reciprocal association between loneliness and subjective well-being. *American Journal of Epidemiology*, 176(9), 777-784.

# The prevalence of loneliness is significant

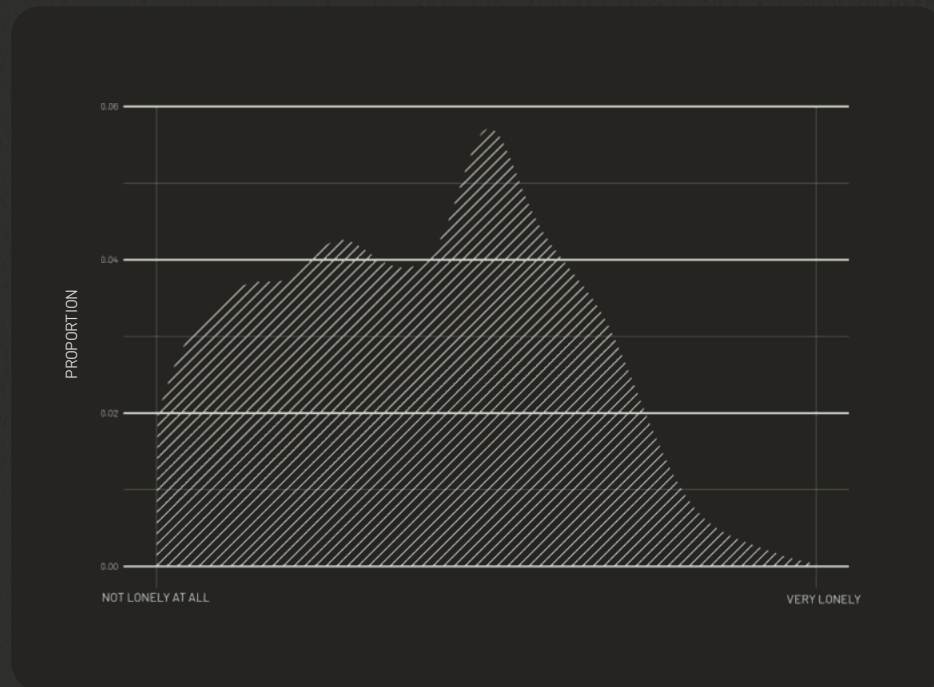
55.8% of respondents indicated moderate to high levels of loneliness\*:

- I lack companionship.
- There is no one I can turn to.
- I am not an outgoing person.
- I feel left out.
- I feel isolated from others.
- I cannot find companionship when I want it.
- I am unhappy being so withdrawn.
- People are around me but not with me.

\*Comparison conducted: Moderate levels of loneliness is defined as those who scored at least 20 out of 40 on the ULS-8 Loneliness Scale, and High levels of loneliness is defined as those who scored at least 30 out of 40. Note that 12.3% of respondents indicated high levels of loneliness.

ULS-8 Loneliness Scale:

Xu, S., Qiu, D., Hahne, J., Zhao, M., & Hu, M. (2018). Psychometric properties of the short-form UCLA Loneliness Scale (ULS-8) among Chinese adolescents. *Medicine*, 97(38).



Loneliness can have severe negative effects on individuals, families & society as a whole.

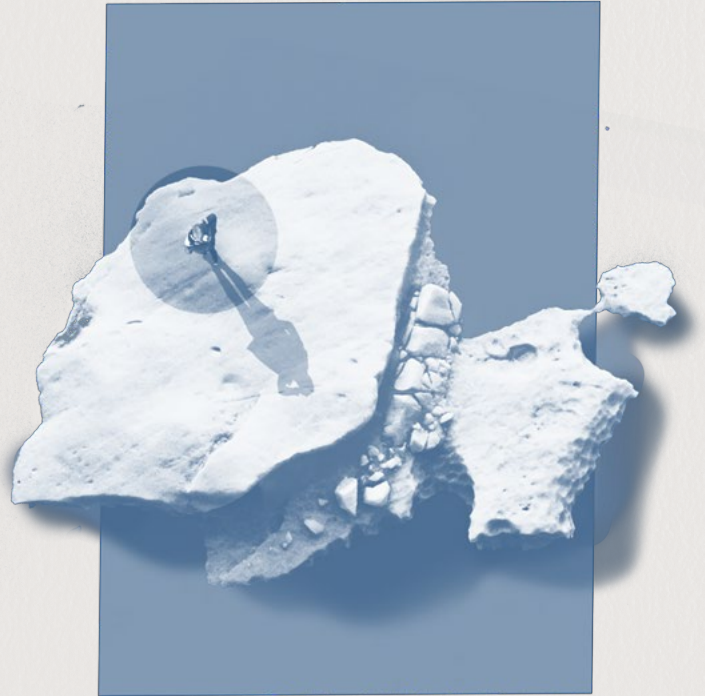
Among the various roles we assume in life, one of the most pivotal is our role as **employees**.



# Our goal

BEworks is committed to providing evidence for what we see and feel in our workplaces.

Our goal is to quantify the psychological effect of loneliness and disconnection, and to generate empirical solutions for deeper connection, workplace productivity, and employee retention. We aim to partner with companies and organizations to support their initiatives and pilot programs for improving the employee experience and way of working.



We set out to explore how the negative effects of loneliness manifest in the world of work.

Put simply, what are the costs of loneliness to businesses?

# The questions we're exploring



How is loneliness impacting the world of work?

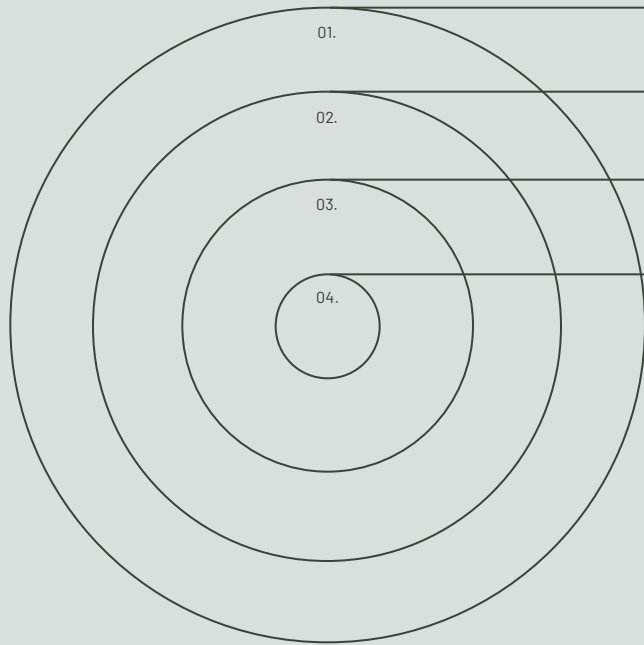


Should the world of work foster greater employee **connectedness**? If so, how can this be done effectively?



How might the nature of management need to change in light of the crisis of loneliness?





FUNCTIONAL CONNECTIONS

Communications to get work done

SOCIAL CONNECTIONS

Having a mix of shallow and deep socially fun experiences

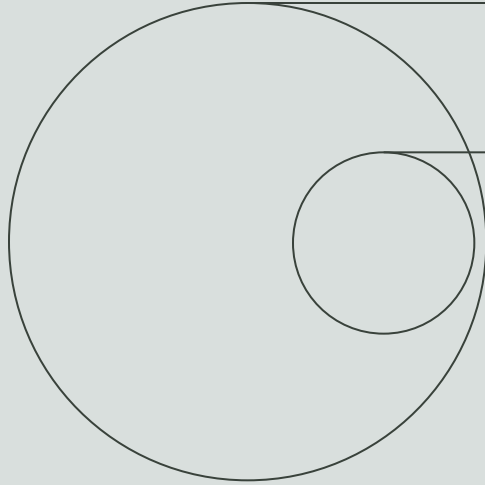
INTELLECTUAL CONNECTIONS

Connecting on interesting and exciting topics

EMOTIONAL CONNECTIONS

Feeling emotionally supported (empathy and care)

# 4 dimensions of connection



CONNECTEDNESS AT THE WORKPLACE

Connections between employee and their peers,  
their managers, their leaders, the organization

EMPLOYEE ENGAGEMENT

Connections between employee and the organization

Connectedness  
includes employee  
engagement

# STUDY PARAMETERS

Online survey with a large and broad sample across industry and departments, that explored the associations between (1) nature of people's work/personal environments (2) types and levels of human connection, (3) various psychological and performance outcomes (e.g., loneliness, resilience, creativity, motivation, etc.).



n = 4,000 (US - 2,500; CAN - 1,500)

18 - 65 years old

Working full time in an office related job

# Overview

## THE PROBLEM

55% of the respondents reported feeling lonely. Those who are lonely are more likely to leave their workplace. High employee turnover is known to affect a business' bottom line.

## HOW CAN WE SOLVE IT?

Increasing employee connectedness is a promising solution. Increased connectedness is not created by simply increasing physical proximity between employees (e.g., return to office mandates). But rather, it is created through encouraging and enabling a process for creativity and feelings of greater purpose.

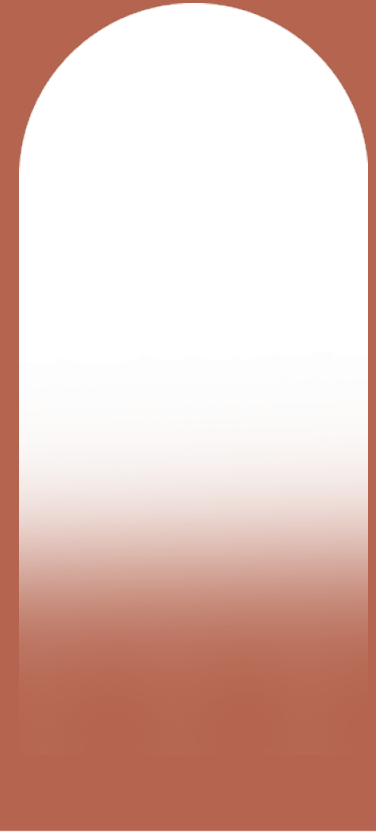
## THE NEXT STEP ●

What would a better system for connectedness and creativity look like at your organization?



# Highlights

WHAT WE'VE LEARNED SO FAR



Our findings were generalizable across age and tenure

And are represented across industries, departments, role types, and organization size

See Appendix for more details about the sample.

\*All subsequent analyses partialled out any effects of age and tenure.



Loneliness exists within the workplace and is associated with poor retention and employee well-being.

# Those who are most lonely tend to have more diffused social networks

- Fewer peers in their own unit
- More managers/supervisors that they report to
- More people in the organization that are outside of their unit
- An overall larger personal social network, but yet have *less* interactions with neighbours, friends, family, and spouses
- More likely to feel affected by how they feel *outside of work*, and more likely to have feelings *at work* affect their personal lives

We did not observe any other trendwise differences by demographics or work role between the less lonely and very lonely.

Comparison conducted:  
Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom three quartiles, using Wilcoxon Test

Statistical significances:  $W's = 302402 - 940760$ ,  $p's < 0.034$





# Lonelier employees are more likely to leave

THIS CAN HAVE OVER \$7M - \$33M IMPACT FOR A BUSINESS\*

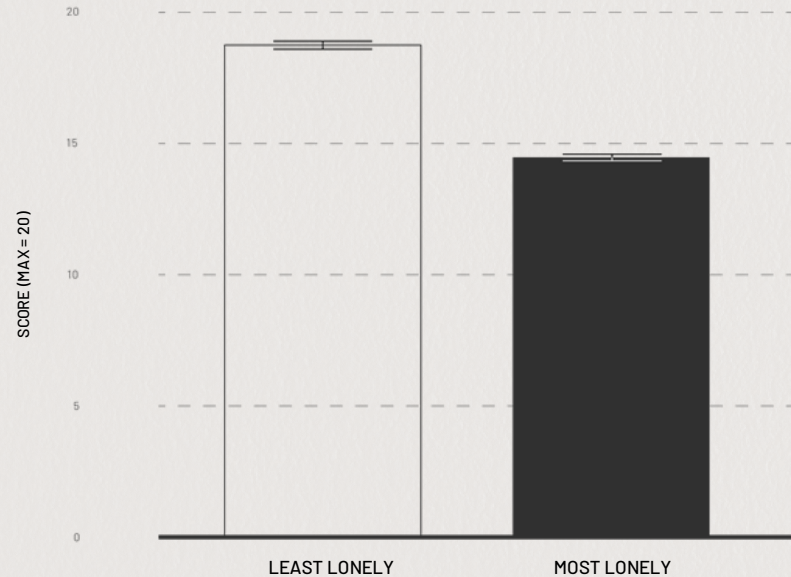
\*Based on our sample, this calculation assumes an average organization size of 575 employees, with an average salary of \$101,265, 12% of the workforce (the absolute loneliest) are likely to leave or 56% of the workforce (moderate to high loneliness), and that it costs the equivalent of an employee's salary to replace them

<https://www.peoplekeep.com/blog/employee-retention-the-real-cost-of-losing-an-employee>

\*\*Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom three quartiles, using Wilcoxon Test

Statistical significance:  $p < 0.01$

EMPLOYEE LIKELIHOOD TO STAY AT THE COMPANY



- I often seriously consider leaving my current job. (R)
- I have started to look for other jobs. (R)
- I would be very happy to spend the rest of my career with this organization.
- Right now, staying with my organization is a matter of necessity. (R)
- I would be happy to spend the next 12 months with this organization.

# Feeling lonely is associated with a number of other negative employee well-being and performance indicators

Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom quartile, using Wilcoxon Test; p's < 0.001

See Appendix for more details.



How might organizations and managers begin addressing the challenge of loneliness in their workforce?



Cultivating connectedness  
at work could be a powerful  
solution to combat loneliness.



## HOW WE MEASURED CONNECTEDNESS:

# Functional Connections

### COMMUNICATIONS TO GET WORK DONE

How often do you... (5 point Likert scale: 1= Less than once per week, 2 = Once or twice per week, 3= Most days in a week, 4 = Every day, 5 = Several times a day)

### FUNCTIONAL CONNECTIONS:

- Message or email others to get work done?
- Attend meetings to discuss work-related matters?
- Take time to help others who have heavy work loads?
- Go out of your way to help new employees or those who have been absent?
- Rely on others to help you with a specific task?
- Depend on your leader to handle important issues on your behalf?
- Rely on your leader to represent your work accurately to others?
- Rely on your co-workers to represent your work accurately to others?
- Receive updates from your company about important changes and developments?

## HOW WE MEASURED CONNECTEDNESS:

# Intellectual Connections

### CLICKING ON INTERESTING AND EXCITING TOPICS

How often do you... (5 point Likert scale: 1= Less than once per week, 2 = Once or twice per week, 3 = Most days in a week, 4 = Every day, 5 = Several times a day)

### INTELLECTUAL CONNECTIONS:

- Actively participate in brainstorming sessions?
- Engage in casual conversation about interesting topics with co-workers?
- Share articles or websites about topics you're interested in?
- Respond to articles or websites about topics that your co-workers send to you?
- See leaders take an interest in your interests?

## HOW WE MEASURED CONNECTEDNESS:

# Social Connections

HAVING A MIX OF SHALLOW AND  
DEEP SOCIALLY FUN EXPERIENCES

How often do you... (5 point Likert scale: 1= Less than once per week, 2 = Once or twice per week, 3 = Most days in a week, 4 = Every day, 5 = Several times a day)

### SOCIAL CONNECTIONS:

- Participate in social gatherings during working hours?
- Participate in social gatherings after working hours?
- Engage in small-talk with others?
- See leaders take a personal interest in your life?
- See leaders engage in social activities?
- Receive praise from your leader for doing a good job?
- Receive praise from your co-workers for doing a good job?

## HOW WE MEASURED CONNECTEDNESS:

# Emotional Connections

FEELING EMOTIONALLY SUPPORTED  
(EMPATHY AND CARE)

How often do you... (5 point Likert scale: 1= Less than once per week, 2 = Once or twice per week, 3 = Most days in a week, 4 = Every day, 5 = Several times a day)

### EMOTIONAL CONNECTIONS:

- Receive emotionally supportive messages from co-workers?
- Receive emotionally supportive messages from your leader?
- Send emotionally supportive messages to co-workers?
- Send emotionally supportive messages to your leader?
- Share your personal feelings with your leader?
- Hear about your leader's personal feelings?
- Depend on your leader to back you up in difficult situations?
- Confide in your leader about personal issues that are affecting your work?
- Feel that your leader encourages you to realize your full potential?



## Social connectedness

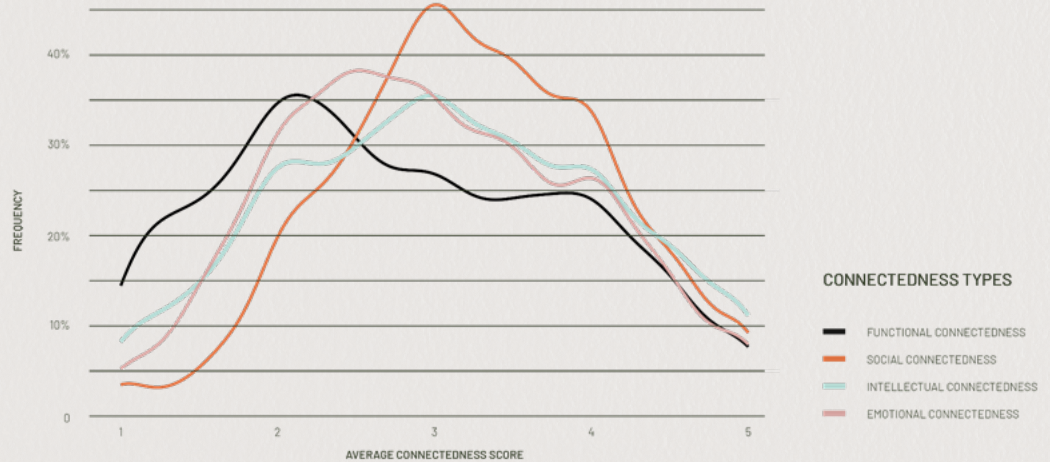
is currently most prevalent,  
leaving room for more

There is variability in how connected people are at work. Overall, social types of connection at workplaces tend to be more commonplace than the other types of connection.

This leaves room for more and better opportunities for greater functional, intellectual, and emotional types of connection.

This variability in connectedness at work is also reflected in connectedness in people's personal lives;  $r$ 's = 0.572- 0.67,  $p$ 's < 0.01

See Appendix for more details.





Nevertheless, people who are highly connected at work tend to exhibit behaviors for **all four types of connection**

The four types of connection are all significantly correlated correlated with each other\*.

**For the subsequent analyses, we therefore collapse across all types of connections at work into a single “connectedness score”.**

\*Statistical significances:  $r$ 's = 0.689 - 0.827,  $p$ 's < 0.001

Higher connectedness is tied to greater *employee motivation...*

Overall connectedness is positively correlated with different aspects of employee motivation\*:

- Desire to **do well** in core job responsibilities
- Desire to **go above and beyond**
- Feeling **optimistic** about job future
- Feeling pride and **purpose** in their work

\*Statistical significances:  $p$ 's < 0.01

\*\* "Going above and beyond" includes: (i) I take on extra responsibilities, (ii) I continually seek new challenges in my work, (iii) I work on keeping my work skills up-to-date.

## GOING ABOVE AND BEYOND

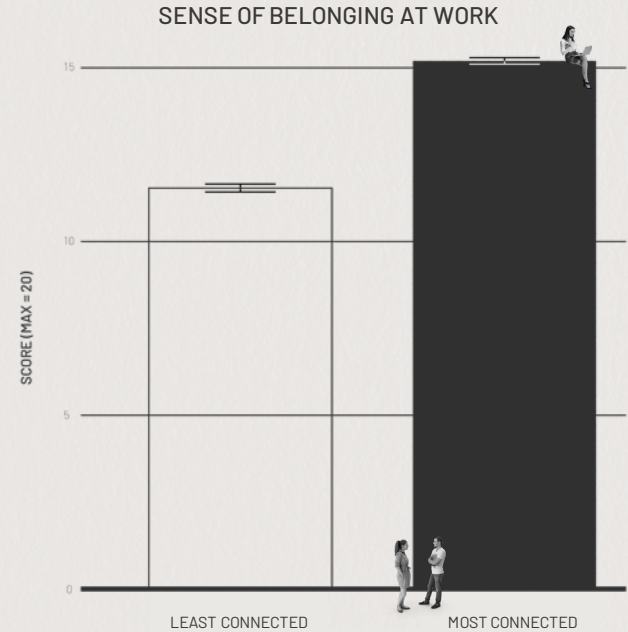


...as well as a *better work overall experience*, such as having a larger and tighter network...

Those who were most connected, also\*:

- Had a higher in **sense of belonging** at work
- Are more likely to **interact with people at all levels**, across their organization
- Are more likely to interact with people inside and outside their organization
- And have more people in these same groups
- Report more **diversity in experiences and beliefs** within these groups

\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test; W's = 102802 - 301126, p's < 0.001



\*\* *Sense of belonging* includes: (i) I do not feel a sense of belonging to my organization (R), (ii) In my work unit I have many common themes with my co-workers, (iii) I belong to a tight-knit group at work, (iv) I have at least one person at work I would call a close friend.

## FEELING STRESSED AT WORK



*...and feeling more satisfied.*

Those who were most connected, also\*:

- **Less frequently experienced stress** at work in the last 30 days
- **More frequently experienced content** at work in the last 30 days
- Felt greater **psychological safety**
- Feel that their work **fulfils their life purpose\*\***

\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test; W's = 200610- 4020306, p's < 0.02

\*\*Comparisons conducted: Correlations, r's = 0.248 - 0.426, p's < 0.01

# Being connected through creative processes is linked to reduced loneliness



Comparisons conducted: An exploratory factor analysis that extracted a factor where psychological variables such as psychological safety, belonging and cooperation loaded together; and another factor where creativity measures loaded together. Composite scores for each of the measures in these factors were put into mediation analysis where  $x$  = connectedness at work,  $y$  = loneliness.

Mediation analysis was also conducted for the reverse, where  $x$  = loneliness, and  $y$  = connectedness at work.  $p$ 's < 0.01.

See Appendix for details on other ways in which connectedness is correlated with other aspects of creativity.

“The creative process provides the opportunities for building connections by not only forging new relationships that may not otherwise exist but also increasing the strength of existing relationships.”

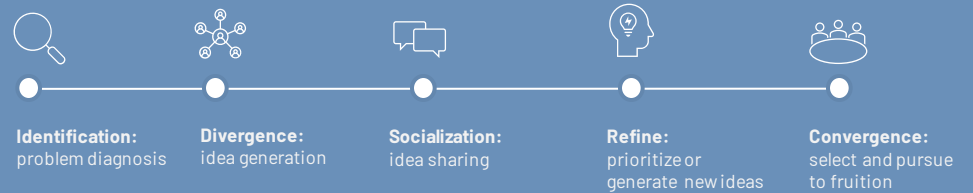
Goncalo, J. A., Katz, J. H., Vincent, L. C., Krause, V., & Yang, S. (2021). Creativity connects: How the creative process fosters social connection and combats loneliness at work. *Handbook of research on creativity and innovation*, 204.





Moving beyond the narrow focus of creativity as mere output, to **creativity as a process.** *What does this look like?*

Creativity is a long process that unfolds over time across many different stages.



Each stage of creativity affords an opportunity for connections between team members.

[1] Goncalo, J. A., Katz, J. H., Vincent, L. C., Krause, V., & Yang, S. (2021). Creativity connects: How the creative process fosters social connection and combats loneliness at work. *Handbook of research on creativity and innovation*, 204.

[2] Binnewies, C., Ohly, S., & Sonnentag, S. (2007). Taking personal initiative and communicating about ideas: What is important for the creative process and for idea creativity?. *European Journal of Work and Organizational Psychology*, 16(4), 432-455.

*Important Nuance:* Team level processes for enabling creativity are likely more effective than organizational level encouragement



This might be because team level processes are more specific and actionable than organizational supports

Items listed here are from the scales used to measure team vs. organizational level creativity.

See Appendix for full list of items used to measure different aspects of creativity, ranging from: the person's self-concept as a creative self, creative behaviors at work, team processes that enable creativity, organizational permissions to be creative, and creative performance



#### TEAM PROCESSES THAT ENABLE CREATIVITY:

- Communicate and exchange creative ideas with each other
- Complement and improve each other's creative ideas and problem solving
- Integrate a creative project at the team level effectively
- Co-operate and interact with each other
- Exchange creative knowledge without obstacle
- Arouse the members' creative enthusiasm through various means

VS.



#### ORGANIZATIONAL SUPPORT FOR CREATIVITY:

- Support new ideas
- Praise creativity
- Appreciate different opinions and perspectives
- Does not rely on tradition or conformity
- Encourage you to be open to new ideas and different perspectives
- Support autonomy and independent thought
- Allow you to be playful
- Encourages you to take risks
- Values creativity

Team level processes that enable creativity are linked to *many other benefits* to the organization and employee



Comparisons conducted: Correlations between team enablement for creative processes, and various employee outcome measures;  $r$ 's = 0.312 - 0.658,  $p$ 's < 0.01

“The focus for management for the last 50 years has been on operational excellence, which is all about optimizing systems. Conditions have obviously changed rapidly in the last decade or two, and the business environment is so much more volatile. So the idea of creativity, to be able to respond to unknown situations in ways that are generative, that create new kinds of solutions rather than just repeat solutions of the past, becomes more and more important.”

TIM BROWN,  
CHAIR OF IDEO

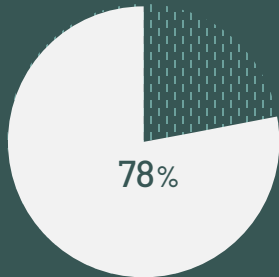


How might businesses introduce  
and foster creative processes  
and outlets for their teams?

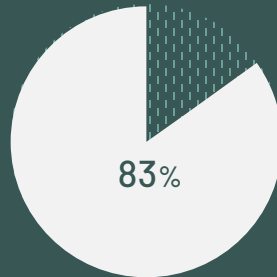
Creativity is an underlying driver to increase connectedness and reduce loneliness, but it is underutilized by organizations as a tool and way of thinking.

# Despite the potential for creativity, it is not often realized in organizations

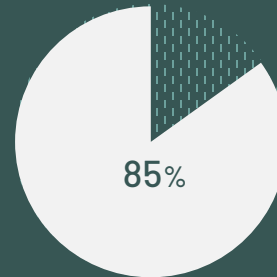
PROVIDE TIME AND SPACE  
FOR CREATIVE THOUGHT



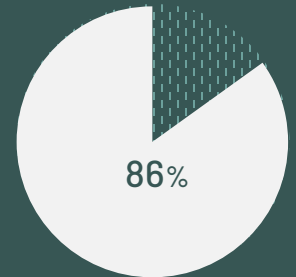
CREATE PROJECTS THAT ARE  
BASED ON MY INTERESTS



PROVIDE TIME AND SPACE FOR  
IMPROVISATION OUTSIDE OF MY  
DAILY RESPONSIBILITIES



PROVIDE TIME TO START  
PASSION PROJECTS



□ THIS OCCURS IN MY WORKPLACE

■ THIS DOES NOT OCCUR



# Other process-based ways that teams can better enable creativity:



## IDENTIFICATION

- Encourage mutual disclosure about personal values and purpose; identify common higher-order goals
- Share unique and relevant personal experiences



## DIVERGENCE

- Create a salient goal to be creative at work
- Frame creativity as problem solving in a way way
- Frame the creative process as involving changing one's perspective



## SOCIALIZATION

- Openly communicate and exchange creative ideas with each other, gather more varied information
- Exchange creative knowledge without obstacle or rejection



## REFINE

- Complement and improve each other's creative ideas and problem solving
- Cooperate and interact with each other
- Encourage others by providing emotional support



## CONVERGENCE

- Jointly create a way to present the prioritized ideas to "gatekeepers" of implementation
- Seek input and support from an extended network for bringing the ideas to reality

“We suggest that engaging in the creative process can boost employee well-being by motivating the formation of social connections by providing the opportunity for self-disclosure and lifting psychological burdens by making individuals feel liberated.

The positive effects of being creative are not inevitable, however. We also consider the possibility that being creative can be isolating if creative ideas are greeted by criticism and rejection rather than acceptance.”

**JACK GONCALO, PHD,**  
Chair of Organizational Behavior, Gies College of Business

Goncalo, J. A., Katz, J. H., Vincent, L. C., Krause, V., & Yang, S. (2021). Creativity connects: How the creative process fosters social connection and combats loneliness at work. *Handbook of research on creativity and innovation*, 204.

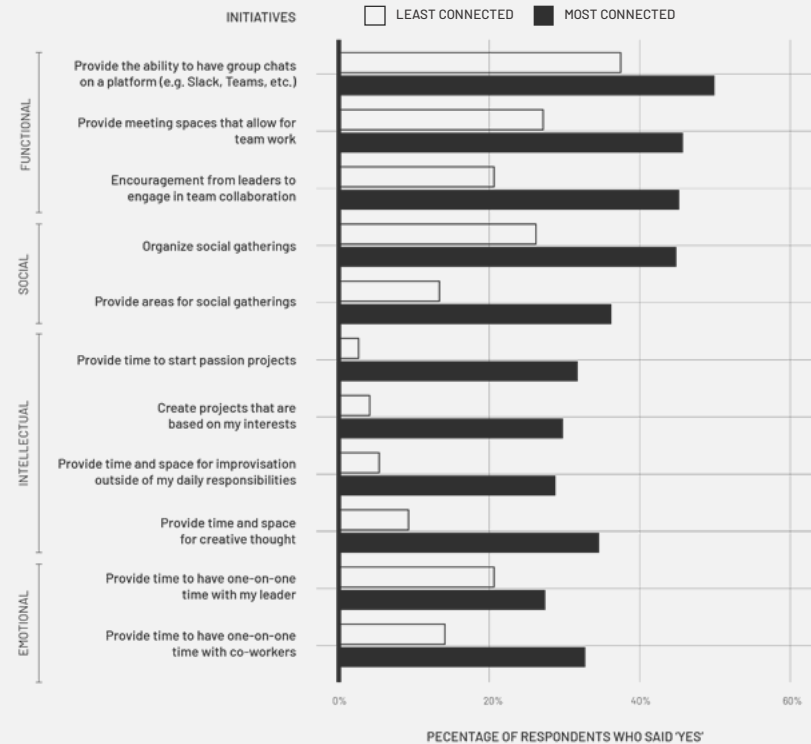
# And even more broadly, connectedness can be *better cultivated* by organizations

For those who are most connected at work, their workplaces tend to have more initiatives that offer opportunities employees build better connections with each other.

\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 200610- 4020306, p's < 0.02

## HOW OFTEN WORKPLACE HAS INITIATIVES TO HELP YOU BUILD BETTER CONNECTIONS WITH OTHERS AT YOUR WORKPLACE



# Certain initiatives are likely more effective at creating & supporting greater connectedness

For those who are **most** connected at work, their workplaces tend to have a wide range of initiatives\*:

\*Comparisons conducted: For those in the top quartile, the most common initiatives where at least 1/4 of these people experience

TYPE OF CONNECTION	INITIATIVE	% OF PEOPLE WHO REPORTED THAT THIS OCCURS IN THEIR WORKPLACE
Functional	<i>Providing the ability to have group chats on a platform (e.g. Slack, Teams, etc.)</i>	50%
	<i>Provide meeting spaces that allow for teamwork</i>	46%
	<i>Encouragement from leaders to engage in team collaboration</i>	45%
Social	<i>Organize social gatherings</i>	45%
	<i>Provide areas for social gatherings</i>	36%
Intellectual	<i>Provide time and space for creative thought</i>	35%
	<i>Provide time to start passion projects</i>	32%
Emotional	<i>Provide time to have one-on-one time with co-workers</i>	33%

This is in contrast to those who are the least connected at work, where their workplaces tend to only have\*:

TYPE OF CONNECTION	INITIATIVE	% OF PEOPLE WHO REPORTED THAT THIS OCCURS IN THEIR WORKPLACE
Functional	<i>Providing the ability to have group chats on a platform (e.g. Slack, Teams, etc.)</i>	37%
None	<i>None at all</i>	28%

\*Comparisons conducted: For in the bottom quartile, where the most common initiatives where at least 1/3 of these people experience

“Because there is no single cause for social disconnection, there is no single recipe that we can all follow that will reduce isolation and create connections — and a one size fits all approach is likely to fail.”

JULIANNE HOLT-LUNSTAD, PHD,  
Professor of Psychology, Brigham Young University

Holt-Lunstad, J. (2018). Fostering social connection in the workplace. *American Journal of Health Promotion*, 32(5), 1307-1312.

Building better connectedness at work requires a broad ranging set of initiatives to support, some of which need to overlap with supporting creative processes.

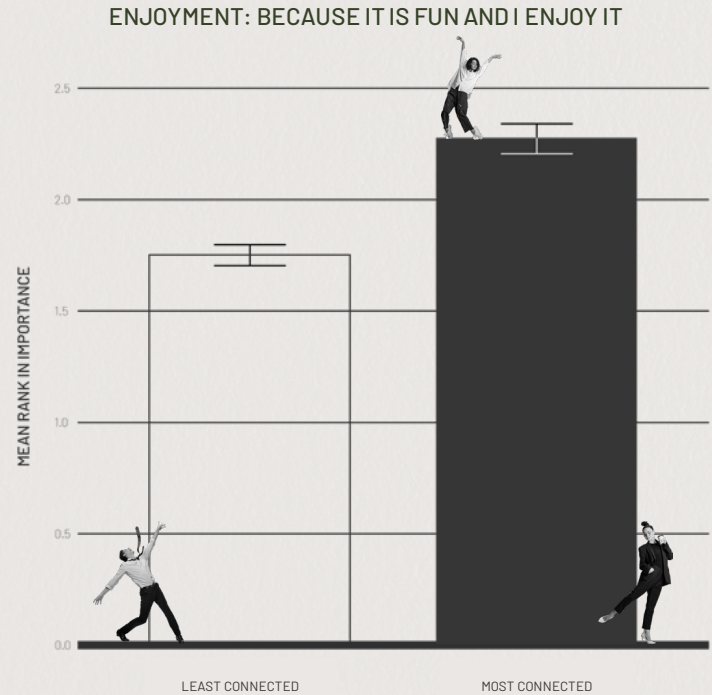


# It's likely a positive cycle:

Those who are highly connected find joy from being creative...

...and those who find joy from being creative are more likely to be highly connected.

Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test;  $p < 0.0001$





How might businesses pair  
creativity and connectedness  
initiatives into a single program?



Connectedness is fostered through creative processes, not mere physical proximity. In any program, flexibility and autonomy are key, not mandates.

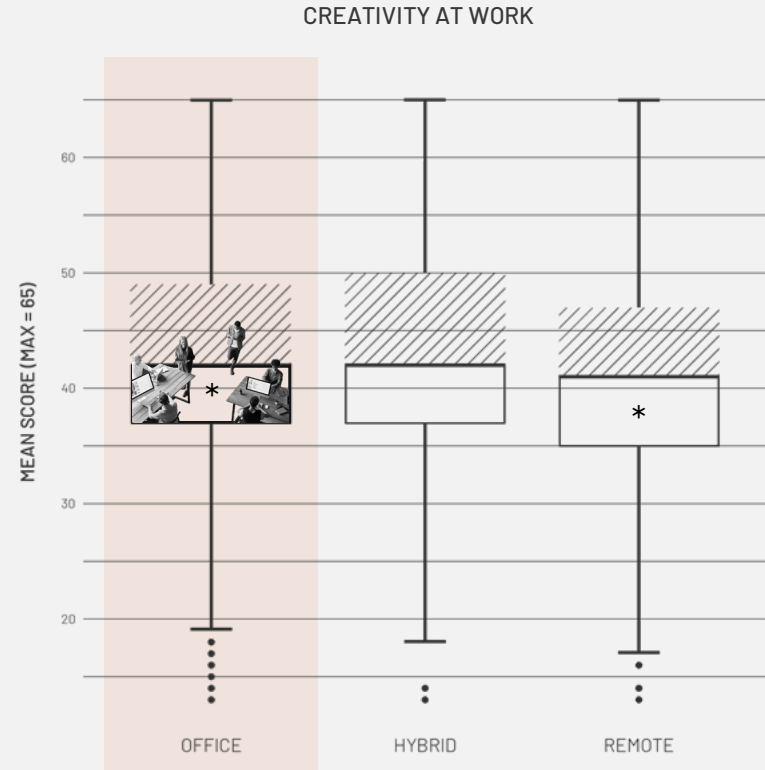
# Being in the office may encourage greater connectedness and creativity

For people whose work is conducted *fully in the office*, they tend to:

- Report more creative behaviours at work than fully remote people
- Have the most social connections at work
- Have more functional, intellectual, and emotional connections at work than fully remote people
- Be the most connected in all types of connections in their personal lives

\*Comparisons conducted: Compared people who worked fully in office, vs. hybrid, vs. fully remote

Statistical significances:  $p$ 's < 0.05

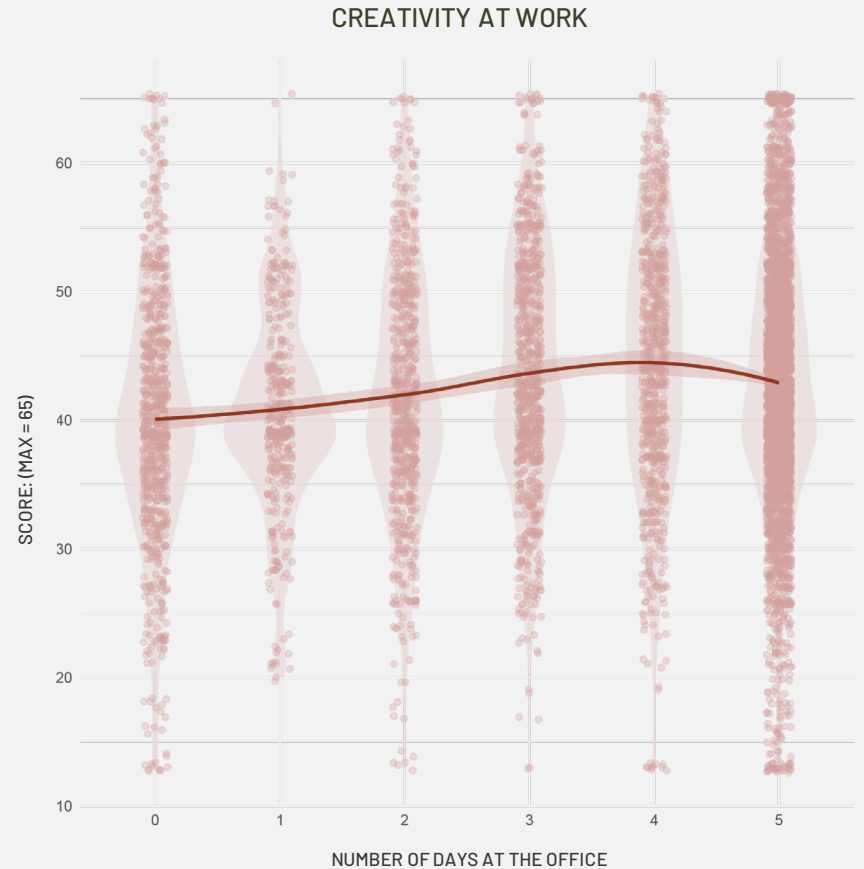


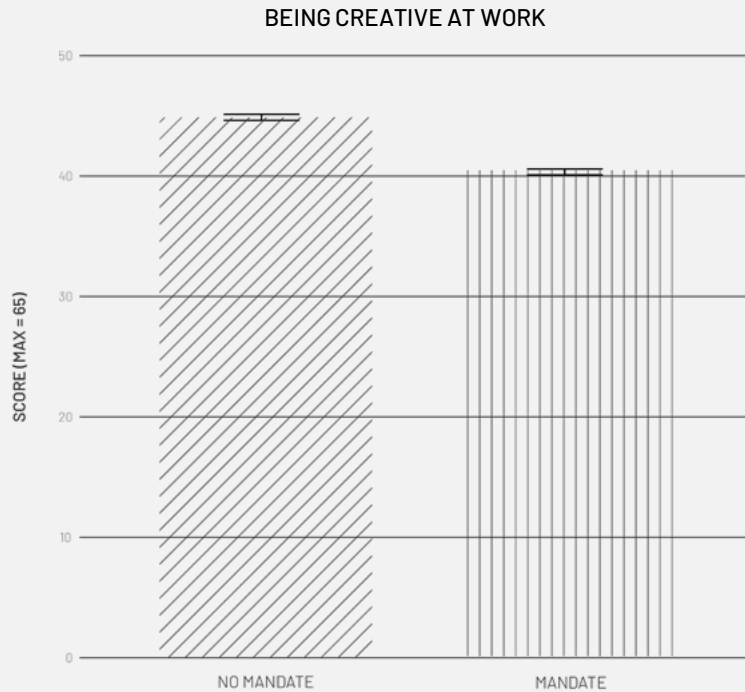
For *hybrid employees*, the more days they spend in the office:

- The **more creative** they feel at work
- The more creative they feel they are as a person
- The **more connectedness behaviours** they perform\*

\*Comparisons conducted: Compared people who worked fully in office, vs. hybrid, vs. fully remote

Statistical significances:  $p$ 's < 0.05





But giving people flexibility to choose where they work is what's critical

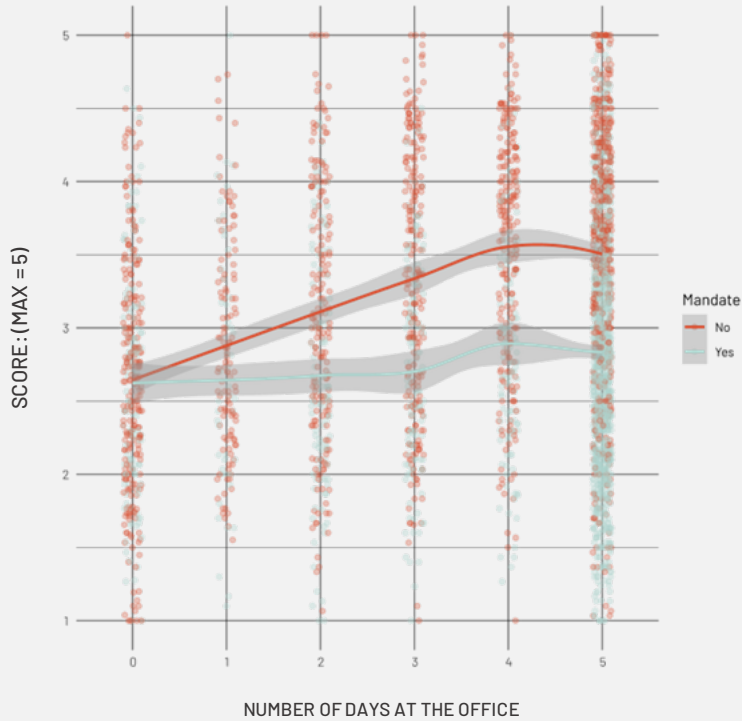
Organizations that do NOT have a "return to office" mandate tend to have\*:

- higher **creativity** at work
- higher **employee motivation**
- higher **sense of belonging**

\*Comparisons conducted: Compare organizations that have vs. do not have "return to office" mandate

Statistical significances:  $W's = 1381833 - 1551410$ ,  $p's < 0.0001$

## CONNECTEDNESS AT WORK



## Focus on creating better connectedness, not mere *physical proximity*

A mandate to go to the office does not automatically create more connection:

- Places that do NOT have a mandate have higher connectedness overall\*
- **When there is greater connectedness at work (and no mandate), employees tend to go to the office more often**

\*Comparisons conducted: Correlate number of days at the office with various creativity and connectedness measures (functional, social, intellectual, emotional)

Statistical significance:  $W = 1574180$ ,  $p < 0.0001$

# What could this all mean?

The components required for an organization to have happy, thriving employees:

FEELINGS OF  
(CREATIVE)  
**COMPETENCE**

FEELINGS OF  
**RELATEDNESS**  
(CONNECTEDNESS)

FEELINGS OF  
**AGENCY**  
(AUTONOMY)



Is a lack of focus on connectedness  
and creativity a missed opportunity  
for businesses?





# Key Takeaways

The costs businesses are incurring from neglecting loneliness are material and unsustainable.

## IMPLICATIONS

Businesses have a role to play in combating loneliness, for the good of their organization and their employee's well-being

The creative process is a vehicle to create greater connectedness and remedy for loneliness.

## IMPLICATIONS

Businesses should explore introducing initiatives that unlock the creative potential of their teams.

Nurturing connections among employees is beneficial, fueling creativity, motivation and a desire to return to the office.

## IMPLICATIONS

Business should pursue intentional methods to cultivate cultures of connectedness.



# Discussion



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What do these initial findings inspire you to think about?

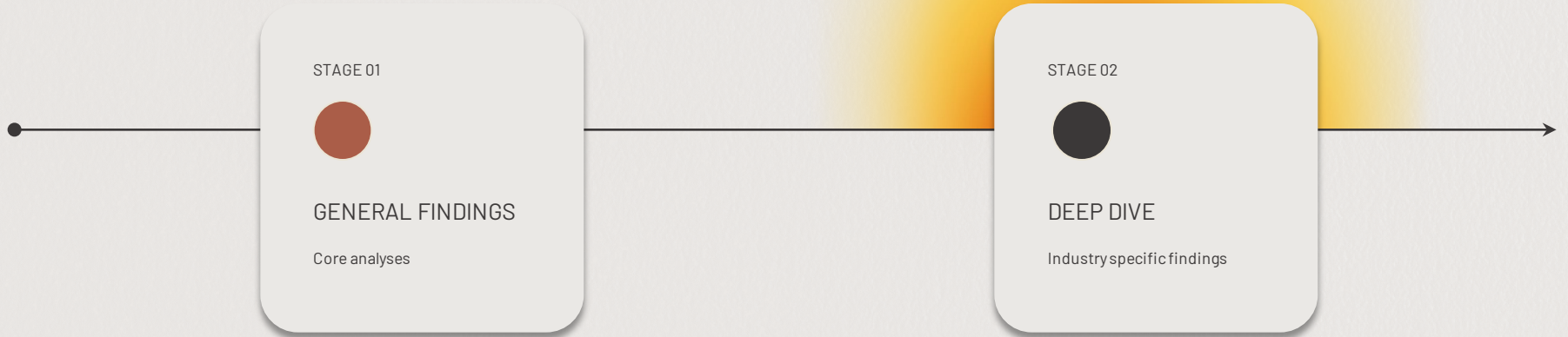
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What, if any, additional questions come to mind?

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How might you apply these findings to your organization?

# What's Next



**BE***works*

Thank You!



# Acknowledgements

We thank Kyu Collective for funding this research, and for serving as key contributors to the research topic and direction of this study. We also thank SYPartners for their contribution to the research questions and interpretation of the findings.



# Appendix

SUPPLEMENTARY FINDINGS

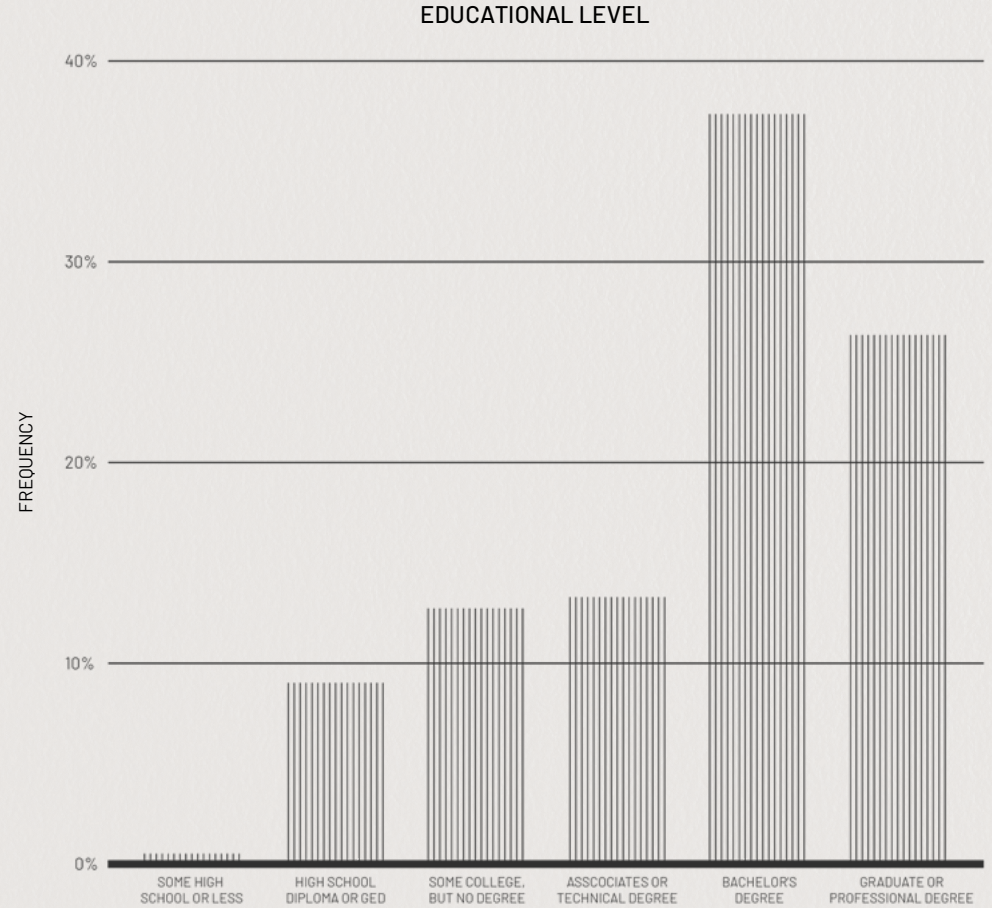


SECTION 01

# About our Sample



# A highly educated sample





Roughly  
evenly split  
across genders



# Representative across age groups

AGE GROUP	PERCENT
18 - 25 years old	5%
26 - 35 years old	21%
36 - 45 years old	33%
46 - 55 years old	24%
56 - 65 years old	18%

SECTION 01  
REPRESENTATION

# Representative across industries

## INDUSTRY

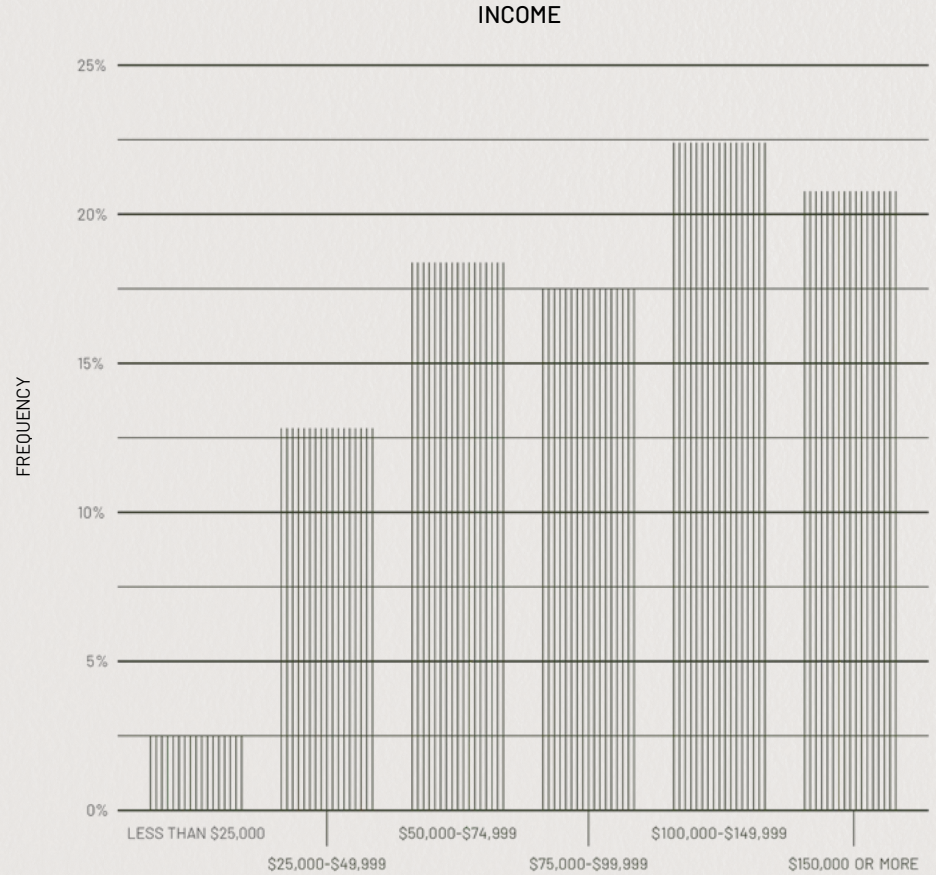


FREQUENCY

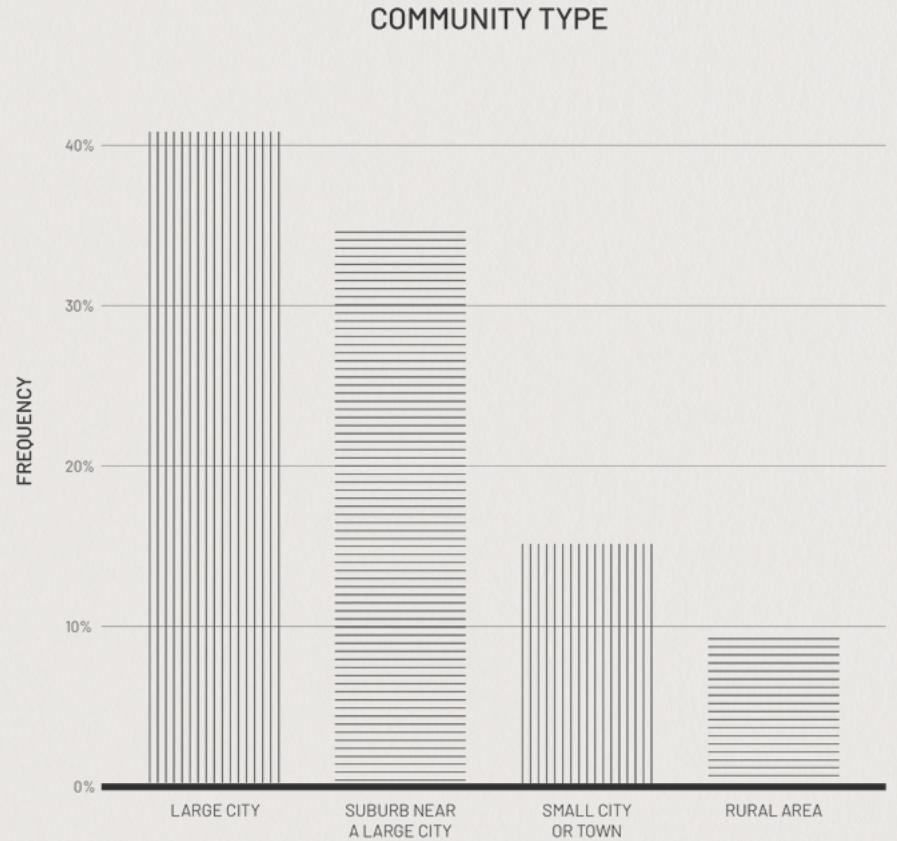
# Representation across departments and organization sizes

DEPARTMENT	PERCENT	ORG SIZE	PERCENT
Sales	11%	1 - 99 employees	27%
Accounting & Finance	12%	100 - 499 employees	24%
HR	7%	500+ employees	49%
Production	7%		
R&D	16%		
Operations Management	17%		
IT	3%		
Marketing	27%		

# Representation across compensation



# Representation across geographies



# How we measured creativity

# Organizational mission

“My organization encourages me to be creative”

For each statement below, please indicate the extent that they describe your current workplace. How often does your workplace... (Matrix MC: Never, Rarely, Occasionally, Regularly, Often)

Adapted from Runco, M. A. (2015) Original ideas, ideational flexibility, and openness to new ideas: Thoughts about hiring creative staff. *TelevLZlon* (Spring, 28/2015/E), 30-33.

- Support new ideas?
- Provide enough time to think about alternatives and options for your projects?
- Praise creativity?
- Appreciate different opinions and perspectives?
- Rely on tradition?(Reverse score)
- Reward conformity?(Reverse score)
- Encourage you to be open to new ideas and different perspectives?
- Make it difficult to consider new methods because of budget, resource constraints, or rules?
- Support autonomy and independent thought?
- Respect incubation and “thinking time”?
- Rely on existing methods (rather than invent new ones)?
- Allow you to be playful?
- Make you fearful of taking risks?(Reverse score)
- Make you feel confident with sharing new ideas?
- Encourage you to ask questions?
- Encourage you to take risks?
- Value creativity?



# Team enablement

“My team is creative”

For each of the statements below, please indicate the extent that they describe your current workplace. (Matrix MC: Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree)

Adapted from Jiang, H., & Zhang, O. P. (2014). Development and validation of team creativity measures: A complex systems perspective. *Creativity and Innovation Management*, 23(3), 264–275.

- We often communicate and exchange creative ideas with each other
- We can complement and improve each other’s creative ideas and problem solving
- We can integrate a creative project at the team level effectively
- Team members can effectively co-operate and interact with each other
- Team members can exchange creative knowledge without obstacle
- Team leaders can arouse the members’ creative enthusiasm through various means
- The team can produce creative outcomes efficiently
- The team can produce creative outcomes with high quality
- The team can produce creative outcomes with great economic and social value

# Creativity at work

“I want to be creative at work, and I try to be creative at work”

For each statement below, please indicate the extent that they describe you at work. While you are at work, how often do you... (Matrix MC: Never, Rarely, Occasionally, Regularly, Often)

Adapted from Runco, M. A., Shepard, A., & Tadić, H. (2022). How much creative potential is expressed at work?. *Journal of Creativity*, 32(1), 100016.

- Have creative or innovative ideas?
- Do innovative things?
- “Incubate” or go find a place where you will be able to think creatively?
- Experiment or explore something new?
- Choose or request tasks that are challenging and new?
- Have an original idea about something outside of work (even though you are at work)?
- Solve problems never met before?
- Take intellectual risks?
- Try to work with people who have a different field or expertise from your own?
- Choose to work on extremely difficult problems?
- Bring some method or system that you use outside of work to work to make things easier at work?
- Adopt new information or new methods?
- Intentionally shift your perspective and view problems or situations from new angles?

# Creativity as a self-concept

“I am a creative person”

For each statement below, please indicate the extent that they describe you.  
(Matrix MC: Definitely not; Somewhat not; Neither yes or no; Somewhat yes;  
Definitely yes)

Adapted from Karwowski, M., Lebuda, I., & Wiśniewska, E. (2018). Measuring creative self-efficacy and creative personal identity. *The International Journal of Creativity & Problem Solving*.

- I think I am a creative person - e.g. I am capable of generating novel and useful ideas, solutions, actions, big or small in my daily life.
- My creativity is important for who I am.
- I know I can efficiently solve even complicated problems.
- I trust my creative abilities.
- My imagination and ingenuity distinguishes me from my friends.
- Many times I have proved that I can cope with difficult situations.
- Being a creative person is important to me.
- I am sure I can deal with problems requiring creative thinking.
- I am good at proposing original solutions to problems.
- Creativity is an important part of myself.
- Ingenuity is a characteristic that is important to me.

# Creativity in personal life

“I engage in creative pursuits in my personal life”

Drawn from Benedek, M., Bruckdorfer, R., & Jauk, E. (2020). Motives for creativity: Exploring the what and why of everyday creativity. *The Journal of Creative Behavior*, 54(3), 610-625.

- How often do you engage in creative activities in your personal life?
- How important is engaging in these creative activities to you?
- When thinking about the reason for why you engage in such activities, rank the following in importance for your motivation from most to least important:
  - Enjoyment: Because it is fun and you enjoy it
  - Coping: Because it allows me to cope with difficult situations or stress and/or distract myself from my problems
  - Challenge: Because it allows you to learn, develop, and discover potential
  - Expression: Because it allows you to express your thoughts and feelings and be yourself
  - Prosocial: Because it allows you to help or bring pleasure to others
  - Social: Because it allows you to meet new people and spend time with others
  - Recognition: Because it allows you to show others what you can do and get positive feedback
  - Duty: Because others expect or want me to

For scoring, we coded higher scores = higher rank.

# Details about our Findings

## Loneliness is associated with the expected negative outcomes in people's lives...

Those who were most lonely, were also\*:

- Less psychologically resilient
- More pessimistic about the future
- Less positive about their lives

\*Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 138328 - 826032, p's = 0

## ...and in the workplace

Those who were most lonely, were also\*:

- **Less motivated** at work
- **Felt more bored** at work
- **Felt less content** and **less inspired** at work
- Felt **less belonging**
- Felt **less psychological safety**
- *More likely to burn out*

\*Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 142877 - 696023.5, p's < 0.0001

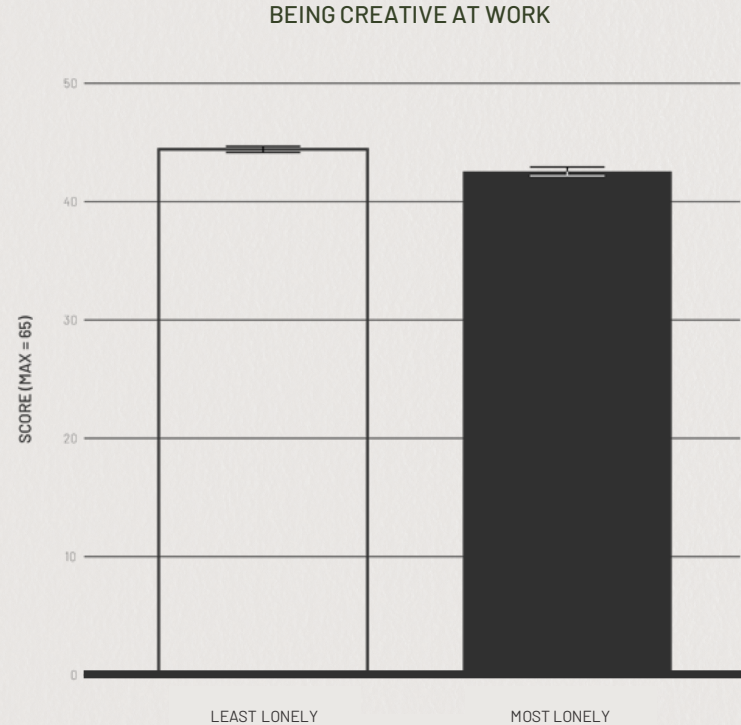
# Loneliness has other unexpected implications for workplaces

Those who were most lonely, were also\*:

- Less creative **as individuals**
- Less creative **at work**
- Less likely to be **at organizations** and **within teams** that promote creativity

\*Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 523575 - 626163, p's < 0.001



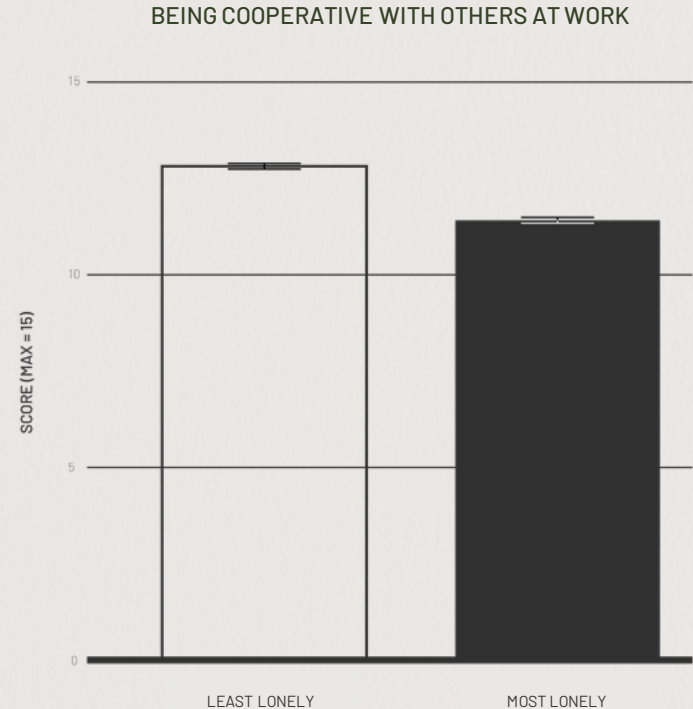
# Loneliness has other unexpected implications for workplaces

Those who were most lonely, were also\*:

- **Less collaborative**
- **Less cooperative** at work
- **More competitive**

\*Comparison conducted: Compared people who scored in the top quartile of loneliness, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 286292.5 - 624589.5, p's < 0.0001





# Greater connectedness at work is accompanied by greater connectedness in life

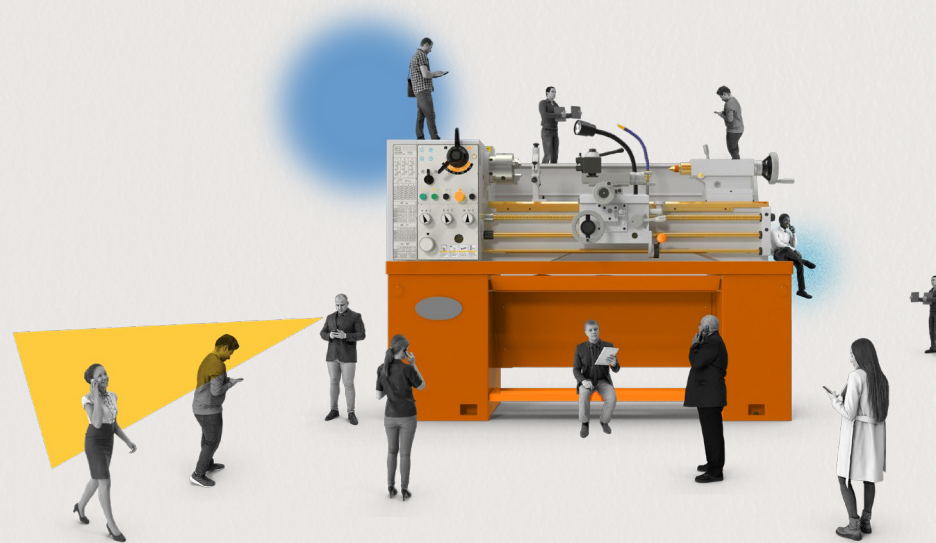
## People who are more highly connected at work\*:

Are more highly connected in **all types of life connections**

Are more likely to **interact with others in their life** especially followers/contacts on social media

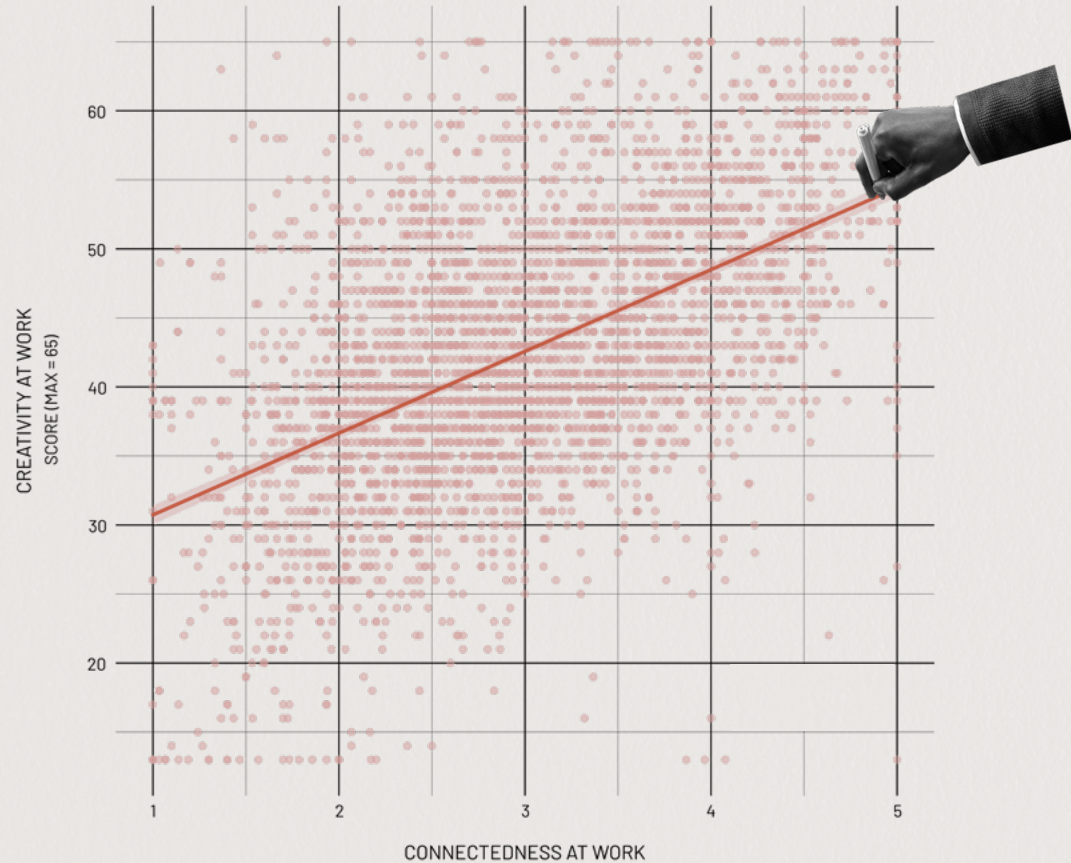
\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances:  $W_s = 74335-165093$ ,  $p_s = 0$



# Connectedness and creativity go together

Overall connectedness is positively correlated with overall creativity\*.



\*Statistical significances:  $R^2 = 0.28$ ,  $p < 0.0001$

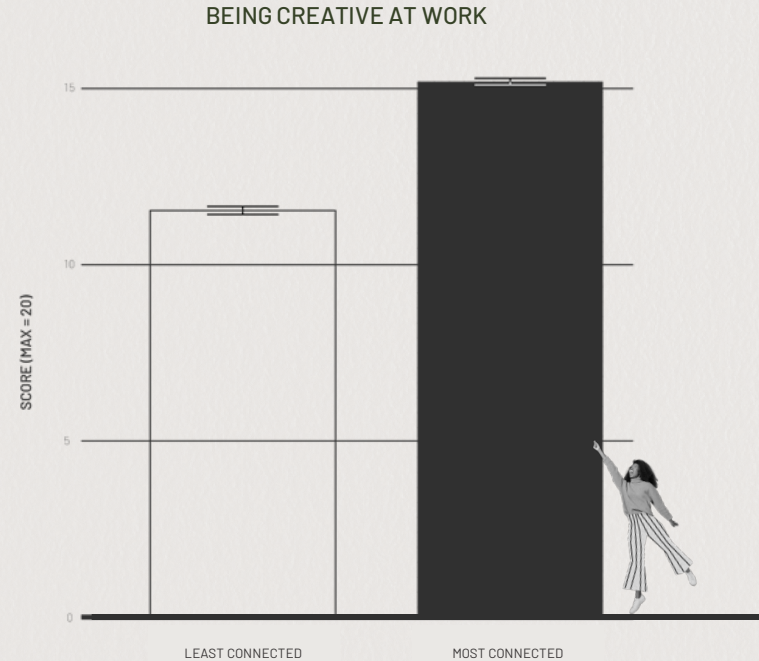
# This is true for many different dimensions of creativity...

Those who were most connected, were also more likely to\*:

- **Be creative** at work
- Identify as a **creative person**
- Report engaging in **creative activities**
- **Experience inspiration** at work in the last 30 days
- Report being in more **creative teams**
- Work for organizations that **support creativity**

\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances: W's = 85169.5 - 217021.5, p's < 0.0001



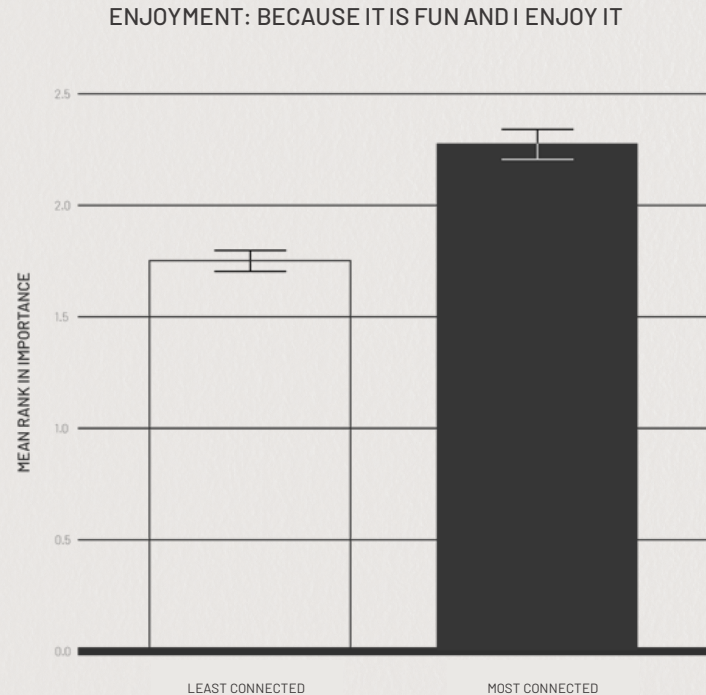
## ...as well as what people value in creativity

Those who were most connected, were also\*:

- **More likely to rank “enjoyment” as their motivation** to engage in creative activities in their personal life
- More likely to report creative activities as **being important to them**
- Less likely to report “socializing” as their motivation to engage in creative activities in their personal life

\*Comparisons conducted: Compared people who scored in the top quartile of connectedness at work, versus those who scored in the bottom quartile, using Wilcoxon Test

Statistical significances:  $W_s = 197855.5 - 440184$ ,  $p's < 0.0001$



# Creativity could play a central role in reducing employee loneliness

Analyses conducted: Correlation between measures, where  $p's < 0.001$



## But workplace initiatives that encourage creativity are not common

Connectedness initiatives that would promote greater **collaboration** and **creativity** are relatively uncommon occurrences within workplaces.

	CONNECTEDNESS INITIATIVES THAT WOULD PROMOTE CREATIVITY	PERCENTAGE OF PEOPLE WHO REPORT THIS OCCURS AT THEIR WORKPLACE
COLLABORATION	Encouragement from leaders to engage in team collaboration	38%
CREATIVITY	Provide time and space for creative thought	22%
	Provide time and space for improvisation outside of my daily responsibilities	17%
	Create projects that are based on my interests	15%
	Provide time to start passion projects	14%

Building better employee connectedness at work requires a broad ranging set of initiatives to support.

These initiatives should align to the four dimensions of connectedness, but critically focused on intellectual/creativity connectedness.

# The relationship between *connectedness and creativity* are stronger in larger working groups and organizations...

## WORKING GROUP SIZE EFFECTS

**The larger the unit, the stronger the relationship** between connectedness and creativity at work\*

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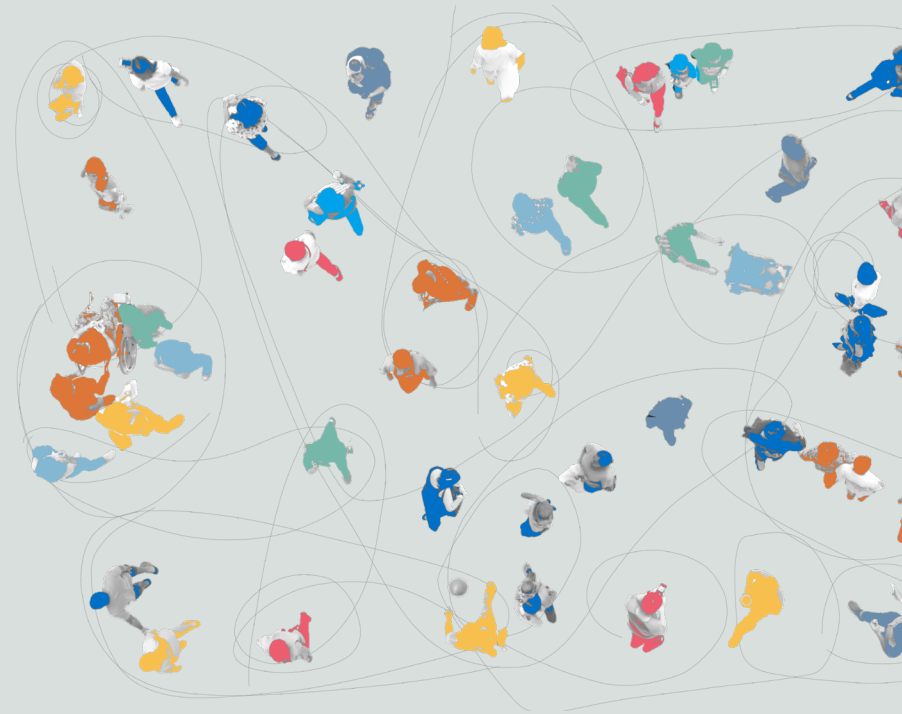
## ORGANIZATION SIZE EFFECTS

**The larger an organization, the stronger the relationship** between connectedness and creativity\*\*

\*Comparison measured by: how many individuals they have within their department, division, or unit

\*Statistical significances:  $p = 0.0236$

\*\*Statistical significances:  $p < 0.001$





# ...And this relationship is consistent across seniority levels at an organization

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## WE HAD A HUNCH THAT THERE WOULD BE TENURE EFFECTS:

Those in more junior roles might be different than those in senior roles, in how they approach connectedness and creativity.

For instance, those in more junior roles may be more prone to having more independent work, whereas those in more senior roles would have a greater need for more creative thinking and therefore would benefit more from greater connectedness at work.

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## HOWEVER, THIS WAS **NOT** TRUE:

We found no significant effect of tenure (a proxy for seniority) on creativity at work, or on the relationship between connectedness and creativity at work\*

\*Statistical significances: Linear model:  $p = 0.452$  and  $p = 0.683$

Using connectedness to bolster creativity may be *more important* in roles *that require team collaboration*, and less important for more solitary roles.

It is also *most powerful in larger organizations* where bureaucracy and complex processes are likely to dampen creative output.



# The importance of *in-office flexibility* is true across generation groups

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WE HAD A HUNCH THAT THERE WOULD BE TENURE EFFECTS:

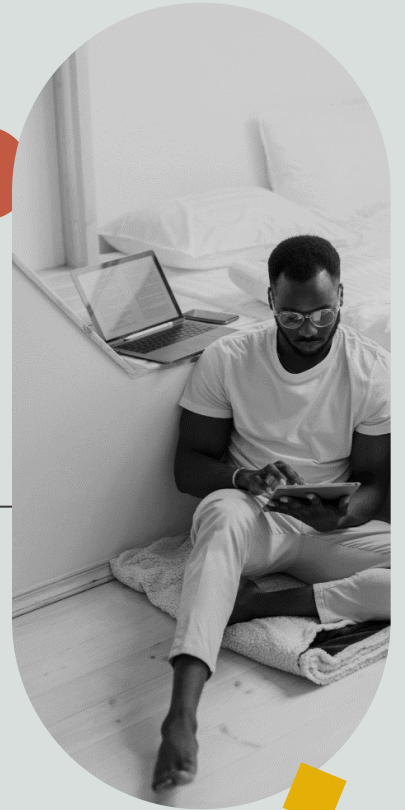
**Those who are older (e.g., Gen X and Boomers) may differ from younger generations (e.g., Millennials and Gen Z) in how they perceive back-to-office mandates.**

Older generations may feel ambivalent about such mandates, whereas younger generations may be more likely to feel that back-to-office mandates are an intrusion on their desire for autonomy and agency over their work.

---

HOWEVER, THIS WAS NOT TRUE:

**We found no significant difference between age groups in how satisfied they are with their work arrangement**



Giving all employees the agency to choose what works best for them, is important for fostering greater connectedness and creativity.