MEANING AT WORK[*]

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Abstract

Firms traditionally use incentives to motivate employees' efforts. In this paper, we evaluate a firm's attempt to do the opposite by encouraging employees to reflect on what gives their life meaning and whether this can be achieved at work. We randomize the rollout of a "Discover Your Purpose" intervention among 3,000 white-collar employees and evaluate their outcomes over two years. The intervention is rooted in the psychiatrist principles of logotherapy and guides workers through a reflection process of pivotal life experiences, to promote a greater understanding of personal purpose by linking past memories and present work in a coherent narrative. We find that performance increases because the bottom performers either leave the firm, laterally move, or do better. Consistent with the intervention reducing the cost of effort of the workers who remain, we find that it flattens the trade-off between meaning and pay, as it is the highest paid among the low performers who either leave the firm or report higher meaning. The intervention is cost effective and the generated gains are shared between the firm and the employees in the form of higher pay.

JEL codes: J2, J3, M5, C93

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"What, then, constitutes the alienation of labor? First, the fact that labor is external to the worker; that in his work, he does not feel content but unhappy, does not develop freely his physical and mental energy...The worker therefore only feels himself outside his work, and in his work feels outside himself. He feels at home when he is not working, and when he is working he does not feel at home."

— Marx, Karl, 1844. *Estranged labor*.

1 Introduction

Modern society is characterized by a clear demarcation between work and personal life. One of its defining features is the reliance on the marketization of labor where most workers do not own the output they help produce and need to be incentivized to exert effort. Indeed, the alienation of labor - not only from the product of its labor or each other but also from an individual's "human essence" - has long been a critique of capitalism.[1]

Firms traditionally attempt to compensate for this alienation through monetary means, connecting workers to the profits of the firm, or, more recently, through non-monetary incentives that aim to connect workers to the firm's broader purpose (Henderson and Steen, 2015; Gartenberg, Prat and Serafeim, 2019; Cassar and Meier, 2018). These solutions are designed to induce behavior that fulfills the firm's purposes. In this paper, we test the economic impact of an approach that attempts the opposite strategy: helping employees discover their own purpose and then trying to align the individual purpose with the specific job employees do inside the firm.

The "Discover Your Purpose" (DYP) intervention draws on the principles of logotherapy, a psychiatrist practice developed by the neurologist and psychiatrist Viktor Frankl that emphasizes finding meaning in life as a central element of well-being (Frankl, 1985). It begins by having participants reflect on and share four pivotal stories from their past within small groups. With the help of the other fellow partici-

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[1]Marx (1844) described four dimensions of alienation in modern capitalist society: alienation of labor from the product of its labor, from their productive activity (working in ways that are debilitating physically or mentally); from other workers (seeing others as means to ends); and from their own human nature ('species-essence'; Gattungswesen). Alienation from one's own human nature—which is purposeful, generative, and self-realized—underpins the other three.

pants, they are then prompted to identify a coherent through-thread unifying these stories, which is distilled into a purpose statement. In the end, employees are encouraged to reflect on whether and how their individual sense of purpose is reflected in their current jobs and work. We randomize the offer of this intervention among 2,976 white-collar employees of a consumer-goods multinational and evaluate its impacts over the subsequent two years on employee exits from the company, job transfers, performance, pay, and sense of meaning.

We find that both workers' exits and internal transfers significantly increase after the treatment. Using a LATE specification which instruments attendance with invitation to the intervention, we estimate that monthly exit increases by 0.7ppt, which is an 88 percent increase relative to the control group. These exits happen within 6 months of participating in the workshop and are twice as large for the bottom performers. The intervention also increases the probability of moving jobs laterally, without a promotion; these moves happen in the first year and, in the subsequent year, they significantly decrease, suggesting that workers are finding better job matches.

We then evaluate the intervention's impact on workers' productivity. Conditional on staying in the firm, workers' performance (as measured by their bosses) increases by 3.9 percent relative to the control group. Using a sub-sample of sales workers, we show that these changes in performance score reflect higher productivity: the treatment increases sales productivity by 0.245 s.d. Together, these correspond to an increase in worker pay and bonuses, an increase which sustains over the entire period of study.

We evaluate the extent to which the increase in productivity is due to worker selection versus changes in worker effort. To estimate a lower bound of the effort channel, we impute the productivity of the departed employees at the 15th percentile of the employees' productivity in that country at baseline. When we do so, the increase in performance drops from 3.9% to 1.9% (49% of the total effect) and remains statistically significant at the 5% level. This indicates that selection explains at most around half of the effects. We find analogous estimates when we use a worker fixed effects specification in the spirit of Lazear (2000) to decompose performance improvements into exits of low-performers, better matching of jobs through lateral moves, and improvements on the same job.

The intervention is expensive in terms of lost work days. Moreover, it leads to higher turnover and its associated costs. To examine whether it is in the firm's economic interest to run these workshops, we need to know the average productivity of the new hires, which we can observe in the data. We compute the impact on performance when replacing all departing employees with the average performance of the replacements. We find that the results are almost identical to the ones obtained among stayers. Workers' performance (as measured by their bosses) increases by 3.6 percent relative to the control (instead of 3.9) and the treatment increases sales productivity by 0.231 s.d. (instead of 0.245).

Combining these estimates with public income statement data from Orbis, we conduct a cost-benefit analysis of the intervention and find a return on investment (ROI) of 122%. Even when outsourcing the workshop to external consulting companies, the estimated costs remain well below the estimated benefits. Overall, the evidence suggests that the benefits of the workshops exceed firms' willingness to pay by a clear margin.

To understand better the mechanisms through which the intervention operates, we build on recent neuroscience research that has found that subjects' purpose or goal can significantly change the value given by the brain to objects and particularly impact the connections perceived between seemingly unrelated objects (De Martino, 2012; Castegnetti, Zurita and De Martino, 2021).[2] This is ultimately a form of meaning-making, which humans have most often done with stories.

A growing literature in economics underscores the importance of the memory of past experiences for current choices (Malmendier and Wachter, 2022; Bordalo, Gennaioli and Shleifer, 2020). This has long been acknowledged in psychology, where it has been linked to story memories of one's life.[3] As Bruner writes, "The self-telling of life narratives achieves the power to structure perceptual experience, to organize memory, to segment and purpose-build the very 'events' of a life" (Bruner, 2004). Understood through the lens of this literature, the workshop guides individuals to reflect

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[2]In a brilliant example, Castegnetti et al. (2021) show how the brain's valuation of a wooden chair vs a metal chair, and the connections with a bottle of whisky and matches, changes when subjects are told to imagine that they are stranded on an island and need to signal for help

[3]Schank and Abelson (1995), for example, make the following three arguments: (1) Virtually all human knowledge is based on stories constructed around past experiences. (2) New experiences are interpreted in terms of old stories. (3) The content of story memories depends on whether and how they are told to others, and these reconstituted memories form the basis of the individual's remembered self.

on their own life's purpose by revisiting personal important memories, and this in turn reshapes their perspective on current activities.

We formalize this idea by assuming that the intervention makes individual purpose more salient, changing the cost of effort by helping individuals uncover their true preferences and align their work with them. We assume that the individual cost of effort is influenced by whether the worker sees the job as congruent with personal values and goals. By increasing the salience of individual purpose, the intervention clarifies this alignment or lack thereof to workers. Workers who understand that their job is not aligned with their personal goals find it too difficult to work at the company and quit their jobs. The others will experience a reduction in the cost of their effort, leading to an increase in the effort exerted.

This simple model has four implications. First, the treatment raises the level of effort by selection. Second, the treatment increases the effort of the employees who stay. Third, the treatment raises the level of job satisfaction and happiness for the people who stay. Fourth, the treatment drives out high paid-low meaning workers.

We find evidence consistent with all these implications. In particular, we find that the average level of satisfaction at work is higher in the treated group and that the intervention flattens the pay-meaning trade-off by inducing high paid-low meaning workers to leave. Overall, the positive results on pay and meaning for workers, along with the firm's high return on investment, show that both parties benefited from the intervention, rather than the firm capturing all the value generated.

If the intervention operates through a rethinking of individual priorities, it should impact employee answers to an after-treatment questionnaire on the job attributes employees value. In addition, if it operates by removing identities and values imposed by education and socialization, it should affect employees' perception of gender norms, possibly the strongest identity into which everyone is forced.

We detect evidence of both effects. Treated workers value relatively more learning new skills on the job and helping others while they value less having flexible time and having a work-life balance. This result is compelling in light of Marx's insight about not feeling home in work: as the separation between home and work disappears due to the alignment between employees' goals and the firm's, so does the need to balance the two. The treatment also closes the gender gap in evaluating job attributes.

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Treated women like "prestige" at work as much as men, while the women in control value it much less. Similarly, women's differential preference for flexibility shrinks in the treated group. These changes in stated preferences manifest themselves in different actions: treated men take 0.8 more months of paternal leave, while treated women take 1.4 fewer months. This closing of the gender gap in parental leave is largest in countries with low female labor force participation and worse gender norms, suggesting that the DYP intervention helps reduce gender stereotypes in preferences.

We bring together two strands of literature. First, a long tradition in organizational behavior and organizational psychology argues that individuals get meaning from their work that extends beyond financial compensation (for a review, see Rosso, Dekas and Wrzesniewski, 2010 and Cassar and Meier, 2018). While many have called for greater incorporation of meaning into economics- see, in particular, Karlsson, Loewenstein and McCafferty (2004), and Chater and Loewenstein (2016)- much less is known about how to generate meaning effectively in the workplace. In a lab experiment, Ariely, Kamenica and Prelec (2008) manipulate meaning through changing the fate of Lego figures assembled by subjects and find large effects on performance and labor supply. Chandler and Kapelner (2013) extends these results to a field experiment by having Amazon's Mechanical Turk (M-Turk) workers label tumor cells, but some workers are explicitly told the purpose of their task is to help researchers identify tumor cells, while others are not.

Related papers highlight the importance of job mission as a source of worker alignment in a principal-agent framework (Besley and Ghatak, 2005; Delfgaauw and Dur, 2007; Delfgaauw and Dur, 2008; Cassar and Armouti-Hansen, 2020), which is backed up by empirical evidence of workers being willing to accept lower wages due to an organization or a job having a strong mission (Preston, 1989; Leete, 2001; Chandler and Kapelner, 2013; Gosnell, List and Metcalfe, 2016; Hedblom, Hickman and List, 2019; Colonnelli, McQuade, Ramos, Rauter and Xiong, 2023; Khan, 2023; Krueger, Metzger and Wu, 2023). While existing research has exclusively focused on settings or workshops where meaning is defined by the organization, we run a field experiment to study the impacts of workers engaging directly in *meaning-making* and envisioning their *own* sense of purpose.

Second, our paper contributes to the literature on narrative economics and on

how new experiences are interpreted in terms of past experiences (Malmendier, 2021; Malmendier and Wachter, 2022; Bordalo et al., 2020). In particular, it relates to an emerging literature on the role of stories at work and of organizational culture shaping worker identity and influencing workplace performance (March and Simon, 1958; Akerlof, Matouschek and Rayo, 2020; Graham, Grennan, Harvey and Rajgopal, 2022; Gartenberg and Serafeim, 2023). Stories are a crucial force shaping employee behavior: they affect knowledge and beliefs (Bénabou, Falk and Tirole, 2018; Gibbons and Prusak, 2020), serve as "mental models" (Cremer, Garicano and Prat, 2007; Mullainathan, Schwartzstein and Shleifer, 2008), and directly influence preferences (Akerlof and Kranton, 2005). Our intervention focuses on self-narrative, and its potential for reshaping job valuation. In our field experiment, we investigate empirically how finding a coherent through-thread through the story-telling of personal narratives can affect worker utility and influence decision-making at work.

2 Institutional context and data

2.1 Setting

The experiment is conducted in a multinational firm (henceforth, the MNE) with offices in more than 100 countries worldwide. It is a large firm with turnover in the tens of billions of dollars that sells consumer products used by billions of people. The firm has a workforce of about 124,000 employees, of which approximately 69,000 are white collars (WC), and 55,000 are blue collars (BC); 30,000 are in high-income countries, and 94,000 are in low to middle-income countries.

The typical WC jobs in this MNE are in sales, engineering, marketing, HR, R&D, and general managerial activities. BC workers are predominantly machine operators. Overall, it is a homogeneous workforce regarding the educational requirements upon entry, which are standardized across establishments (having a college degree for white collars and secondary education for blue collars). The company is organized into a work-level hierarchy (WL) that goes from WL1 to WL6 (C-Suite). Employees with a work level above one are considered to be performing managerial roles (WL2+).

This paper focuses on white-collar 'work-level 1' employees. The study time horizon is from January 2019 until December 2021. Because each country had different

project timelines, countries started the experiment in different months in 2019 (ranging from January 2019 to August 2019). We analyze outcomes until December 2021.[4] As baseline outcomes and variables, we take the average values over 2018.

2.2 Global administrative data

The main variables are obtained from the organization's personnel records, which provide monthly snapshots of the workers worldwide. We create a panel dataset by combining the global HR records with the payroll and performance data, and the surveys we designed as part of the intervention. Table I summarizes the main outcome variables and data sources.

The global personnel records keep track of demographic variables of interest (age, gender, tenure, education), and give a monthly snapshot of the workers' hierarchy levels, functions, and job titles, from which promotions and lateral moves can be constructed. It is also recorded if a worker has been made redundant (involuntary exit) or if she has decided to quit the job for alternative employment or other activities (voluntary exit). In terms of the types of jobs, there are 14 functions in the MNE, with the biggest six being Sales, HR, R&D, Supply Chain, Finance, and Marketing. Within each function, there are multiple sub-functions; for example, in the finance function, an employee can be working in the tax sub-function or the M&A sub-function.

We supplement this data with payroll data, including employee earnings and bonus payments. Salary differences are an important metric to assess performance within the firm. Practically, there are three ways in which workers with the same job title can earn a different salary: the salary grade, the salary band, and the annual bonus (variable pay, which is on average 10% of fixed pay for lower-level white-collar workers).

In addition, the firm's talent management system includes worker evaluations, such as the performance score set annually by the manager. The manager is the main decision-maker after considering the views of all the colleagues who have interacted with the worker (360-degree reviews). The decision process is designed to be as fair as possible and to limit manager bias. The manager has to justify any salary increase, transfer, or promotion decision against a set of objective criteria to the rest of her col-

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[4]Our intervention partly overlapped with COVID-19: 13% of the workers in the treatment group did the workshop virtually because of this. We control for whether the workshop is virtual in the analysis.

leagues in talent forums dedicated to this discussion. The performance assessment is done in the same way in every function and office so that comparisons can be made between workers in different jobs and offices.

2.3 Local data from country offices

Country offices provided access to two data sources. The first consists of details of the DYP intervention: the list of participants, attendance (including the time of each workshop), and the names of the facilitators. The second is sales monthly performance data at the individual or team level (depending on local HR practices).

The worker sales performance is based on reaching targets each month set by the country demand planning teams in the Supply Chain function. Some examples of sales targets include growth of sales, product placement, on-shelf availability, additional exhibitions, and number of orders vs. total visits each month. While most of the data come from the global personnel records, sales data are managed independently in each country and need to be separately collected on a country-by-country basis by liaising with the countries' local sales teams. The annual performance score is strongly positively correlated with the sales performance measure (see Appendix Figure A.1). In particular, moving from being a worker in the bottom group of the performance score (a score of 70) to being a worker in the medium group (a score of 100) increases sales productivity by 0.21SD.

2.4 Surveys

We survey the treatment group three times and the control group twice to obtain measures of sense of meaning, team engagement, job satisfaction, life satisfaction, and clarity of mind. Appendix Table B.2 lists the survey questions and their references.

Figure I illustrates the survey administration timeline. For the treatment group, the timing of the surveys is anchored around the timing of the treatment (the workshop invitation email). In particular, the baseline survey is sent 7 days before the workshop day, a second "reflections survey" is sent 7 days after the delivery of the workshop, and the endline survey is sent 6 months after the workshop. The reflections survey is only sent to the compliers (the workers in the treatment group who take up the

workshop invitation), as it asks workers to reflect on their workshop experience. This survey timing ensures that we hold constant the time of the endline survey outcomes among all compliers.

For the employees in the control group, we run a baseline and an endline survey. For these surveys, the median workshop date of the treatment group within each country is used to anchor the timing of the control group surveys, which are sent to all the workers in the control group at the same time. This same method is adopted to send the survey among the non-compliers in the treatment group who do not attend the workshop.

We check whether the treatment group has a higher variation in responses given the greater variation in the calendar month at which they receive the endline survey, compared to the control group workers who receive the endline survey all at the same time. We do not find any differences in the coefficient of variations across all survey questions (see Appendix Figure A.2).

Due to an implementation oversight that we only realized at the end of the field experiment, we cannot use the baseline survey, as the treatment group received an email containing some pre-work materials to prepare ahead of the workshop *before* receiving the baseline survey. In particular, the pre-work is sent 14 days before the workshop date and the baseline survey is sent 7 days before the workshop date. We had planned to send the baseline survey 14 days before the workshop and the pre-work 7 days before, but the company's IT team accidentally recorded the dates the other way around. Because of this, there are statistically significant differences between the treatment and control groups in the baseline survey.

The average response rate of the endline survey is 43.7% for the treatment group and 44.9% for the control group. The average response rate of the reflections survey, which is sent only to compliers, is 24.5%.

3   Intervention

We study the impact of the "Discover Your Purpose" (DYP) intervention, designed and implemented internally by the MNE. The DYP program was created to provide employees with an opportunity to reflect on their overarching life purpose and under-

stand whether and how it is connected to their job.

Why did the firm pursue this? Central to the firm's philosophy is the belief that companies with purpose last, which then evolved into the notion that individuals with purpose thrive. Unlike brands, however, discovering personal purpose requires a bottom-up approach: individuals must first understand their own raison d'être. The guiding principle of the intervention is that purpose is unique to each individual—it is about understanding who you are, what brings you meaning and joy, what you love, and what keeps you moving forward. The intervention is deeply rooted in logotherapy, an existential form of therapy developed by neurologist and psychiatrist Viktor Frankl, which is based on the idea that the primary motivation in life is the search for meaning (Frankl, 1985).

3.1 "Discover Your Purpose" (DYP)

The DYP program consists of two parts and both are centered on reflecting on individual purpose and connecting it with work and personal life. The first is done independently by each participant over two weeks by completing a pre-work briefing pack. The second is a day-long workshop, which is attended in person. Figure II shows some excerpts about the contents of the pre-work and workshop. The basic premise is to reflect on pivotal personal life experiences through story-telling. The pre-work consists of inspirational readings and videos, such as a summary of "Man's Search for Meaning" book by Victor Frankl (1985),[5] and the "From Purpose to Impact" Harvard Business Review article by Craig and Snook (2014), and self-reflection exercises. In the self-reflection exercises, participants are prompted to reflect on their life experiences to date and bring them alive by asking family and friends what words they would use to describe them and by crafting personal life stories they would tell at the workshop.

Specifically, the intervention is structured around 4 personal stories based on the following key themes:

1. When I Was Young: *Think back to your childhood. Before you knew about the 'right' or 'expected' thing to do. What did you love? What did you enjoy spending your time*

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[5]Originating from another cultural tradition but related to Victor Frankl's theory of meaning and the practice of logotherapy, is the Japanese concept of *ikigai*, which has been recently popularized by the book García and Miralles (2017). It encourages the location of purpose at the intersection of four domains: what you love, what you are good at, what the world needs, and what you can be paid for.

doing and where were you at your happiest?

2. Crucible: The Challenge That Shaped Me: *Think about your life in general or your career so far. When have you faced a real challenge? Why was it so tough? Did it challenge your skills, values, or identity? Were you with people or in a place that you found difficult? What did you do and how did that challenge shape you? How did it change how you see yourself? How did it redefine you?*

3. Sparking My Interest: *Forget the Company for a moment. Outside of work, what do you most enjoy doing? What about this energizes you, makes you tick, or sparks your interest? What got you interested in this? Has there been a significant or special moment as you have explored this interest?*

4. My Success Story: *Think about your career and your life outside work. When have you been really successful and thriving or at your best? Why were you so successful? What was it about what you did that made you succeed and what motivated you to achieve these things? Why did it make you feel proud?*

The pre-work contains relevant questions and details to help workers craft personal stories for each of the 4 themes above. Participants are told that each story should take approximately 5 minutes to tell in the in-person workshop. Moreover, they are prompted to ensure that each story is about a situation or experience that has been completed rather than something that is still ongoing and to choose situations and experiences that have really helped to shape their life and have a strong personal connection to who they are.

On average, 20 workers attend the workshop on the same day. For each workshop, there is one Lead Facilitator and several Group Facilitators. Facilitators are internal workers from any function and in any position who volunteer to act as facilitators, and before acting as facilitators, they must have done the DYP intervention and completed a training course run by the firm HR. The workshop must have at least 1 facilitator for every 4 workers (including the Lead Facilitator). The workshop day lasts for 8 hours and starts with a welcome session in a plenary room, which consists of an introductory presentation by the Lead Facilitator about the goals of the day. Subsequently, participants are randomly divided into small groups of 3-4 people, each led by a Group Facilitator, and given a personal workbook to take notes during the

group discussions. Before starting, the Group Facilitator reiterates the three ground rules: "Today is all about learning, instead of assessment," "Everything that is said in the room stays in the room," and "Nothing that is said here will be misused."

In the morning session, participants share their 4 personal stories in their group based on the questions they were asked to complete as part of the pre-work: When I Was Young, Crucible: The Challenge That Shaped Me, Sparking My Interest, and My Success Story. Participants are actively prompted to ask questions and comment on each other stories following the principle that working collaboratively with the group helps keep the discussion engaged and focused via active listening, summarizing, and deepening.[6] Once all participants have told all 4 of their stories, they have 15 minutes for self-reflection exercises to review the feedback and insights they captured in their workbook and consider what key themes are emerging that may help them define their purpose.

After a lunch break, participants return to their groups and work individually to complete a series of targeted questions in their workbook that involve thinking about their transformative relationships, own values, and legacy in terms of family, community and career, strengths, and their special superpower. They also work on the first draft of their purpose statement, a one-line sentence that completes the prompt "My Purpose is to ...". As part of the facilitator handbook, it is stated that: "It [your purpose] provides you with a compass that motivates you and inspires you to be your best in a changing world so that you can embrace the changes that are coming at you."

Then, working in their groups, each participant reads through and shares their responses to the workbook questions and their draft purpose statement, and group members reflect and share their thoughts as to whether this reflects what they have seen and heard from this person. After this, participants are given some additional time to refine and shape their purpose statement based on the group discussion and on some final workbook questions, such as describing your purpose as if you were talking to a 10-year-old child. In the end, everyone returns to the plenary room, where the Lead Facilitator delivers a short presentation about going from purpose to impact, and participants watch a short video about some fellow employees' and managers' workshop experiences.

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[6]Participants are encouraged to use the workbook to make notes on the stories they hear from their fellow group members, so to provide them with their feedback and insight.

3.2 Post-intervention feedback

We analyze the responses from our Reflections Survey sent to the participants one week after the DYP workshop to gauge workers' feedback about the workshop. Overall, 194 workers responded to this survey, which represents 26% of the participants. Workers express great satisfaction about the initiative, as shown in Figure A.3. The median score for the workshop engagement question is 4.4 out of a maximum score of 5.[7] Moreover, participants report having found a unifying group of words that inspire them, which still resonate with them now (the median is 5.5 out of a maximum score of 7).[8] Around 80% of participants share their purpose with family and friends, the team, and their line manager, and more than 80% of participants write down their purpose statement somewhere. Figure A.4 shows where workers write it down: most popular locations are the personal diary, the internal platform of the Company (Workday), and the phone and laptop screensaver.

Regarding the contents of the purpose statements, only 99 out of 194 workers answered the open-text question "Can you give us a story of how you have used your purpose statement so far either in the context of your job or outside of work?", limiting the scope of the statistical analysis we can do with these statements. However, a word frequency analysis helps convey how the intervention is broadly about "one's life" rather than solely about the current job at the company: 48% of statements are categorized as personal as opposed to work-related.[9] Figure A.5 shows that the top 5 words are work, people, help, life, and new.[10]

In Appendix Table B.1, we report some anonymous quotes from the focus groups that we conducted about the usefulness of the intervention and the purpose statements. Workers describe how being conscious of their purpose affects them (e.g., quote No. 1, 2 and 7) and how they act on their purpose (e.g., quote No. 3 and 6).

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[7]*Workshop Engagement* is measured by averaging these three questions: "Overall this workshop was a valuable investment of my time" (1-7); "I felt the facilitator was helpful engaging and prepared to run the session" (1-7);" Would you be interested in becoming a facilitator?" (0-1).

[8]*Purpose Discovery* is measured by averaging these two questions: "I managed to find a unifying purpose sentence or a group of words that inspired me" (1-7); "These words still resonate with me now" (1-7).

[9]The categorization comes from two research assistants independently manually coding the statements as personal versus work-related.

[10]Here are some examples of the responses to this question: *"I used my purpose statement at Company by proposing an environmental campaign project aside from launching new product"*; *"My Purpose is related to telling stories and as a marketeer I learn how to get better at telling stories everyday"*; *"I use my purpose in my everyday life, with my family, as a father, much more than in the context of my job"*.

4 Research design

4.1 Experiment

The experiment is based on the staggered roll-out of the DYP intervention. Employees were familiar with the fact that, due to logistical constraints, the firm could not offer DYP to everyone at the same time.[11] It was also common knowledge that all employees would be able to participate in the intervention at some point.

Participation was entirely voluntary, and neither HR nor managers could use them as criteria for high performance and promotion.[12] No employee was told that s/he was part of an experiment run by external academic researchers nor that an experiment was being carried out to evaluate the DYP intervention.

One employee from HR in each country acted as the Experiment Facilitator, i.e., as the main point of contact between the Research Team and the local organization of the intervention. S/he was in charge of communicating with the Research Team and ensuring that the DYP intervention was conducted according to the agreed execution principles. The Experiment Facilitator was responsible for sending over the lists of employees still to be invited to attend the DYP intervention, which the team randomized, and for the treatment group receiving the invitation emails. S/he was also responsible for ensuring that attendance at the DYP intervention would be carefully tracked and that all employees in the study sample would receive emails to complete the three surveys designed by the Research Team.

The research was carried out across 14 countries where the DYP intervention had not been extensively rolled out yet at the beginning of 2019.[13] The study sample corresponds to 2,967 workers in 14 countries. Figure III shows the 14 countries that participated in the experiment: Costa Rica, El Salvador, Ghana, Greece, India, Indonesia, Italy, Mexico, Nigeria, Philippines, Russia, Singapore, South Africa, and Thailand. In each of these countries, the Research Team obtained the list of employees not invited

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[11]The "Discover Your Purpose" (DYP) initiative started in 2017 and was rolled out among the managers at the top echelons of the multinational. Because of the huge success and positive feedback, it then trickled down to the rest of the managerial workforce and to the front-line workers.

[12]The take-up rate among managers (WL2+), which were not part of the experimental sample, in the 14 countries involved in this study was 68.3%.

[13]There was some variation in which stage of the workers' roll-out each of these 14 countries was in, with the share of the workers already invited to the intervention before the RCT ranging between 30% and 50%.

yet to the intervention and randomized it to create the treatment and control groups with a 50% split. The randomization is at the worker level, stratified by country and whether the worker is in the Customer Development (sales) function.[14] Figure IV illustrates the experimental design.

In practice, the only difference between the treatment and the control group is that the former received an email inviting them to participate in one of the DYP workshops occurring in the office within the next months. We followed the firm's existing practice of email inviting participants to the intervention. The control group did not receive any invitation email to sign up for a DYP workshop during the sample period. We agreed with the firm that the control group would only be invited after the end of the study period in December 2021. It was common knowledge among the employees at the firm that everyone would have the opportunity to attend the intervention at some point and that participation was entirely voluntary. In addition, historically, the actual workshop sign-up date had been dictated by calendar constraints.

The overall intervention experience is different from a team bonding exercise. In fact, in our sample, only 29% of the workers in the data do the workshop with at least one colleague.

Panel (a) in Appendix Table A.1 shows that the treatment and control groups are balanced in terms of baseline variables. Appendix Figure A.6 compares the demographics of the RCT sample with those of the 'work-level 1' employees outside of the RCT sample. The RCT sample has slightly more female, younger, and lower-tenure workers working in the Supply Chain function (compared to the Customer Development function) than the rest of the white collars in work-level 1.

Two facts provide support to the understanding that the roll-out of the intervention among the RCT participants was equivalent to that of the other workers. First, the take-up rate among the two groups is also very similar (65.3% in the RCT sample and 68.3% in the non-RCT sample). Second, Appendix Table A.2 compares the baseline performance of workshop attendees who were part of the RCT with those not part of the RCT. We do not find systematic differences in performance between the two groups at the baseline. We note that the lack of correlation between the email invitation and worker performance outside the RCT further reinforces the understanding

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[14]We stratified by belonging to the Customer Development function as HR told us that we could obtain function-specific productivity measures at the worker level for those employees working in sales.

that participation was never a criterion for promotion. This also helps alleviate concerns that the email may have been perceived as a signal of special recognition from management.

4.2 Estimation

Workers are observationally equivalent only at the time of intervention invitation, which they can choose to follow up on by signing up for a workshop. Because take-up is 65.3%, our preferred estimates are the Local Average Treatment Effects (LATE), but we also present Intention To Treat (ITT) estimates in the Appendix. We use the following specification for worker i in country c in year-month t:

$$y_{ict} = \theta \widehat{DYP}_{ict} + X_{ict}\beta + \psi_c + \eta_{ict} \tag{1}$$

where y_{ict} is the labor market outcome of interest, ψ_c is a vector of country fixed effects; and X_{ict} controls for a linear trend and whether workshop is held virtually. The indicator for having participated in the DYP intervention, $\widehat{DYP}_{ict}$, is instrumented with whether the worker received the invitation email, $Invited\ DYP_{ict}$.

The parameter θ measures the causal effect of participating in the DYP intervention provided that the email invitation (the treatment) is relevant, that is, it is highly correlated with DYP participation (the F-stat is > 10), and exogenous or orthogonal to η_{ict}, which is ensured by the randomization. As randomization is at the worker level (i), we use cluster the standard errors at the individual level.

For the surveys, we estimate a similar specification on the cross-section of workers that replied to the endline survey:

$$y_{ic} = \theta \widehat{DYP}_{ic} + X_{ic}\beta + \psi_c + \eta_{ic}$$

where y_{ict} is the survey outcome of interest, ψ_c is a vector of country fixed effects; and X_{ic} controls for whether workshop is held virtually. We standardize all survey outcomes using the baseline mean and standard deviation of the control group.

Panel (b) in Appendix Table A.1 shows how the participants (compliers) compare to the non-participants using baseline characteristics. Participants are more likely to

be female, have less tenure, be younger, and have a higher performance score.

5   Main findings

5.1   Worker exit and lateral moves

First, we examine the impact of the DYP intervention on quitting and lateral moves. In Table II we find that the intervention increases monthly exit by 0.7ppt (an 88% increase relative to the control group). It also increases the probability of the worker making at least one lateral move within the next two years in the firm by 6.8ppt. In contrast, there are no detectable effects on the probability of worker promotion. The evidence on the lack of effects of promotion is robust to splitting the sample by worker tenure years, indicating that low worker tenure at baseline cannot explain the null effect (see Appendix Table A.3).[15]

In Figure V, we assess the dynamics of the effects on exit. Worker exits are swift and occur within 6 months of doing the workshop. The fact that there are no differences in exit rates after 6 months suggests that the workers who exit due to the intervention are individuals who would have never left the firm otherwise. Hence, the intervention does not merely accelerate the rate of exit; it actually prompts certain employees, who otherwise would not have considered leaving, to exit the firm. Panel (b) looks at lateral moves, which are similarly rapid to occur; but, in addition, it is worth noting that they decline in the last semester, indicating that workers are more likely to remain in their jobs after the initial reallocation. This suggests that they are finding better job matches. In this respect, the evidence from the lateral moves connects to the findings from the multi-dimensional job matching literature that has examined the costs of mismatch along heterogeneous skill dimensions and job characteristics (Guvenen, Kuruscu, Tanaka and Wiczer, 2020; Lise and Postel-Vinay, 2020). Our results reveal an additional, important dimension of job matching – one's own sense of purpose – that typically remains unobserved in administrative data.

Does the intervention lead workers to sort into specific functions? We look at this in Appendix Figure A.9, where we plot workers' distribution across functions separately for treatment and control workers, and separately for baseline and endline. The

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[15]We report the ITT estimates in Appendix Table A.4.

overall distribution remains quite stable over time across the two groups, suggesting that there are no systematic patterns of directional moves originating from the DYP intervention. This is not surprising given the highly individual nature of the DYP intervention, which suggests that participants' lateral moves are shaped by their unique perspectives and circumstances, making a uniform effect on specific job moves unlikely to occur.

5.2 Performance of remaining workers

We begin to examine the impact of the DYP intervention on worker performance in Table III.[16] In Columns 1-4 of Panel A, we look at the manager's assessment of their workers' performance, the performance score, which is given annually and determines the workers' annual bonuses. It can range between 0 to 150, but practically, the firm uses it to divide workers into three main groups: bottom (< 80), standard (≥ 80 but < 125), and top performers (≥ 125). Column 1 shows that the average performance score increases by 3.9 points (a 3.82% increase relative to the control group). The next columns help us understand where this increase in performance is coming from: the share of bottom performers decreases, and the share of the median performers increases by the corresponding magnitude. At the same time, there is no change in the share of top performers. Column 5 looks at workers' self-assessment of their own effort from the survey question "I am inspired to go the extra mile in my job" and shows that there is an increase of 0.275 S.D. six months after the intervention.

In Panel B of Table III, we look at worker bonuses and worker pay. In Column 1, we show that worker bonuses significantly increase (an increase of 0.17 S.D.). We take the inverse hyperbolic sine transformation of the bonus since workers can get zero bonus if their performance is particularly poor. Bonus pay represents 10% of fixed pay on average and is the way the firm rewards worker performance each year. In Columns 2-4, we look at the probability that the bonus is above different thresholds, such as above zero, the 25th percentile, and the median of baseline bonus. Bonus increases in all cases. In Column 5, we look at worker fixed pay, which increases by roughly 4.4%. The increase in worker pay manifests at the 6-month window and is sustained until two years after (Figure V).

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[16]We report the ITT estimates in Appendix Tables A.5.

In Table IV, we draw on the subsample of field sales workers to provide evidence of whether such a performance increase is backed up by an increase in sales productivity, defined in all countries as achievement over target averaged over several product-specific KPIs. Some examples of sales targets include growth of sales, product placement, on-shelf availability, additional exhibitions, and the number of orders vs. total visits each month. We standardize this measure within the country and product group.[17] The IV estimate in the second column of Table IV shows that the treatment increases sales productivity by 0.24 S.D. (p-value <0.05), which, assuming a standard normal distribution, is equivalent to improving average worker productivity from the 50th percentile to the 60th percentile or by 15%.

5.3 Overall impact on worker performance

Thus far, we have only analyzed the intervention's impact on the treated workers who stay. Finding a positive impact is insufficient to conclude that the firm's productivity increases. It depends upon the average productivity of the replacements. In Appendix Tables A.6 and A.7, we recalculate the impact of the intervention on productivity, replacing the productivity of the employees who leave with the average productivity of new hires in the same job and country. In Appendix Table A.6, we find that the increased performance score goes down from 3.9 (col. 1) to 3.6, resulting in 90% of the former estimate. Similar magnitudes are obtained for bonus, pay, and sales productivity as reported in Appendix Table A.7.

A separate question is the extent to which the performance effects documented in sub-section 5.2 are due to worker selection versus higher worker effort. While we do not have the data on the productivity of the workers who left the firm, we can calculate some lower bounds. In Appendix Tables A.8 and A.9, we assume that all the workers who leave will perform at the 15% level of the baseline productivity distribution in their country. When we do so we find that the increase in the performance score does go down from 3.9 (col. 1) to 1.9, resulting in 49% of the former estimate. For bonus and pay, the estimates are actually slightly larger when imputing the values for the bottom

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[17]While most of the data come from the global personnel records, sales data is managed independently in each of the countries. The data needs to be separately collected on a country-by-country basis by liaising with the countries' local sales teams. A second data challenge is that the field sales teams are increasingly outsourced to contractors.

15% performers. This is because the workers who leave tend to be low performers with relatively high pay and longer average tenures. We revisit this finding in Section 6. For sales productivity (Appendix Table A.9), the estimate drops to a null effect.

As an alternative strategy to separate selection from effort, we use a worker fixed-effects specification in the spirit of Lazear (2000). In particular, to disentangle selection and job reallocation from effort, we estimate the within worker and within worker-job change in worker bonus by adding worker and worker∗job fixed effects, respectively, to the model in equation 1.[18] Figure VII illustrates the results of this decomposition: the higher orange bar indicates the bonus effect when estimating specification 1 and the blue bar denotes the coefficient estimate when adding worker fixed effects (to account for worker exit) and worker*job fixed effects (to also account for lateral moves). When adding worker fixed-effects, the bonus estimate drops to 0.36 or 64% of the main effect. When adding worker*job fixed effects, it drops to 50% of the main effect. Hence, worker selection accounts for 36% of the total effect on bonus, and overall worker reallocation that also takes into account lateral moves explains 50% of the overall effect, with the remaining variation coming from changes in worker effort or behavior.

Overall, these exercises indicate that worker selection explains at most 50% of the treatment effects on performance.

5.4 Comparison of causal to observational evidence

As previously noted, the firm has been running the DYP intervention since 2017, initially rolling it out to managers in the highest ranks. Due to its wide success, after the senior managers, it was introduced to middle managers and then to lower level white collar workers. Our randomized intervention started in 2019 among the 14 "virgin countries" that had not yet completed their rollout.

We can compare the effects from the observational evidence -the workers who self-selected to do the intervention- against the ones from the RCT who got invited randomly. Because the former sample is much larger, we take a bootstrap sample with 100 iterations and the same number of workers as the RCT. Figure X compares the intervention effects between the RCT group and the non-RCT sample. It shows that the

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[18]We run this fixed effects exercise on worker bonus rather than the performance score because, unlike pay, the performance score does not behave as a continuous variable and shows substantial bunching at the threshold levels of the three performance brackets in place at the firm.

non-experimental evidence yields nearly opposite conclusions: participating in the intervention decreases exit and lateral moves, decreases the share of bottom performers, and increases both the medium and top performers' share. The comparison between the experimental and observational estimates acts as a compelling argument for establishing causality rather than solely relying on observational data for researchers in social sciences and practitioners.

The differences in estimated effects on exit and lateral moves between our RCT sample and the observational sample suggest that those who voluntarily take part in the workshops are more likely to find their current work aligned with their personal purpose. In other words, workers suffering from the tacit dissonance between their purpose and their current job are likelier to select away. The fact that some workers may want to stay away from the workshop speaks to the large body of theoretical work on information avoidance (e.g., see Golman, Hagmann and Loewenstein (2017) for a review). This 'negative selection on gains' is also consistent with past findings in the literature; for instance, in evaluating a wellness program, Jones, Molitor and Reif (2019) found that those who participated in the wellness program incurred lesser medical expenditures and engaged more in healthier activities (e.g., running a marathon) in the year leading up to the experiment, in comparison to those who did not participate. Similarly, in an experiment that compares compulsory and voluntary training programs, Sandvik, Saouma, Seegert and Stanton (2021) find that those who opted out are the ones that would have seen the largest benefits.

Comparing the effects between the observational evidence and the RCT is also useful to get a sense of what were the firm's initial priors before the RCT. In particular, the firm executives thought that the intervention led to higher retention and an increase in the top performers and, on this basis, they supported its roll-out. Hence, they did not think of the intervention as a tool to induce some employees to exit or move laterally, which are instead the causal effects we document.

Finally, the fact that the firm has been implementing this intervention for an extended period prior to our experiment is important to consider when interpreting our results. Because of the long-standing implementation, the DYP intervention is well-integrated into the firm's operations and culture. Therefore, our experimental estimates do not capture the effects of a newly introduced initiative or a broader shift in

the firm's overall strategy. Instead, we are evaluating the specific outcomes of the intervention in a relatively stable environment where the broader organizational strategies have remained consistent. This stability allows us to isolate the effects of the intervention more effectively, minimizing the influence of other potential changes within the firm that could confound our results.

6 Mechanisms

We develop a very simple model to illustrate the psychological mechanism through which the relatively long-lasting impacts that we have found can take place, and then we test the implications of this model.

6.1 Theory

Using a principal-agent model, we propose that meaning at work changes the cost of effort. Given the nature and the brevity of the intervention, however, it is difficult to claim that it alters individual preferences. Therefore, we assume that the intervention makes existing preferences more salient.

   We capture this idea in the most straightforward extension of the textbook agency model and then check whether the implications of this model are compatible with our findings. A principal (the firm) hires an agent (the employee) to perform a task. Effort is costly, which creates a wedge between the interests of the two parties, and is non-contractible. The extent to which work is costly, however, differs across workers, where the parameter $m_{ij} \geq 0$ captures the alignment between employee's i and job j: the higher the alignment with a specific job, the lower the cost. We assume that the DYP intervention increases the salience of the alignment component. Thus, let the cost of effort be:

$$c_i(e) = \frac{e^2}{2(1 + p_i m_{i1})} \tag{2}$$

where $0 \leq p_i \leq 1$ is the extent to which an individual is aware of how their own preferences align with job j.[19] By bringing employees to reflect on their lives' stories

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[19]The use of p in modeling awareness is for methodological convenience. For example, one could extend the model by breaking the job into N different aspects, such as 'how good is the work-life balance',

and articulate what truly matters to them, the intervention increases p_i.

As an illustrative example of how the intervention "switches on" own sense of meaning, we take a video interview with the head of human resources, which is shown during the workshop. His purpose statement is "to be a firework artist" reflecting his childhood passion for fireworks and his partly rebellious spirit. When reflecting on whether his purpose is connected to his current job, he saw a connection that the beauty of fireworks arose from coordinating many individual explosions, like a human resource manager whose success depends upon the ability to coordinate the creativity of many employees.

We assume that output is linear in effort and ability (θ_i), that the agent is risk-neutral, and that the principal uses linear contracts of the form $S_1 + bf(\theta_i, e)$, where $S_1 > 0$ is a fixed salary, $b > 0$ is the performance reward (financial or otherwise), and $f(\theta_i, e) = \theta_i e$ is the output.[20] Each worker chooses e_i to maximize their expected utility:

$$U(e_i) = S + b\theta_i e_i - \frac{e_i^2}{2(1 + p_i m_{i1})} \tag{3}$$

where e is effort, S is the salary. Let $e^* = argmax(S + b\theta_i e - c_i(e))$. Solving for the optimal effort:

$$e^* = \xi(m_{i1}, p_i) = b\theta_i(1 + p_i m_{i1}) \tag{4}$$

In equilibrium, employees work for the firm if the utility is larger than what they would get in their outside option, which could be in a different job within the same firm or elsewhere. Assume, for simplicity, that the outside option pays $S_0 + bf(\theta_i, e)$ and gives meaning m_{i0}, then individual i works job 1 if and only if:

$$(S_1 - S_0) \geq \frac{p_i b^2 \theta_i^2}{2}(m_{i0} - m_{i1}) \tag{5}$$

'how data-driven is the role' etc. Then, the meaning parameter, m_{ij}, is replaced by a $N \times 1$ vector that weights different job aspects, but with some noise. The intervention increases awareness by reducing the noise. For greater clarity, we use this simpler setup.

[20]This set-up raises the standard question of why the principal does not sell the firm to the agent. Thus, we assume that the agent is wealth-constrained.

that is if her meaning is at least:

$$m_{i1}^* = -\frac{2(S_1 - S_0)}{p_i b^2 \theta_i^2} + m_{i0} \tag{6}$$

Note that by helping employees discover their purpose, the intervention not only reveals how meaningful the worker's current job is but also how meaningful other jobs are. We have implicitly assumed that the principal cannot adjust the parameters of the contract after the intervention. Not only is this what we observe in practice, but it is also a necessary condition for the workers to participate voluntarily in the intervention. If employees expected the firm to take advantage of the intervention to pay them less, they would not participate voluntarily. Obviously, there is a credibility issue. This is one of the reasons why not all firms can take advantage of this kind of intervention: they must be credible vis-a-vis their workers.

In this framework, the treatment can be seen as an increase in the p_i of the treated individuals. Since the treatment is randomized, we expect that the average p_i of the treated group (p_T) is higher than the average p_i of the control group (p_C).

We obtain the following results:

Result 1, Selection:

The treatment raises the average productivity through selection.

After the treatment, an employee will quit if and only if

$$p_C \frac{b^2 \theta_i^2}{2}(m_{i0} - m_{i1}) \leq (S_1 - S_0) < p_T \frac{b^2 \theta_i^2}{2}(m_{i0} - m_{i1}) \tag{7}$$

The employees with an alignment of their preferences with their current job m_{i1} higher than with any other alternative occupation ($m_{i1} > m_{i0}$) will never quit after the treatment. Thus, only employees with a relatively low m_{i1} ($m_{i1} < m_{i0}$) will leave. Hence, the average m_{i1} of the employees who stay goes up. Since productivity is a linear function of m_{i1} (see Equation 4), the departure of some employees will increase the average productivity of the remaining ones.[21]

Result 2, Effort:

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[21]For completeness in showing this result, one may assume that m_{i0}, m_{i1} and θ_i are independent of one another and across different i, and follow a uniform distribution $U[0,1]$.

The treatment increases the productivity of the employees who stay.

For individuals who were already at job j before the intervention:

$$e_T^* = b\theta_i(1 + p_T m_{i,j}) > b\theta_i(1 + p_C m_{i,j}) \tag{8}$$

Since $p_T > p_C$, i's effort after treatment is larger than the effort of an identical individual who has not been treated.

Result 3, Utility at work:

Worker utility is higher in the treatment group.

When we substitute a worker's optimal effort, worker i's utility (Equation 3) becomes

$$U(p_i, \theta_i) = S + \frac{(b\theta_i)^2(1 + p_i m_{i1})}{2} \tag{9}$$

which is increasing in p_i. Hence, the result.

Result 4, Flattening of the meaning-pay tradeoff:

The treatment drives out highly paid-low meaning workers. As a result, the meaning vs. pay trade-off flattens out.

The intuition is simple. Before the treatment, the firm has two types of workers: those who like the job more than any alternative (high m_{i1}) and those who like it less (low m_{i1}) but stay because their S_i is relatively high. The type that is not present are workers who do not like the job and are not paid well because they will never choose to stay at the company.

After the treatment, the first type of workers will never quit because their salary has not changed and their alignment with the current job has become more salient, and thus will be happier (Result 3). Thus, the only workers quitting are workers with a high salary but a low m_{i1}. In Appendix Figure A.10, we plot the worker meaning, m_{i1}, against fixed salary, S_{i1}. Since, after the treatment, there are fewer people with high pay and low meaning, the frontier curve is going to be flatter: the workers remaining in the firm need to trade-off less compensation for lost meaning, as their utility from being aligned with the current job has increased.

6.2 Evidence

In Table III, we have already shown that the average productivity of the remaining employees went up after the treatment (Result 1). Moreover, in sub-section 5.3, we have shown that there is also a treatment effect (Result 2). In particular, Figure VII illustrates that worker reallocation explains 50% of the overall effect, with the remaining variation coming from changes in worker effort or behavior.

To test Result 3, we need some measure of happiness after the treatment. In Appendix Table B.2, we detail the survey questions we asked 6 months after the treatment and how they are aggregated into indices. We note that, because the higher worker exit occurs within 6 months of participating in the intervention, the responses to the endline surveys are only available for the workers who remain in the firm. Table V presents the results. After the intervention, workers express higher meaning, job satisfaction, and life satisfaction. The results are unchanged when controlling for worker pay (see Appendix Table A.10).

To understand further how the intervention affects workers' sense of meaning, we examine a survey question that asks workers to rank 12 job priorities. Figure A.7 presents the cumulative distribution functions for treatment and control groups separately. The answers are reverse-coded so that rank 12 is the highest and rank 1 is the bottom. The plots concretely convey that treatment and control groups state different job priorities. The treatment distribution first-order stochastically dominates the control one for the categories of helping others, being useful to society, growing and learning new skills, opportunities for advancement, and high prestige (Panel a). Conversely, the control distribution first-order stochastically dominates the treatment one for work-life balance, flexible time, job security and independent work (Panel b).

We analyze the role of meaning behind the increase in performance by performing a mediation analysis following the method by Dippel, Gold, Heblich and Pinto (2019). The underlying intuition is that the treatment effect of the intervention on outcome Y (performance score) can be decomposed as operating through the mediator M (worker meaning):

$$\frac{dY}{d\text{DYP}} = \frac{\partial Y}{\partial M}\frac{\partial M}{\partial \text{DYP}} + R \tag{10}$$

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where R is the part of the treatment effect which cannot be attributed to the mediator. We take the performance score as the outcome, Y, and the worker meaning as the mediator, M, measured 6 months after the intervention. We find that worker meaning contributes to 52% of the total effect of the intervention on the performance increase. This links back to the discussion in subsection 3.2 of how the intervention, by equipping workers with the heuristic of the purpose statement, helps them keep their own sense of meaning top of mind. As a by-product, worker performance increases.

Finally, we test Result 4 on the well-known tradeoff between pay and a meaningful job.[22] Figure VIII evaluates the impact of the treatment on the meaning-pay tradeoff by plotting an individual's sense of meaning at work against her pay. The plot is based on the cross-section of workers who replied to the endline survey: the dashed line represents the treatment group, and the solid line the control one. It shows that the intervention's treatment effect flattens the pay and meaning tradeoff. Employees in the treatment group now require less additional compensation to offset any perceived loss in job meaning, as their sense of meaningfulness of their job has been strengthened by the intervention. A formal test for the difference in the slope for treatment yields a coefficient estimate of 0.153 with s.e.=0.078 and p-value=0.05. We also note that, in Figure VIII, the treatment's curve is shifted up on top of pivoting, leading to a different intercept from what is predicted by the theoretically derived money-meaning frontier depicted in Appendix Figure A.10. The difference between the two is that the money-meaning frontier derived from theory depicts a scenario where the workers are indifferent. This needs not to be the case in reality, and in fact, we find that the workers in the treatment group experience an outward shift in the frontier, as meaning levels increase across the board.

The weakening of the pay-meaning tradeoff may occur because the highest-paid among the low performers either leave the firm or report having higher meaning. Table VI splits the sample into low, medium, and high performers based on the annual performance score at baseline and tests for heterogeneous treatment effects by terciles of baseline pay. Columns 1-4 consider worker exit and columns 5-8 look at meaning

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[22]The assumption that monetary compensation is what mainly matters for motivation at work is at odds with many observations. For instance, Stern (2004) shows that scientists pay to be scientists. Moreover, a long tradition in organizational behavior and organizational psychology argues that individuals get meaning from their work that extends beyond financial compensation (for a review, see Rosso et al. (2010)).

(among those who do not leave the firm). Zooming in on columns 1 and 5 that only consider the low performers, they show that exit and meaning are highest for the highest paid workers. We find a similar pattern among the medium performers, where the differences are smaller but more precise due to the larger sample size. Since there are very few low performers, we also run a model where we combine the low with the medium performers (columns 4 and 8), which adds statistical power to the analysis. Thus, the flattening of the curve is due to the exit of workers who are highly paid but poorly motivated, as predicted by our model.

7 Discussion

7.1 DYP and social norms

It is difficult to explain how a relatively short intervention has such an impact on workers unless it re-activates some pre-existing beliefs and preferences that have been suppressed by society. It is well recognized (see, for example, Mokyr (2001)) that historically, education has been designed to make workers more susceptible to the incentives that the factory needed. It homogenizes people, making them compartmentalize personal aspects away from work.

We can think of the intervention as an attempt to undo this homogenization. It aims to induce workers to bring themselves (i.e., their pre-existing preferences) into work. By spotlighting the individual's *unique* experiences and life stories, the intervention offers a platform for workers to explore and embrace their authentic preferences, unencumbered by the constraints imposed by society.

To assess the plausibility of this interpretation, we analyze how it affects gender roles. Gender is a predominant example of social identity. Gendered norms, often deeply ingrained in societal expectations, can dictate specific behaviors for women and men in the workplace, even when these are not aligned with individuals' preferences. If the intervention offers a platform for workers to embrace their authentic preferences, unencumbered by social constraints, we expect the intervention to close gender gaps in job priorities.

Figure IX revisits the ranking of job priorities and plots the gender gap in each job priority separately for treatment and control groups. In 9 out of 12 dimensions, the

gender gaps in priorities shrink for the treatment group. This suggests that the intervention effectively alters traditional gender-based priorities within the workplace.

A striking practical implication of this change is reflected in taking parental leave, a domain often riddled with gender stereotypes. In particular, Table VIII suggests that men in the treatment group are more likely to take parental leave (5.93%, p-value= 0.113), and the converse happens to women. Men take 0.8 more months of parental leave while women take 1.4 fewer months; the coefficient on the gender gap, men minus women, is 2.214 (p-value<0.1). Although the estimates are imprecise and we cannot reject the null of equality, this closing of the gender gap in parental leave occurs especially in countries where female labor force participation is lower and gender norms are more traditional. While these findings are suggestive, they underscore how the intervention can help challenge and reduce gender stereotypes related to caregiving and labor division.[23]

Unfortunately, we do not have information on the number of kids per employee, but the take-up of parental leave indicates that there is both a higher chance of taking any parental leave at all and of taking a longer time on parental leave. This pattern hints at a meaningful shift in personal decision-making processes, challenging and reshaping potentially deeply entrenched gender norms and preferences within professional environments.

7.2 DYP and social effects

DYP and individualism. We modeled the intervention's impact as an increase in the importance of alignment between individuals' goals and their jobs, as it encourages individuals to reflect on what truly matters to them and how well their current roles align with these priorities. At its core, it is based on own introspection and on prioritizing personal values, preferences, and career aspirations. Could this emphasis on personal alignment lead to a rise of individualism at the expense of social cohesion?

To explore this potential trade-off, we included several questions in our endline survey based on the "Adapted Inclusion of Others in Self (IOS) scale" (Aron, McLaughlin-Volpe, Mashek, Lewandowski, Wright and Aron, 2004), which measures the extent to

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[23]Compared to their control group counterparts, men are 7% (2%) more likely than women to take parental leave in countries with below (above) median female labor force participation rates.

which individuals perceive community- and self-interest as overlapping (for more details, see Appendix B). Table VII shows that workers report higher alignment with colleagues and the company. There is higher self-reported overlap with colleagues and the company, team collaboration, and a closer relationship with the manager.[24] This suggests that focusing on personal alignment not only coexists with a sense of collective belonging but may actually enhance it.

As a placebo question, in the last column, we look at whether the treatment increased the overlap of goals with the community. If our understanding of the mechanism through which the intervention operates is correct, we should not expect any effect. Indeed, we see no differential effects between treatment and control groups on this dimension. These results are evidence against the intervention leading to a greater sense of individualism at the expense of social cohesion in the workplace.[25]

DYP and network effects. A possible way through which workers in the treatment group secure new job matches is by benefiting from network effects that arise through interactions with other workshop participants. If so, we should observe an increasing probability of sharing the same sub-function with workshop participants following the workshop. In Appendix Figure A.8, we plot the fraction of workshop participants that share the same sub-function and office with at least one other participant in the workshop. We compute this proportion at different time windows since the workshop. The share remains broadly constant over time at roughly 60%, therefore suggesting the treatment effects are not because of network effects.

DYP and spillovers on the control group. While positive spillovers would lead to an underestimate of the impacts, negative spillovers could magnify the workshop impacts. We do not deny the possibility of some treated workers speaking highly of the workshop and their experience, thereby influencing colleagues in the control group (indeed, as mentioned earlier, some used their purpose statements as their phone/laptop screensavers). However, we believe the intervention's main effect is through the meaning-making enabled by drawing connections between crucial life events that are highly personal, and individuals in the control groups are unlikely to reach this 'Eureka moment' just by reading their colleague's one-liner purpose state-

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[24]These results are unchanged when we control for pay, as shown in Appendix Table A.11. Please refer to Appendix B for more details about the overlap question.

[25]We report the ITT estimates in Appendix Tables A.12 and A.13.

ment without investing themselves into the pre-work and the workshop. Furthermore, the workshop is not designed to shape workers into amicable coworkers to each other. We do not expect to find negative spillovers either. Negative spillovers due to the "morale effects" of not being selected for treatment are highly improbable because of how the company executed the roll-out, as detailed in Section 4.[26]

Indeed, we find no evidence of spillovers (either positive or negative) to the control group as shown in panel (a) of Appendix Table A.14. In particular, the share of colleagues who are in the treatment group does not correlate positively with performance and salary. This underscores the fact that the intervention is fundamentally a personal experience, which one cannot fully understand until actually attending it.

We also check whether the higher exit of treated colleagues caused by the intervention could have indirectly impacted the control group. In panel (b) of Appendix Table A.14, we look again at the sample of control group workers and check whether their performance variables are affected by the share of treated colleagues who exit the firm in that year. We do not find evidence of the exit share significantly impacting the control group workers' performance. However, the estimates are positive, implying that the departure of colleagues might potentially limit the full treatment effects we could otherwise observe.

7.3 Cost-benefit analysis

The intervention is expensive in terms of lost work days and leads to higher turnover and associated costs. Thus, even if it increases workers' productivity, it might not be in the firm's economic interest.

To evaluate the profitability of the DYP intervention we conduct a cost-benefit analysis from the shareholders' perspective. As we could not obtain measures of the revenues or costs directly from the Company, we base our calculations on public income statement data in 2019 from the Orbis database. All estimates are in USD currency. We define the average cost of the intervention as the cost required to cover one worker. The DYP workshop lasts for 8 hours, and each workshop facilitator can cover 4 people at the same time. We compute the implied benefits and costs of one year that arise

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[26]In particular, we specifically emphasize that the intervention program had been established in all countries before the beginning of the RCT, as well as its sequential roll-out which was required due to logistical reasons.

from one worker attending the workshop.

Regarding the benefits of the intervention, we use the increase in sales productivity of 15% as a benchmark for the increase in worker productivity. As a revenue measure of worker performance, we use again the employee value added from Orbis. Moreover, we subtract the 4% increase in worker wage. Finally, we account for the lower retention rate of the treatment group compared to the control group. Hence:

$$Benefit\ of\ DYP = 0.928 * (\ \underbrace{(80,301 * 0.15)}_{increase\ in\ productivity} - \underbrace{(47,857 * 0.04)}_{increase\ in\ wages}) = \$9,401$$

The intervention costs entail the one-day foregone production of the participants involved and the replacement costs of the workers who exit after the intervention. We use value added per employee for the foregone production costs, which is 80,301 in 2019. As we need an estimate for one working day only, we divide it by 250 working days per year. Moreover, because the workshop entails one facilitator for every 4 workers, we multiply it by 1.25. As replacement costs, we assume that, on average, a worker's exit costs to the firm 100% of the average annual worker salary. Given that HR gave us the range of replacement costs for 'work-level 1' workers to be between 1/3 and 2/3 of the average worker salary, we consider this to be an upper estimate. We use the costs of employees and the number of employees from Orbis to compute the replacement costs; the average employee costs \$47,857 to the firm. From the estimates in Table II, the treatment group has a 7.2ppt higher annual exit than the control group.[27] Hence:

$$Cost\ of\ DYP = \underbrace{(80,301/250) * 1.25}_{daily\ cost} + \underbrace{(47,857 * 0.072)}_{replacement\ cost} = \$3,848$$

We then compute the one-year return on investment (ROI) per employee with a discount rate of $\delta = 0.1$ as:

$$Net\ Benefit\ of\ DYP = (9,401/1.1) - (3,848) = \$4,699 \Rightarrow ROI = \frac{4,699}{3,848} > 122\%$$

The net rate of return is thus around 1.22 times its cost.

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[27]Table II reports monthly estimates, so we multiply the coefficient on exit by 12 months (0.007pp*12= 7.2pp).

The intervention costs are relatively low given it is run internally and does not involve external consulting firms. However, we can compare our estimates about the benefits of the intervention with the costs of some of the most reputable consulting firms (McKinsey & Company, KPMG, Deloitte Consulting, and Ernst & Young) as proxies for firms' willingness to pay for external consulting services. In particular, we use these well-known consulting firms' price lists as contractors to the government published on General Services Administration (GSA).[28] We use the higher range of figures to offset potential differences in the contract prices between government and private firms.

Table A.15 summarizes the costs among these consulting firms for a 1 Partner/Associate Partner equivalent and 5 consultants equivalent, which would cover an average work-shop of 20 employees.[29] The average cost of bringing in external workshop specialists amounts to \$797.53 per attending employee. Using the way we defined *Cost of DYP* earlier, the estimated cost is given below:

$$Cost\ DYP_{External} = \underbrace{80,301/250}_{daily\ cost} + \underbrace{797.53}_{external\ consulting} + \underbrace{(47,857*0.072)}_{replacement\ cost} = \$4,564$$

Note that we no longer use the 1.25 multiplier for the daily cost as the consultants now act as the workshop facilitators. Even when outsourcing the intervention to external consulting companies, the estimated cost is still well below the estimated benefits of \$9,401. These estimates indicate that the benefits of the intervention outweigh these external costs, which can be interpreted as a proxy for firms' willingness to pay, by a considerable margin.

Taking stock, the DYP intervention led to an increase in workers' salary and mean-ing, resulting in an outward shift of the money-meaning frontier, as documented in Section 6. Additionally, it delivered a significant return on investment (ROI) for the firm. The combination of positive worker outcomes and the firm's financial gains sug-gests that the benefits of the intervention were shared between both parties. This is

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[28]They can be found on GSA eLibrary Contractor Listing. All the price lists are retrieved on January 16th, 2024. Where there is pricing for multiple years (e.g., 2023, 2024, and 2025), we always use the earliest year possible.

[29]We assume the partner will be responsible for creating the curriculum and supervising the work-shop implementation, whereas the five consultants will be responsible for running the workshops. This implies the given team structure will only cover 20, instead of 24 employees. The assumption will only increase our estimated average cost and lower the estimated net benefit.

particularly noteworthy, as the success of the intervention depends on the firm not capturing the entire surplus value, but rather credibly committing to allowing workers to retain a portion of the rents generated.

8   Conclusion

We study a workplace intervention that incorporates principles of logotherapy – helping employees engage in meaning-making and identify what truly matters to them (Frankl, 1985) – through the sharing of personal stories. We find that the intervention increases exit, lateral moves, and the performance and happiness of the people who stay. The results are consistent with the intervention reducing the cost of effort of the employees who choose to remain in the firm.

It is important to appreciate how this intervention differs from the more common forms of corporate training that aim to instill the *corporate purpose* amongst employees.[30] As implied by its name, corporate purpose takes a top-down approach, with the company defining the purpose and persuading its employees to adopt it as their own. In contrast, by its very name, the "Discover Your Purpose" intervention is meant to help employees realize the personal meaning that they get out of every activity and crystallize it in their *own* purpose. The intervention enables individuals to see connections between their true selves and aspects of their lives (including but not only their professional ones), that, once seen, cannot be unseen.[31] The "epiphany" that comes out of the intervention gives people a mental causal model that changes what their work means to them and, hence, how they approach their job.

This mechanism explains why a relatively short intervention can have such a long-lasting effect. First, it is a discovery of your own true goals, not an imposition of somebody else goals. In this way, the intervention empowers workers to become principals of themselves. Second, once this new mental causal model is seen, it cannot be unseen. Third, it asks participants to craft precise purpose statements and encourages

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[30]For more on corporate purpose, see Bartlett and Ghoshal (1994) and Gartenberg et al. (2019).

[31]An intuitive way to envisage the intervention's mechanism can be the 'wooden vs metal chair' comparison in Castegnetti et al. (2021), where one would see the stark difference between the two chairs when prompted to consider their abilities to prevent hypothermia in a 'Cast Away' like scenario. In other words, the potential of a wooden chair to serve as a heat source does not appear out of a vacuum or perish based on one's thinking; the thought process helps to connect with this novel use.

them to write them in places that act as constant reminders.

This is important because one's own deeper sense of purpose may not always be top of mind. There are cognitive bandwidth limitations and attention constraints (Mullainathan and Shafir, 2013; Simon, 1955), stress (Dean, Schilbach and Schofield, 2017), norms, and identity/career concerns (Cohn, Fehr, Herrmann and Schneider, 2014). Finally, the "living own purpose" culture is pervasive and deeply ingrained within the MNE, serving as a continuous nudge to all participants.

We estimate the net return of MNE's investment in DYP intervention to be at least 122%. Such a large profitability raises the question of why more firms are not doing these kinds of interventions. In fact, many do. Duke University, MIT, and the University of Michigan offer workshops in the same spirit as DYP, and so does IBM. Many other firms (like Deloitte, KPMG, and PWC) have courses on purpose, but where the purpose is more top-down, as in Bartlett and Ghoshal (1994) and Gartenberg et al. (2019). Thus, most firms are experimenting with the use of purpose, but there is no consensus on what works best. Our paper is the first to demonstrate causal impacts of the "Discover Your Purpose" intervention.

Our analysis explains why not all firms can successfully implement this type of intervention. First, the firm must be credible in its commitment not to use (let alone abuse) the information revealed during the intervention and not to exploit the greater alignment of the employees who stay to cut bonuses and wages. Second, the intervention is effective only if individual purpose becomes a company-wide culture. Not all firms can easily do so.

Our results hold significance in the coming future. Labor productivity has been stagnant for a long time (Adler, Duval, Furceri, Çelik, Koloskova and Poplawski-Ribeiro, 2017; Decker, Haltiwanger, Jarmin and Miranda, 2017; Fernald, Inklaar and Ruzic, 2023). In addition, as Ferrazzi and Clementi (2022) explains, the post-COVID-19 "Great Resignation" reflects a deeper shift: "Pandemic life forced everyone to re-examine their personal and professional priorities. Remote work alerted us to the possibility of decoupling jobs from geography. And a seller's labor market empowers us to pursue it. It's a personal awakening incubating an exploratory movement that is reshaping how and why we work, live, and think about our futures."

Most importantly, the job of the future demands more intense but also more differ-

entiated individual effort. The one-size-fits-all approach does not work anymore; instead of breaking down tasks into simpler units ("deskilling"), we now see companies investing in "upskilling". Thus, firms are seeking new human resource approaches to embrace and benefit from individual diversity. In this context, the "Discover Your Purpose" intervention that we study in this paper, which the firm is planning to keep as a cornerstone of its corporate strategy for the foreseeable future, presents itself as a compelling option.

9 References

Adler, Gustavo, Mr Romain A Duval, Davide Furceri, Sinem Kiliç Çelik, Ksenia Koloskova, and Marcos Poplawski-Ribeiro, *Gone with the headwinds: Global productivity*, International Monetary Fund, 2017.

Akerlof, George A and Rachel E Kranton, "Identity and the Economics of Organizations," *Journal of Economic perspectives*, 2005, *19* (1), 9–32.

Akerlof, Robert, Niko Matouschek, and Luis Rayo, "Stories at work," *AEA Papers and Proceedings*, 2020, *110*, 199–204.

Ariely, Dan, Emir Kamenica, and Dražen Prelec, "Man's search for meaning: The case of Legos," *Journal of Economic Behavior & Organization*, 2008, *67* (3-4), 671–677.

Aron, Arthur, Elaine N. Aron, and Danny Smollan, "Inclusion of Other in the Self Scale and the Structure of Interpersonal Closeness," *Journal of Personality and Social Psychology*, 1992, *63* (4), 596–612.

__ , **Tracy McLaughlin-Volpe, Debra Mashek, Gary Lewandowski, Stephen C Wright, and Elaine N Aron**, "Including others in the self," *European review of social psychology*, 2004, *15* (1), 101–132.

Bartlett, Christopher A and Sumantra Ghoshal, "Changing the role of top management: Beyond strategy to purpose," *Harvard business review*, 1994, *72* (6), 79–88.

Bénabou, Roland, Armin Falk, and Jean Tirole, "Narratives, imperatives, and moral reasoning," Technical Report, National Bureau of Economic Research 2018.

Besley, Timothy and Maitreesh Ghatak, "Competition and incentives with motivated agents," *American economic review*, 2005, *95* (3), 616–636.

Bordalo, Pedro, Nicola Gennaioli, and Andrei Shleifer, "Memory, attention, and choice," *The Quarterly journal of economics*, 2020, *135* (3), 1399–1442.

Bruner, Jerome, "Life as narrative," *Social research: An international quarterly*, 2004, *71* (3), 691–710.

Cassar, Lea and Jesper Armouti-Hansen, "Optimal contracting with endogenous project mission," *Journal of the European Economic Association*, 2020, *18* (5), 2647–2676.

__ **and Stephan Meier**, "Nonmonetary incentives and the implications of work as a source of meaning," *Journal of Economic Perspectives*, 2018, *32* (3), 215–238.

Castegnetti, G, M Zurita, and B De Martino, "How usefulness shapes neural representations during goal-directed behavior," *Science advances*, 2021, *7* (15), eabd5363.

Chandler, Dana and Adam Kapelner, "Breaking monotony with meaning: Motivation in crowdsourcing markets," *Journal of Economic Behavior & Organization*, 2013, *90*, 123–133.

Chater, Nick and George Loewenstein, "The under-appreciated drive for sensemaking," *Journal of Economic Behavior & Organization*, 2016, *126*, 137–154.

Chen, Beiwen, Maarten Vansteenkiste, Wim Beyers, Liesbet Boone, Edward L. Deci, Jolene Van der Kaap-Deeder, Bart Duriez, Willy Lens, Lennia Matos, Athanasios Mouratidis, Richard M. Ryan, Kennon M. Sheldon, Bart Soenens, Stijn Van Petegem, and Joke Verstuyf, "Basic Psychological Need Satisfaction, Need Frustration, and Need Strength across Four Cultures," *Motivation and Emotion*, April 2015, *39* (2), 216–236.

Cohn, Alain, Ernst Fehr, Benedikt Herrmann, and Frédéric Schneider, "Social comparison and effort provision: Evidence from a field experiment," *Journal of the European Economic Association*, 2014, *12* (4), 877–898.

Colonnelli, Emanuele, Timothy McQuade, Gabriel Ramos, Thomas Rauter, and Olivia Xiong, "Polarizing Corporations: Does Talent Flow to" Good" Firms?," Technical Report, National Bureau of Economic Research 2023.

Craig, Nick and Scott Snook, "From purpose to impact," *Harvard business review*, 2014, *92* (5), 104–111.

Cremer, Jacques, Luis Garicano, and Andrea Prat, "Language and the Theory of the Firm," *The Quarterly Journal of Economics*, 2007, *122* (1), 373–407.

Dean, Emma Boswell, Frank Schilbach, and Heather Schofield, "Poverty and cognitive function," in "The economics of poverty traps," University of Chicago Press, 2017, pp. 57–118.

Decker, Ryan A, John Haltiwanger, Ron S Jarmin, and Javier Miranda, "Declining dynamism, allocative efficiency, and the productivity slowdown," *American Economic Review*, 2017, *107* (5), 322–326.

Delfgaauw, Josse and Robert Dur, "Signaling and screening of workers' motivation," *Journal of Economic Behavior & Organization*, 2007, *62* (4), 605–624.

_ **and** _ , "Incentives and workers' motivation in the public sector," *The Economic Journal*, 2008, *118* (525), 171–191.

Diener, E., R. A. Emmons, R. J. Larsen, and S. Griffin, "The Satisfaction With Life Scale," *Journal of Personality Assessment*, February 1985, *49* (1), 71–75.

Dippel, Christian, Robert Gold, Stephan Heblich, and Rodrigo Pinto, "Mediation analysis in IV settings with a single instrument," *UCLA Working Paper*, 2019.

Fernald, John, Robert Inklaar, and Dimitrije Ruzic, "The productivity slowdown in advanced economies: common shocks or common trends?," *Review of Income and Wealth*, 2023.

Ferrazzi, K and M Clementi, "The great resignation stems from a great exploration," *Harvard Business Review*, 2022.

Frankl, Viktor E, *Man's search for meaning*, Simon and Schuster, 1985.

García, Héctor and Francesc Miralles, *Ikigai: The Japanese secret to a long and happy life*, Penguin, 2017.

Gartenberg, Claudine and George Serafeim, "Corporate purpose in public and private firms," *Management Science*, 2023, *69* (9), 5087–5111.

_ , Andrea Prat, and George Serafeim, "Corporate purpose and financial performance," *Organization Science*, 2019, *30* (1), 1–18.

Gibbons, Robert and Laurence Prusak, "Knowledge, stories, and culture in organizations," in "AEA Papers and Proceedings," Vol. 110 American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203 2020, pp. 187–192.

Golman, Russell, David Hagmann, and George Loewenstein, "Information avoidance," *Journal of economic literature*, 2017, *55* (1), 96–135.

Gosnell, Greer K, John A List, and Robert Metcalfe, "A new approach to an age-old problem: Solving externalities by incenting workers directly," Technical Report, National Bureau of Economic Research 2016.

Graham, John R, Jillian Grennan, Campbell R Harvey, and Shivaram Rajgopal, "Corporate culture: Evidence from the field," *Journal of Financial Economics*, 2022, *146* (2), 552–593.

Guvenen, Fatih, Burhan Kuruscu, Satoshi Tanaka, and David Wiczer, "Multidimensional skill mismatch," *American Economic Journal: Macroeconomics*, 2020, *12* (1), 210–244.

Hedblom, Daniel, Brent R Hickman, and John A List, "Toward an understanding of corporate social responsibility: Theory and field experimental evidence," Technical Report, National Bureau of Economic Research 2019.

Henderson, Rebecca and Eric Van den Steen, "Why do firms have "purpose"? The firm's role as a carrier of identity and reputation," *American Economic Review*, 2015, *105* (5), 326–330.

Jones, Damon, David Molitor, and Julian Reif, "What do workplace wellness programs do? Evidence from the Illinois workplace wellness study," *The Quarterly Journal of Economics*, 2019, *134* (4), 1747–1791.

Karlsson, Niklas, George Loewenstein, and Jane McCafferty, "The economics of meaning," *Nordic Journal of Political Economy*, 2004, *30* (1), 61–75.

Khan, Muhammad Yasir, "Mission motivation and public sector performance: experimental evidence from Pakistan," *Mimeo*, 2023.

Krueger, Philipp, Daniel Metzger, and Jiaxin Wu, "The sustainability wage gap," *Swedish House of Finance Research Paper*, 2023, (20-14), 21–17.

Lazear, Edward P, "Performance pay and productivity," *American Economic Review*, 2000, *90* (5), 1346–1361.

Leete, Laura, "Whither the nonprofit wage differential? Estimates from the 1990 census," *Journal of Labor Economics*, 2001, *19* (1), 136–170.

Lise, Jeremy and Fabien Postel-Vinay, "Multidimensional skills, sorting, and human capital accumulation," *American Economic Review*, 2020, *110* (8), 2328–2376.

Lyubomirsky, Sonja and Heidi S. Lepper, "A Measure of Subjective Happiness: Preliminary Reliability and Construct Validation," *Social Indicators Research*, 1999, *46* (2), 137–155.

Malmendier, U. and J. Wachter, "Memory of Past Experiences and Economic Decisions," in M. Kahana and A. Wagner, eds., *Handbook of Human Memory*, Oxford University Press, 2022.

Malmendier, Ulrike, "FBBVA lecture 2020 exposure, experience, and expertise: Why personal histories matter in economics," *Journal of the European Economic Association*, 2021, *19* (6), 2857–2894.

March, J.G. and H.A. Simon, *Organizations* Organizations, Oxford, England: Wiley, 1958.

Martino, Benedetto De, "The effect of context on choice and value," in "Neuroscience of Preference and Choice," Elsevier, 2012, pp. 93–119.

Marx, Karl, "Economic and political manuscripts of 1844," 1844.

Mashek, Debra, Lisa W Cannaday, and June P Tangney, "Inclusion of community in self scale: A single-item pictorial measure of community connectedness," *Journal of Community Psychology*, 2007, *35* (2), 257–275.

May, Douglas R., Richard L. Gilson, and Lynn M. Harter, "The Psychological Conditions of Meaningfulness, Safety and Availability and the Engagement of the Human Spirit at Work," *Journal of Occupational and Organizational Psychology*, 2004, *77* (1), 11–37.

Mokyr, Joel, "The rise and fall of the factory system: technology, firms, and households since the industrial revolution," in "Carnegie-Rochester Conference Series on Public Policy," Vol. 55 Elsevier 2001, pp. 1–45.

Mullainathan, Sendhil and Eldar Shafir, "Scarcity: Why having too little means so much.," 2013.

_ , Joshua Schwartzstein, and Andrei Shleifer, "Coarse thinking and persuasion," *The Quarterly journal of economics*, 2008, *123* (2), 577–619.

Preston, Anne E, "The nonprofit worker in a for-profit world," *Journal of labor economics*, 1989, *7* (4), 438–463.

Rosso, Brent D, Kathryn H Dekas, and Amy Wrzesniewski, "On the meaning of work: A theoretical integration and review," *Research in organizational behavior*, 2010, *30*, 91–127.

Sandvik, Jason, Richard Saouma, Nathan Seegert, and Christopher T Stanton, "Should workplace programs be voluntary or mandatory? evidence from a field experiment on mentorship," Technical Report, National Bureau of Economic Research 2021.

Schank, Roger C. and Robert P. Abelson, "Knowledge and Memory: The Real Story," in Robert S. Wyer Jr, ed., *Advances in Social Cognition*, Vol. VIII, Hillsdale, NJ: Lawrence Erlbaum Associates, 1995, pp. 1–85.

Schultz, P Wesley, "Inclusion with nature: The psychology of human-nature relations," *Psychology of sustainable development*, 2002, pp. 61–78.

Schultz, Patricia, Richard Ryan, Christopher Niemiec, Nicole Legate, and Geoffrey Williams, "Mindfulness, Work Climate, and Psychological Need Satisfaction in Employee Well-being," *Mindfulness*, October 2015, *6*, 971–985.

Simon, Herbert A, "A behavioral model of rational choice," *The quarterly journal of economics*, 1955, pp. 99–118.

Stern, Scott, "Do scientists pay to be scientists?," *Management science*, 2004, *50* (6), 835–853.

10   Figures

Figure I: Timeline of the intervention
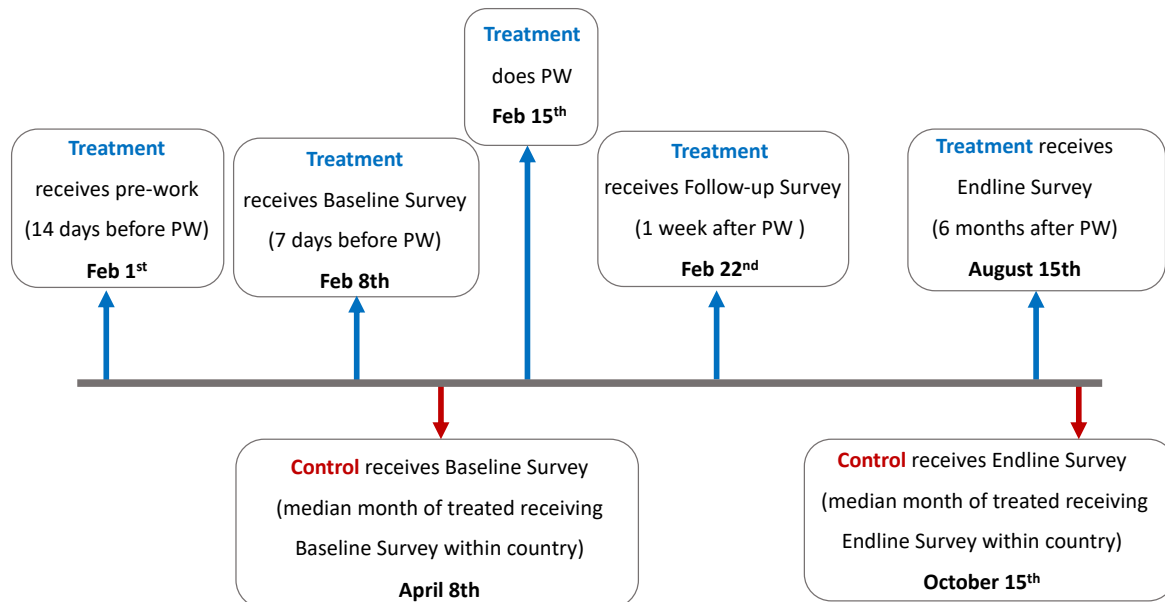
Notes. The median workshop date of the treatment group within each country is used to anchor the timing of the control group and non-compliers surveys.

Figure II: DYP intervention: telling the stories that have shaped your life

Notes. The intervention content consists of self-reflection exercises around the four main themes illustrated in the figure.

Figure III: Sample: 3,000 workers from 14 "virgin" countries

(228,655]
(153,228]
[45,153]
No data
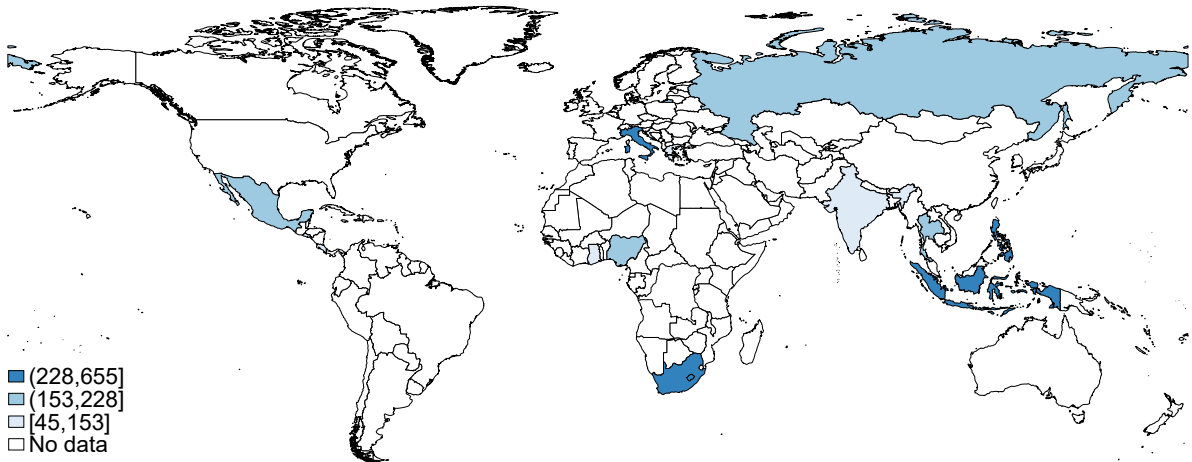
Notes. 14 countries participated in the RCT: Costa Rica, El Salvador, Ghana, Greece, India, Indonesia, Italy, Mexico, Nigeria, Philippines, Russia, Singapore, South Africa, and Thailand. The darker-colored countries are those with more workers in the experimental sample. For example, South Africa, the Philippines, and Indonesia have the most workers, while India and Ghana have the least workers.

Figure IV: Experimental design

1 Select sample of all entry-level workers to do purpose workshops

2 Randomize selected sample (stratified randomization on country and revenue generating function)

Treatment Group (50% of sample)

3 measure differential outcomes

Control Group (50% of sample)
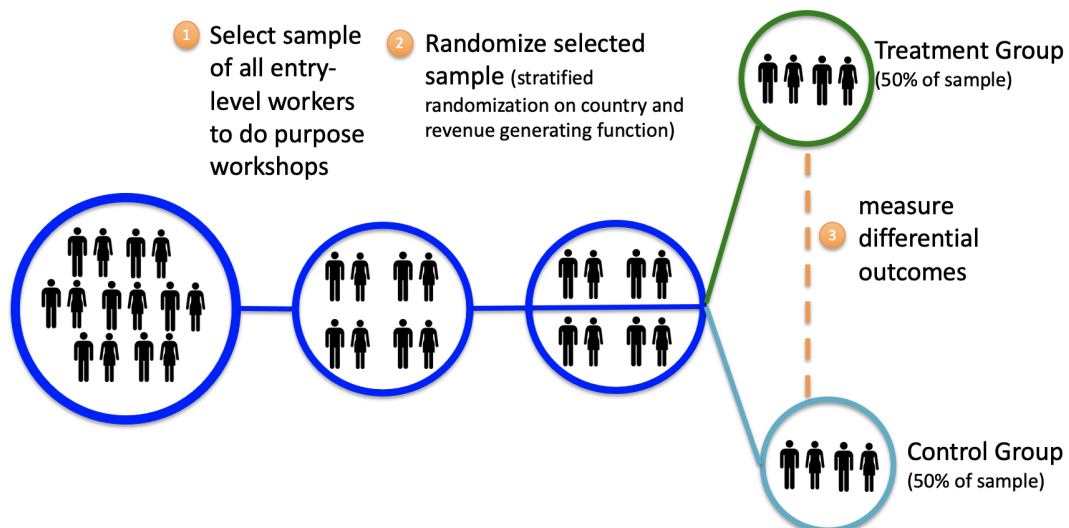
Notes. First, we select a sample of all lower level white collar workers to invite to sign up for the DYP intervention. Next, we randomize stratifying by country and revenue generating function, which indicates whether the worker operates in field sales. Finally, we randomly split 50-50 within each group into treatment and control groups.

Figure V: Dynamics of the treatment effects

(a) Exit
(b) Internal Transfer
(c) Bonus (asinh)
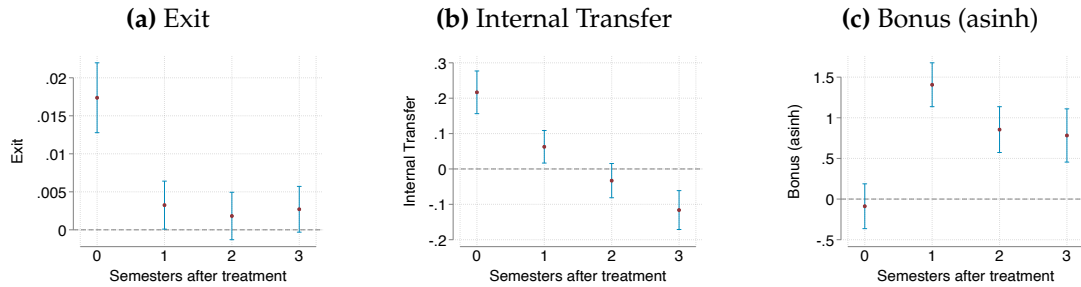
Notes. IV. Standard errors clustered on the employee level. *Did DYP* interacted with months after treatment is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

Figure VI: Who exits or changes job? Heterogeneity by baseline performance

(a) Baseline performance: Exit
(b) Baseline performance: Internal Transfer
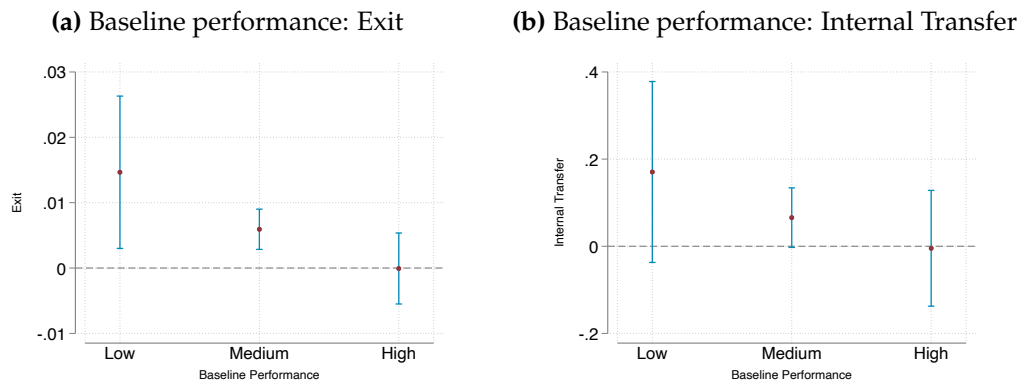
Notes. IV. Standard errors clustered on the employee level. *Did DYP* interacted with the performance score group is instrumented with treatment invitation interacted with performance score tertile. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

Figure VII: Decomposition of bonus effect
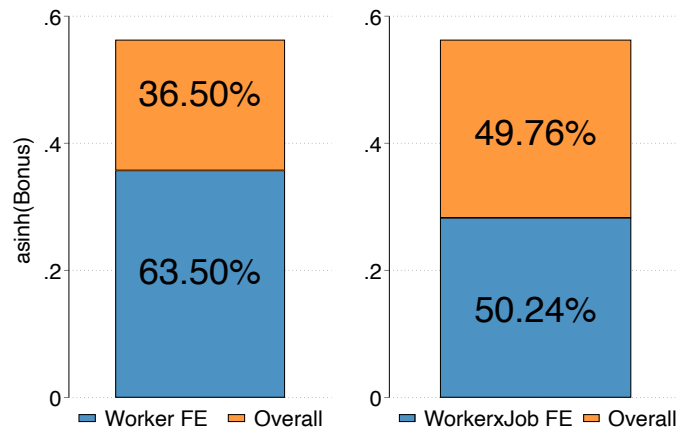
Notes. IV. Standard errors are clustered on the employee level. *Did DYP* is instrumented with treatment invitation. The regression for the "overall" orange bar includes country FE and the regression for the blue bar includes worker*job FE. Both regressions include control for whether the workshop is held virtually and a time trend.

Figure VIII: Pay and meaning
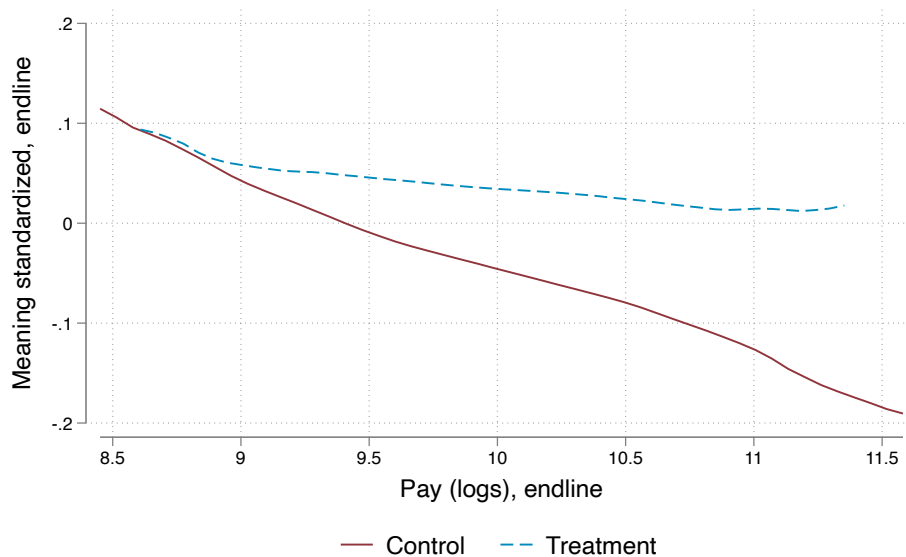
Difference in slope for treatment = 0.153 (s.e.=0.078, p-val=0.05).

Notes. Local polynomial smooth plot for the trade-off between standardized meaning and pay in logs. Kernel bandwidth is 0.6.

Figure IX: Gender gaps in job priorities
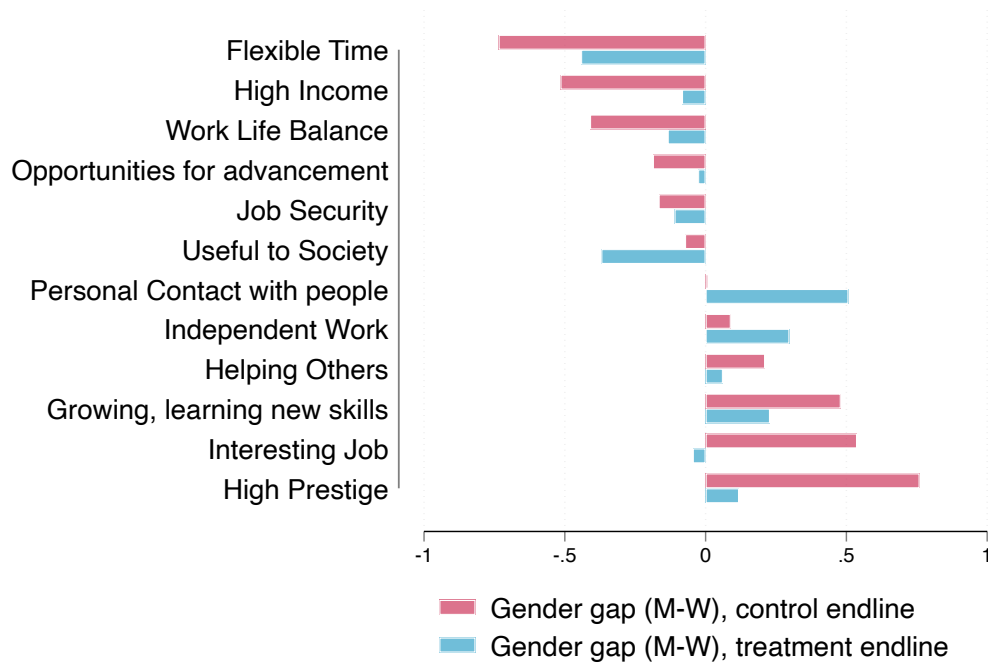
Notes. Gender gap in the average ranking of the job priorities sorted from low to high (more favored by men vs. more favored by women). For example, for the control group on average, women rank high prestige -0.76 lower than men and rank flexible time 0.74 higher than men.

Figure X: DYP impacts: randomized into the intervention vs. own choice
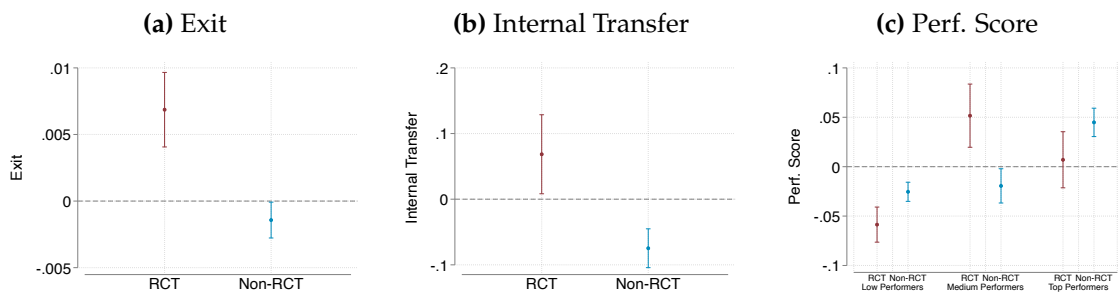
Notes. For the non-RCT sample, the bootstrap sample size is the same as the RCT sample size. Bootstrap repetition is 100 times with random seed 1532. OLS standard errors clustered on the employee level. All regressions include country FE and control for a time trend.
For RCT sample: IV. Standard errors clustered on the employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for a time trend.

11 Tables

Table I: Outcome variables

Variable	Source
Performance score, pay	Global administrative data
Sales measures	Local records from demand planning teams
Exit, lateral move, promotion	Global administrative data
Meaning, team collaboration, SWB	Our surveys

Notes. This table summarizes the main data sources.

Table II: Worker exit and lateral moves

	(1) Monthly exit	(2)	(3)
		Moves within 2 yrs	
	Exit	Lateral move	Promotion to manager
Did DYP	0.007***	0.068**	0.024
	(0.001)	(0.031)	(0.027)
Control mean	0.008	0.407	0.218
Number of obs.	115234	115234	115234

Notes. IV. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

Table III: Worker performance

	(1)	(2)	(3)	(4)	(5)
	Panel A: Effort & Performance Score				
	Manager assessment of worker performance				Self-assessed effort
	Perf. Score	Perf. Score $\geq$ 125	80 $\leq$ Perf. Score < 125	Perf. Score < 80	Extra Mile
Did DYP	3.863***	0.007	0.052***	-0.059***	0.275***
	(0.724)	(0.014)	(0.016)	(0.009)	(0.088)
Control mean	101.149	0.116	0.820	0.063	5.393
Control S.D.	17.712	0.321	0.384	0.244	1.392
Number of obs.	95318	95318	95318	95318	1264
	Panel B: Worker Bonus and Pay				
	(1)	(2)	(3)	(4)	(5)
	asinh(Bonus)	Bonus>0	Bonus>p25	Bonus>p50	asinh(Pay)
Did DYP	0.565***	0.067***	0.062***	0.021	0.044**
	(0.168)	(0.019)	(0.021)	(0.027)	(0.021)
Control mean	6.829	0.798	0.728	0.433	10.706
Control S.D.	3.482	0.401	0.445	0.496	0.532
Number of obs.	115234	115234	115234	115234	115234

Notes. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data.

Table IV: Sales performance

	(1) ITT	(2) IV
Treated	0.170**	
	(0.079)	
Did DYP		0.244**
		(0.113)
Adjusted R-squared	0.040	0.039
Control Mean	0.052	0.052
Number of obs.	5464	5464
Number of employees	215	215

Notes. Standard errors clustered on employee level. Productivity is standardized within each country-product. *Did DYP* is instrumented with treatment invitation. Regressions use monthly productivity data (2099 from 89 distinct employees), quarterly data (2563 from 105 distinct employees), and yearly data (802 from 44 distinct employees). All regressions include country FE and control for whether the workshop is held virtually.

Table V: Meaning and happiness

	(1)	(2)	(3)
	Meaning	Job satisfaction	Happiness
Did DYP	0.130**	0.283***	0.176**
	(0.063)	(0.087)	(0.083)
Control mean	0.801	1.375	1.183
Number of obs.	1264	1264	1264

Notes. IV. Standard errors clustered on employee level. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

Table VI: Worker exit and meaning, by baseline performance and baseline pay

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Exit				Meaning	
	Low Perf.	Med. Perf.	High Perf.	Low & Med. Perf.	Low Perf.	Med. Perf.	High Perf.	Low & Med. Perf.
Did DYP × Low Pay	0.014	0.002	-0.008	0.003	1.123	0.105	0.007	0.217
	(0.010)	(0.003)	(0.005)	(0.003)	(0.861)	(0.158)	(0.535)	(0.155)
Did DYP × Medium Pay	0.008	0.002	0.001	0.003	-0.438	0.139	0.400	0.059
	(0.010)	(0.003)	(0.005)	(0.003)	(0.532)	(0.145)	(0.291)	(0.138)
Did DYP × High Pay	0.041	0.014***	0.002	0.015***	2.397	0.230*	0.586	0.282**
	(0.028)	(0.004)	(0.007)	(0.004)	(2.194)	(0.136)	(0.469)	(0.138)
Control Mean	0.010	0.007	0.006	0.007	4.719	4.944	4.732	4.922
Number of obs.	10377	71212	12170	81589	86	762	118	850
p-values for coefficient comparison								
Low Pay = Med. Pay	0.696	0.912	0.247	0.961	0.114	0.876	0.525	0.458
Low Pay = High Pay	0.353	0.016	0.291	0.018	0.617	0.555	0.416	0.757
Med. Pay = High Pay	0.266	0.010	0.885	0.009	0.221	0.652	0.739	0.259

Notes. Standard errors clustered on employee level. The three interaction terms are instrumented with treatment invitation interacted with the corresponding baseline pay classification variables. All regressions include country FE and control for whether the workshop is held virtually and a time trend. Low (Perf. Score < 80), medium (80 ≤ Perf. Score < 125), and high (Perf. Score > 125) performance are classified according to the baseline performance score. Low, medium, and high pay are classified according to the tercile of overall baseline pay. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data.

Table VII: Team collaboration and overlap with company

	(1)	(2)	(3)	(4)	(5)
	Team collab.	Rel. w. manager	Overlap with colleague	Overlap with company	Overlap with community
Did DYP	0.158*	0.213**	0.244***	0.308***	0.114
	(0.087)	(0.089)	(0.090)	(0.087)	(0.094)
Control mean	1.114	1.426	1.360	1.379	1.554
Number of obs.	1264	1264	1264	1264	1264

Notes. IV. Standard errors clustered on employee level. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

Table VIII: Effects on parental leave, by gender

	Probability of Parental Leave (1)	Months of Parental Leave (2)
Did DYP * (Male - Female)	0.0593	2.214*
	(0.0374)	(1.225)
Adjusted R-squared	0.066	0.066
Control Mean	0.101	2.828
Number of obs.	115234	115234

Notes. IV. Standard errors clustered on employee level. *Did DYP* interacted with gender is instrumented with treatment invitation interacted with gender. All regressions include country FE and control for whether the workshop is held virtually and a time trend.

A Appendix: Additional figures and tables

A.1 Additional figures

Figure A.1: Sales bonus and performance score are very correlated
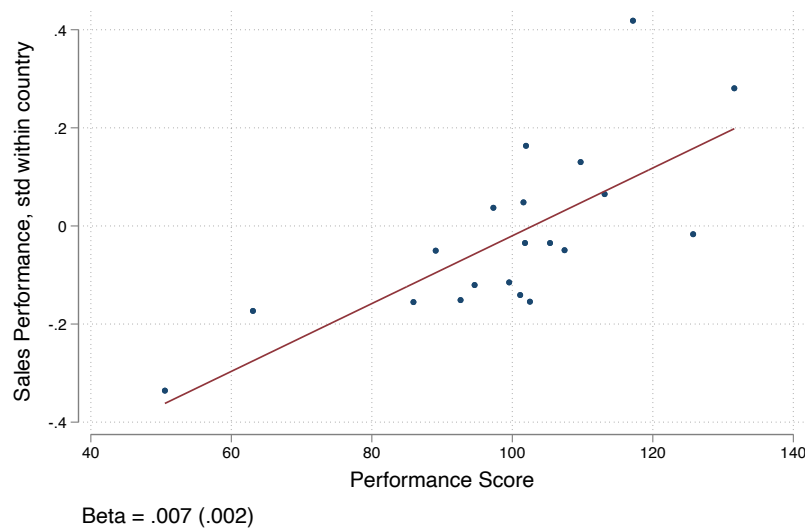
Beta = .007 (.002)

Notes. Standard errors clustered on the employee level. The regression includes country FE, product group FE, month and year FE.

Figure A.2: Coefficient of variation for survey questions: endline
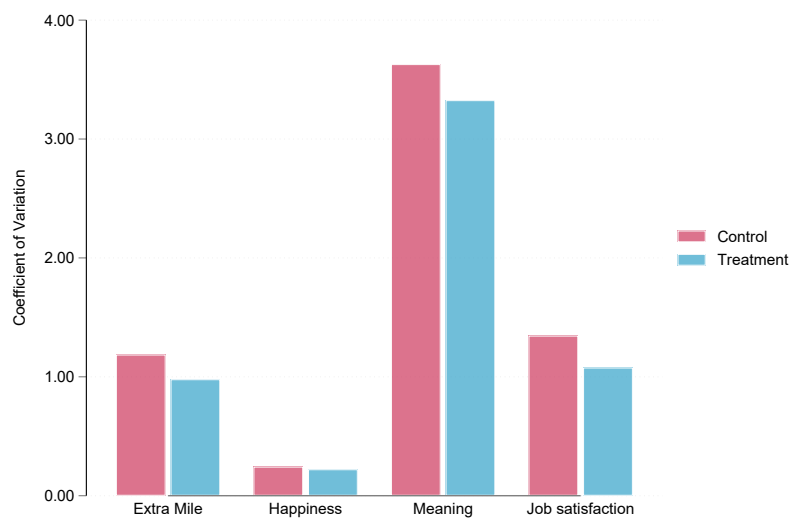
Notes. Coefficient of variation is calculated as the standard deviation divided by the mean of the survey questions at the endline, aggregated by treatment group. We didn't find systematic differences in survey outcomes between control and treatment groups.

Figure A.3: DYP intervention: what do participants say?

Live purpose & engagement

■ Purpose Discovery (1-7)
■ Workshop Engagement (0.67-5)
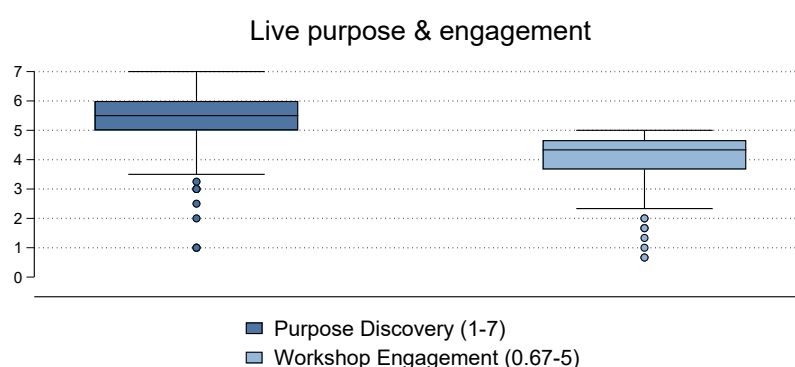
Purpose Discovery questions:
I managed to find a unifying purpose sentence or a group of words that inspired me.
These words still resonate with me now.
Workshop Engagement questions:
Overall this workshop was a valuable investment of my time. (1-7)
I felt the facilitator was helpful engaging and prepared to run the session. (1-7)
Would you be interested in becoming a facilitator? (0-1)

Notes. Box chart for the distribution of answers to the purpose discovery and workshop engagement questions. A score of 7 corresponds to "strongly agreeing" and a score of 1 corresponds to "strongly disagreeing". Dots are outliers. The upper and lower bound is the median plus 1.5 times the interquartile range. The box in the center contains the upper quartile, median, and lower quartile.

Figure A.4: DYP intervention: where do people write down their purpose statements?

Where Do People Write Down their PS?

Personal Diary — 35.75
My Plan (Workday) — 25.91
Phone Screensaver — 21.24
Laptop Screensaver — 19.69
Office desk — 13.99
Not Applicable — 9.84
Car — 5.70
Bedside Table — 5.70
Mirror — 4.66
Other — 4.15
Kitchen Fridge — 4.15
Wallet — 3.63
Keychain — 1.04

Chosen as an answer(%)
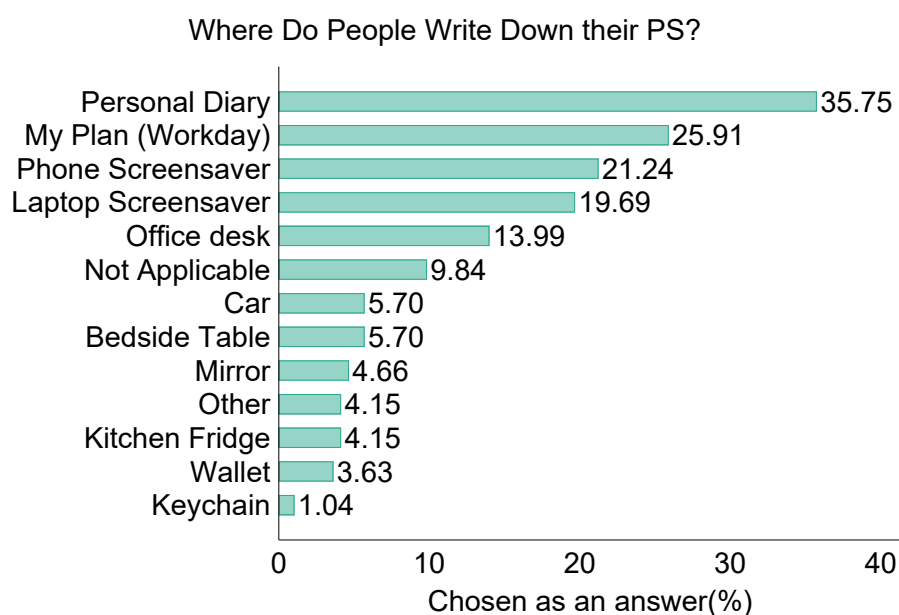
Based on responses to question: *Where did you write it down or where do you plan to write it down?*
More than 1 Answer Allowed.

Notes. Average percentage share of where people write down their purpose statement at the individual level, multiple answers are allowed. For example, on average, 35.75% of employees who participated in the workshop wrote down their purpose statement in their personal diaries.

Figure A.5: DYP intervention: word frequencies of purpose use stories
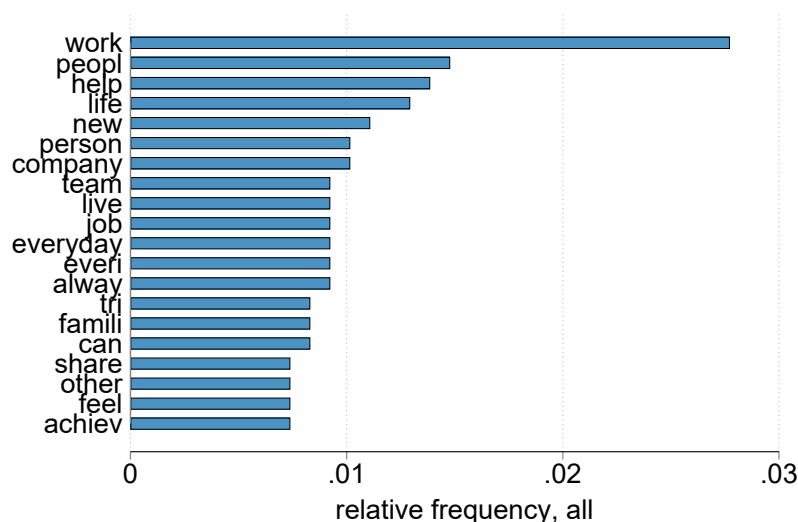
Notes. We apply standard text-cleaning and parsing procedures, including removing numbers, symbols, punctuation, hyphens, symbols, URLs, and uppercases. We then utilize the "quanteda" package in R for quantitative textual analysis and remove stopwords in English. Next, we perform stemming on the words and remove "purpose", "workshop", "thing", "use", "statement" from the list. Finally, we replace the name of MNE with "company", generate word count, and rank the relative frequencies in descending order.

Figure A.6: Sample characteristics
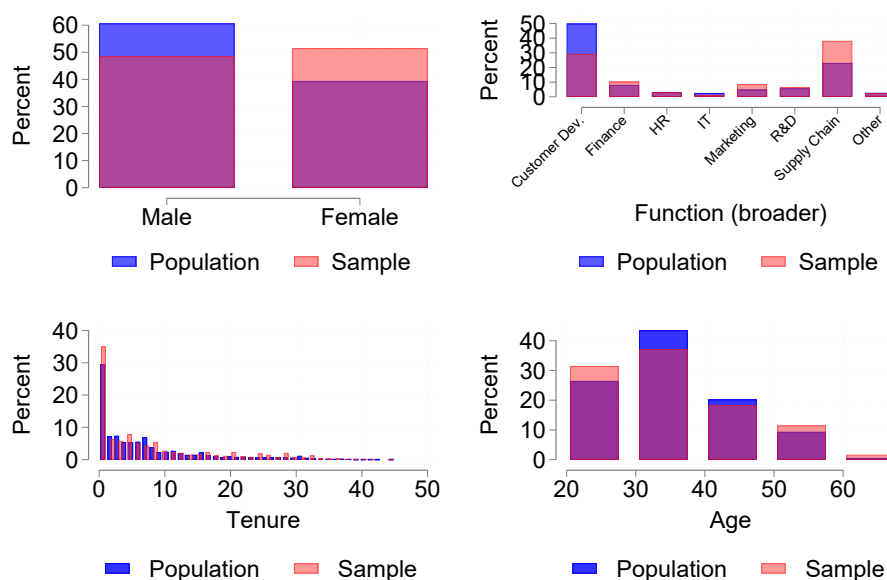
Notes. Each graph displays the comparison between the distribution of the RCT sample and the non-RCT sample (population), across gender, functional group, tenure, and age. The overlapping areas of sample vs. population in the box plot display a purple-like color.

Figure A.7: Ranking of job priorities

(a) Job priorities (I): society & growing and learning new skills
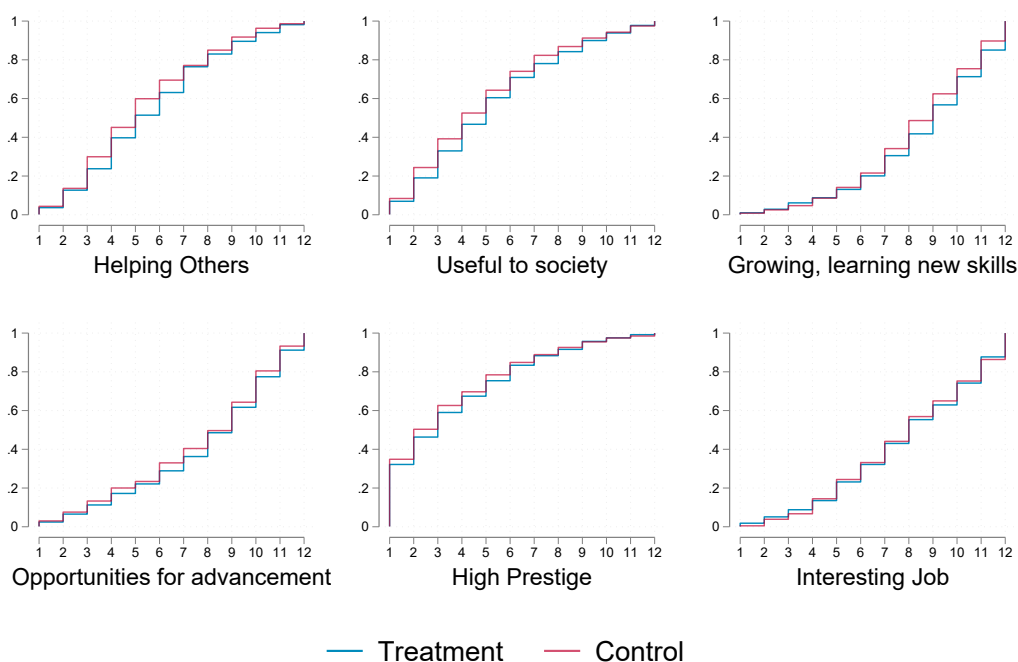
(b) Job priorities (II): work-life balance & job security
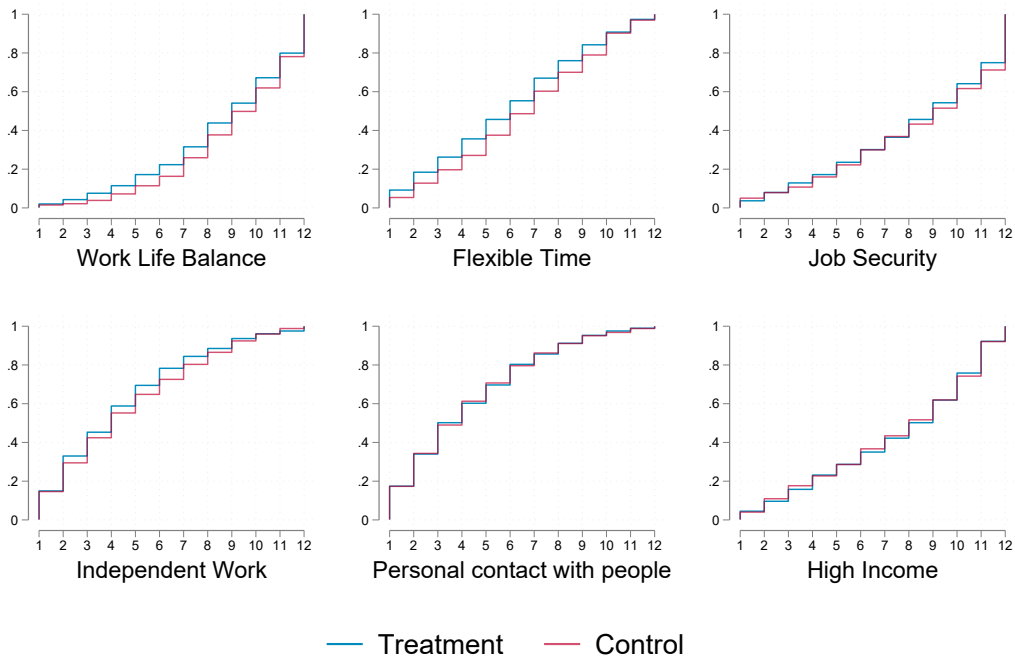
Notes. Cumulative distribution of ranking of the importance of 12 job priorities for the treatment and control group at the endline survey. The answers are reverse-coded so that rank 12 is the highest and rank 1 is the bottom.

Figure A.8: Share of workshop participants that share the same subfunction and office with at least one other participant in the workshop
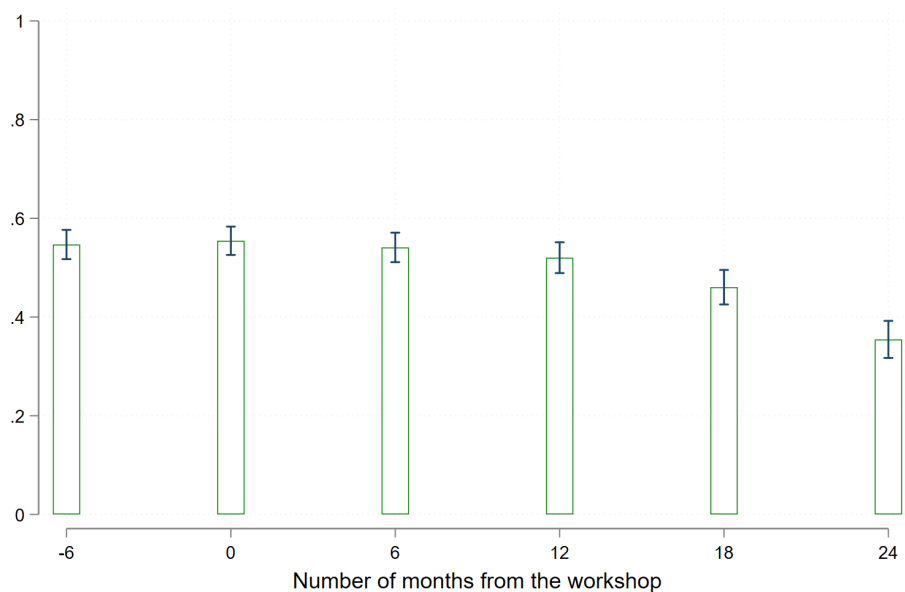
Notes. This plot presents the proportion (and the confidence interval) of workshop participants who have the same subfunction-office pair with at least one other participant in the workshop after a given period.

Figure A.9: Function distributions
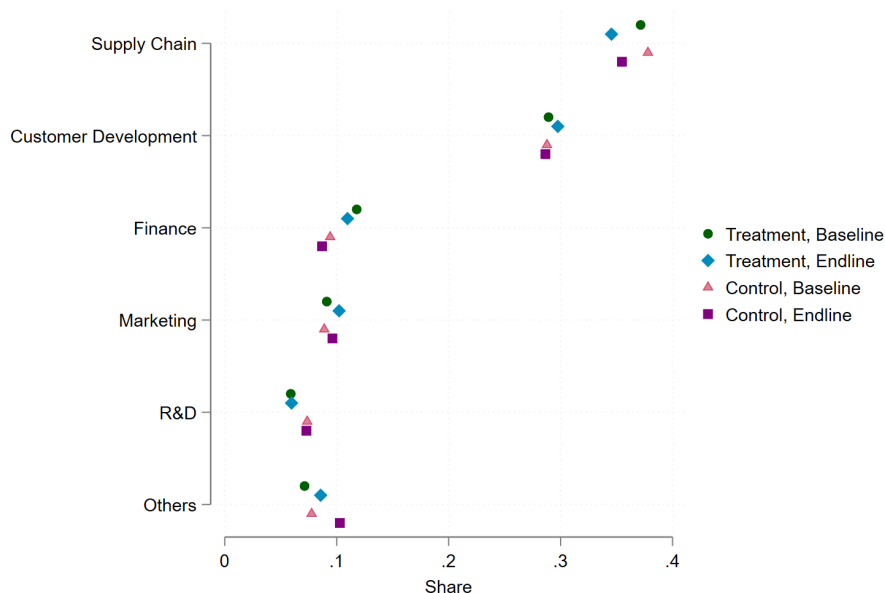
Notes. This plot presents the share of workers in the biggest 5 functions and all other functions, separately for treatment and control groups, and separately for baseline and endline.

Figure A.10: The money-meaning frontier
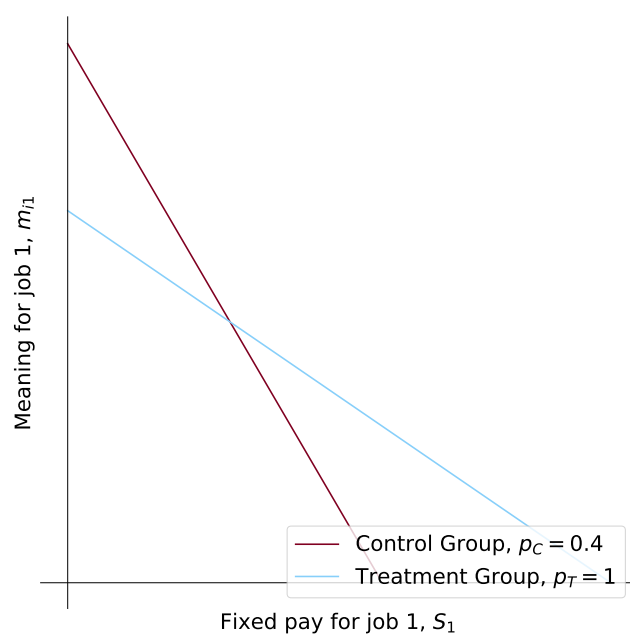
Notes. This figure illustrates the money-meaning tradeoff introduced in Section 6.

A.2 Additional tables

Table A.1: Balance table

	Panel (a): Treatment vs control		
	(1)	(2)	(3)
	Control	Treatment	Difference
Female	0.536	0.503	-0.032*
	(0.499)	(0.500)	(0.018)
Tenure (years)	7.320	7.584	0.304
	(9.171)	(9.547)	(0.308)
Age	35.406	35.823	0.418
	(10.696)	(10.788)	(0.357)
Perf. Score	97.324	98.175	0.889
	(22.551)	(22.214)	(0.927)
Pay	24,509.840	24,841.660	337.867
	(13,071.404)	(13,072.136)	(319.170)
Bonus	2,290.273	2,297.025	18.691
	(2,171.437)	(2,218.692)	(57.370)
Observations	1,508	1,459	2,967
	Panel (b): Compliers vs non-compliers		
	(1)	(2)	(3)
	Did not do DYP	Did DYP	Difference
Female	0.436	0.537	0.105***
	(0.496)	(0.499)	(0.029)
Tenure (years)	8.794	6.970	-1.889***
	(10.195)	(9.145)	(0.522)
Age	37.511	34.967	-2.034***
	(11.007)	(10.577)	(0.599)
Perf. Score	95.578	99.538	3.165**
	(23.766)	(21.244)	(1.533)
Pay	24,199.535	25,183.459	237.828
	(12,667.279)	(13,277.416)	(517.967)
Bonus	2,412.534	2,234.107	98.881
	(2,221.344)	(2,216.021)	(88.457)
Observations	491	968	1,459

Note. Showing mean and standard deviations (in parentheses). The difference in means is computed using robust standard errors and controlling for country fixed effects. Panel (a) compares treatment and control workers, while panel (b) compares the compliers and non-compliers in the treatment group.

Table A.2: Invitation to intervention: RCT vs. outside of the RCT

	(1)	(2)	(3)
	Perf. Score ≥ 125	80 ≤ Perf. Score < 125	Perf. Score < 80
RCT sample	-0.022	0.015	0.008
	(0.021)	(0.025)	(0.016)
Number of obs.	1762	1762	1762

Note. Sample restricted to compliers who do not exit the firm during the sample period. Standard errors clustered on employee level. The regression includes country FE. *RCT sample compliers* indicates whether the worker has done the intervention as part of the RCT or outside the RCT.

Table A.3: Promotion outcome: robustness by tenure

	(1)	(2)	(3)	(4)
		Promotion to manager		
	Unrestricted sample	At least 2 years of tenure	At least 3 years of tenure	At least 5 years of tenure
Did DYP	0.025	0.037	0.047	0.040
	(0.025)	(0.034)	(0.034)	(0.033)
Control mean	0.218	0.226	0.194	0.157
Number of obs.	115234	77129	69700	59011

Note. IV. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE for whether the workshop is held virtually and a time trend.

Table A.4: ITT: worker exit and lateral moves

	(1)	(2)	(3)
	Monthly exit	Moves within 2 yrs	
	Exit	Lateral move	Promotion to manager
Treated	0.004***	0.035**	0.012
	(0.001)	(0.016)	(0.014)
Control mean	0.008	0.407	0.218
Number of obs.	115234	115234	115234

Note. ITT. Standard errors clustered on employee level. All regressions include country FE for whether the workshop is held virtually and a time trend.

Table A.5: ITT: Work performance

	(1)	(2)	(3)	(4)	(5)
	Panel A: Effort & Performance Score				
	Manager assessment of worker performance				Self-assessed effort
	Perf. Score	Perf. Score $\geq$ 125	80 $\leq$ Perf. Score < 125	Perf. Score < 80	Extra Mile
Treated	2.204***	0.004	0.029***	-0.033***	0.167***
	(0.410)	(0.008)	(0.009)	(0.005)	(0.053)
Control mean	101.149	0.116	0.820	0.063	5.393
Control S.D.	17.712	0.321	0.384	0.244	1.392
Number of obs.	95318	95318	95318	95318	1264
	Panel B: Worker Bonus and Pay				
	(1)	(2)	(3)	(4)	(5)
	asinh(Bonus)	Bonus>0	Bonus>p25	Bonus>p50	asinh(Pay)
Treated	0.291***	0.035***	0.032***	0.011	0.023**
	(0.086)	(0.010)	(0.011)	(0.014)	(0.011)
Control mean	6.829	0.798	0.728	0.433	10.706
Control S.D.	3.482	0.401	0.445	0.496	0.532
Number of obs.	115234	115234	115234	115234	115234

Note. ITT. Standard errors clustered on employee level. All regressions include country FE for whether the workshop is held virtually and a time trend. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data.

Table A.6: Worker performance: imputations using new hires

	Main Sample			Imputed Sample		
	Perf. Score	asinh(Bonus)	asinh(Pay)	Perf. Score	asinh(Bonus)	asinh(Pay)
	(1)	(2)	(3)	(4)	(5)	(6)
Did DYP	3.863***	0.565***	0.0443**	3.617***	0.526***	0.0415*
	(0.724)	(0.168)	(0.0209)	(0.684)	(0.160)	(0.0216)
Control mean	101.149	6.829	10.706	100.999	6.888	10.696
Control S.D.	17.712	3.482	0.532	16.995	3.401	0.533
Number of obs.	95318	115234	115234	105729	127009	126946

Notes. IV. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend. In the imputed sample, for those individuals who leave the firm, values of the outcomes variables are imputed as the average of corresponding variables for all new hires in the same country and standard job category.

Table A.7: Sales performance: imputations using new hires

	Main Sample		Imputed Sample	
	ITT	IV	ITT	IV
	(1)	(2)	(3)	(4)
Treated	0.170**		0.146**	
	(0.0793)		(0.0695)	
Did DYP		0.244**		0.231**
		(0.113)		(0.110)
Adjusted R-squared	0.040	0.039	0.033	0.032
Control Mean	0.052	0.052	0.081	0.081
Number of obs.	5464	5464	6364	6364
Number of employees	215	215	215	215

Notes. Standard errors clustered on employee level. Productivity is standardized within each country-product. *Did DYP* is instrumented with treatment invitation. Regressions use monthly productivity data (2099 from 89 distinct employees), quarterly data (2563 from 105 distinct employees), and yearly data (802 from 44 distinct employees). All regressions include country FE and control for whether the workshop is held virtually. In the imputed sample, for those individuals who leave the firm, values of the outcomes variables are imputed as the average of all new hires in the corresponding country and standard job category.

Table A.8: Worker performance: imputations with 15th percentile of baseline values

	Main Sample			Imputed Sample		
	Perf. Score	asinh(Bonus)	asinh(Pay)	Perf. Score	asinh(Bonus)	asinh(Pay)
	(1)	(2)	(3)	(4)	(5)	(6)
Did DYP	3.863***	0.565***	0.0443**	1.936**	0.572***	0.0599***
	(0.724)	(0.168)	(0.0209)	(0.793)	(0.159)	(0.0202)
Control mean	101.149	6.829	10.706	98.081	6.726	10.656
Control S.D.	17.712	3.482	0.532	18.742	3.484	0.538
Number of obs.	95318	115234	115234	112051	131967	131967

Notes. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend. In the imputed sample, for those individuals who leave the firm, values of the outcomes variables are imputed as the 15 percentile of all workers in the baseline.

Table A.9: Sales performance: imputations with 15th percentile of baseline values

	Main Sample		Imputed Sample	
	ITT	IV	ITT	IV
	(1)	(2)	(3)	(4)
Treated	0.170**		0.00922	
	(0.0793)		(0.0993)	
Did DYP		0.244**		0.0153
		(0.113)		(0.163)
Adjusted R-squared	0.040	0.039	0.036	0.037
Control Mean	0.052	0.052	-0.216	-0.216
Number of obs.	5464	5464	6559	6559
Number of employees	215	215	215	215

Notes. Standard errors clustered on employee level. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually and a time trend. In the imputed sample, for those individuals who leave the firm, values of the outcomes variables are imputed as the 15 percentile of all workers in the baseline.

Table A.10: Meaning and happiness: controlling for pay

	(1)	(2)	(3)
	Meaning	Job satisfaction	Happiness
Did DYP	0.125**	0.280***	0.170**
	(0.063)	(0.087)	(0.083)
Pay + Bonus (log)	-0.171***	-0.134	-0.105
	(0.061)	(0.087)	(0.076)
Control mean	0.801	1.375	1.183
Number of obs.	1263	1263	1263

Note. IV. Standard errors clustered on employee level. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually.

Table A.11: Team collaboration and overlap with company: controlling for pay

	(1)	(2)	(3)	(4)	(5)
	Team collab.	Rel. w. manager	Overlap with colleague	Overlap with company	Overlap with community
Did DYP	0.154*	0.210**	0.240***	0.304***	0.109
	(0.087)	(0.089)	(0.090)	(0.087)	(0.094)
Pay + Bonus (log)	-0.112	-0.010	-0.122	-0.036	-0.221**
	(0.084)	(0.085)	(0.087)	(0.083)	(0.094)
Control mean	1.114	1.426	1.360	1.379	1.554
Number of obs.	1263	1263	1263	1263	1263

Note. IV. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually.

Table A.12: ITT: meaning and happiness

	(1) Meaning	(2) Job satisfaction	(3) Happiness
Treatment Group	0.079**	0.172***	0.107**
	(0.038)	(0.053)	(0.051)
Control mean	0.801	1.375	1.183
Number of obs.	1264	1264	1264

Note. Standard errors clustered on employee level. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. *Did DYP* is instrumented with treatment invitation. All regressions include country FE and control for whether the workshop is held virtually.

Table A.13: ITT: Team collaboration and overlap with company

	(1) Team collab.	(2) Rel. w. manager	(3) Overlap with colleague	(4) Overlap with company	(5) Overlap with community
Treatment Group	0.096*	0.129**	0.148***	0.187***	0.069
	(0.053)	(0.054)	(0.055)	(0.052)	(0.057)
Control mean	1.114	1.426	1.360	1.379	1.554
Number of obs.	1264	1264	1264	1264	1264

Note. ITT. Standard errors clustered on employee level. For survey measures, the outcome variable is standardized using the baseline control mean and s.d., while the reported control means use the raw endline data. All regressions include country FE for whether the workshop is held virtually.

Table A.14: Spillovers on the control group: performance

	(1) Perf. Score	(2) asinh(Bonus)	(3) Bonus>0	(4) Bonus>p50	(5) asinh(Pay)
Panel A: Consider all treated workers in team					
Share treatment in team	1.273	0.007	-0.018	-0.005	0.033
	(1.304)	(0.222)	(0.021)	(0.031)	(0.025)
Panel B: Consider treated exits in team					
Share treated exit in team	2.839	-0.023	-0.009	0.017	-0.071
	(3.403)	(0.573)	(0.066)	(0.081)	(0.103)
Control mean	101.150	6.828	0.799	0.433	10.706
Control S.D.	17.708	3.481	0.401	0.495	0.531
Number of obs.	48150	58549	58549	58549	58549

Note. Sample restricted to the control group. Standard errors clustered on the employee level. The regression includes country FE. *Share treatment in team* indicates the share of team colleagues who are in the treatment group in that year. *Share treated exit in team* indicates the share of team colleagues who are in the treatment group and exit the firm in that year.

Table A.15: Hourly rate comparison among consulting firms

Consulting Company	Position/Category	Hourly Rate
Ernst & Young	1 Partner (522310)	1×$511.51
	5 Seniors (522310)	5×$223.62
Deloitte Consulting	1 HRC Advisory Executive III - (EPM)	1×$413.66
	5 HRT Operations Sr. Professional IV - (EPM)	5×$223.00
KPMG	1 Partner	1×$382.73
	5 Experienced Senior Consultant	5×$178.26
McKinsey & Company	1 Senior Partner - Executive/Strategy	1×$1,147.66
	5 Associate – Executive/ Strategy	5×$479.07

Average: $1,993.83

Average cost of one workshop participant: $\left(\frac{\$1,993.83 * 8\ hours}{20\ workers}\right) = \$797.53$

Notes. 1 Partner/Associate Partner equivalent, 5 consultants equivalent. We define the average workshop cost as the cost required to cover one worker. The DYP workshop lasts for 8 hours, and each workshop facilitator can cover 4 people simultaneously. The 1 Partner equivalent, 5 consultants equivalent team structure is based on a McKinsey proposal submitted to the New Jersey Office of Emergency Management in April 2020 (link). In particular, we build our estimation based on the first proposed team structure in section 4.0 PROFESSIONAL FEES, Exhibit 4.1. Note that we exclude the wider support team that is outlined as part of the proposed team structure in constructing the external cost estimates.

B Appendix: Field implementation

B.1 Qualitative evidence from focus groups

Table B.1: Anonymous quotes from the focus groups

No.	Quotes
1	*Being conscious of my purpose and being able to clearly articulate it to others means that I can proactively use it to steer my decisions inside and outside of work.*
2	*Since discovering my purpose I feel more recognition and empowerment to continue to do what I am best at. Your purpose should be something that you can action daily.*
3	*If I'm wondering, demotivated, or struggling, I can go read it and the meaningfulness of it and what sits behind it comes back to me.*
4	*You will probably find that your purpose statement is something that you have known about yourself but never been encouraged to put it into words. Once verbalized, it will be very easy to remember.*
5	*I read my purpose statement every morning to keep it in the back of my mind at all times, facilitate prioritization and allow it be a driving force on my actions and decisions.*
6	*I keep a journal to reflect often on what you are doing both at work and outside of work and if it fits with your purpose.*
7	*For 8 years, I had a monotonous lifestyle of work-home-work that I felt like a robot just trying to make ends meet that I came to forget and took for granted what is most important for me. Thanks to this workshop, it has reminded me of why I am doing this in the first place - for my family. So it has given me the drive to continue pursuing my career and to live life fully.*

B.2 Variable lists

Overlap in interests with colleagues, company, and community. Based on the "Adapted Inclusion of Others in Self (IOS) scale" (Aron et al., 2004), which measures the extent to which individuals perceive community- and self-interest as overlapping. IOS has been validated across a wide variety of contexts, and adapted versions are found to be strongly correlated with environmental behavior (Schultz, 2002) and connectedness to the community (Mashek, Cannaday and Tangney, 2007). We code the measure from 1 to 7, where 7 implies the highest overlap. Workers are asked to choose between sets of pictures, each showing two circles (labeled "self" and "community") with varying degrees of overlap, from non-overlapping to almost completely overlapping.
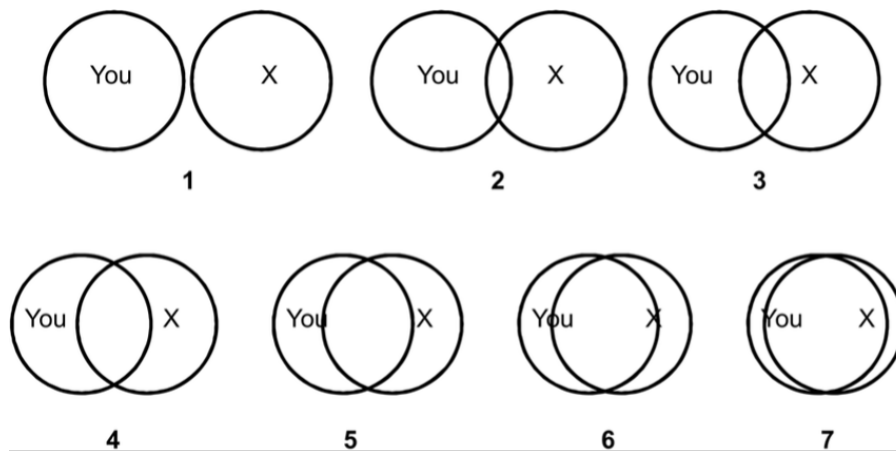
Notes. The term "x" indicates colleagues, company, and community, respectively.

Table B.2: Variable construction: survey measures

Variable	Components	Details	Possible answers
Panel A: Feedback from Purpose Workshops			
Workshop expectations	I have high expectations about the workshop and I believe it will be a valuable experience. The workshop will probably be a waste of time.	Index formed by adding together responses. Reverse coded.	1 Strongly disagree - 7 Strongly agree; 1 Strongly disagree - 7 Strongly agree
Workshop engagement	Overall this workshop was a valuable investment of my time. I felt the facilitator was helpful, engaging and prepared to run the session. Would you be interested in becoming a facilitator?	Index formed by adding together responses.	1 Strongly disagree - 7 Strongly agree; 1 Strongly disagree - 7 Strongly agree; 0 No - 1 Yes
Purpose discovery	I managed to find a unifying purpose sentence or a group of words that inspired me. These words still resonate with me now.	Index formed by adding together responses.	1 Strongly disagree - 7 Strongly agree; 1 Strongly disagree - 7 Strongly agree
Purpose use	Have you written your purpose down so that you could see it frequently? Have you shared your purpose with members of your family and/or friends? Have you shared your purpose with members of your team at $< company >$? Have you shared your purpose with your line manager?	Index formed by adding together responses.	0 No - 1 Yes or not yet; 0 No - 1 Yes or not yet; 0 No - 1 Yes or not yet; 0 No - 1 Yes or not yet
Alignment with job	I feel I am currently living my purpose in my everyday job.		1 Strongly disagree - 7 Strongly agree
Alignment with company	I feel I can live my purpose at $< company >$.		1 Strongly disagree - 7 Strongly agree
Panel B: Motivation, job satisfaction and SWB			
Meaningful work index	The work I do on this job is very important to me. My job activities are personally meaningful to me. The work I do on this job is worthwhile. My job activities are significant to me. The work I do on this job is meaningful to me. I feel that the work I do on my job is valuable.	Index formed by adding together responses. From Psychological Meaningfulness Scale (PMS) (May, Gilson and Harter, 2004).	1 Strongly disagree - 7 Strongly agree (×6)
Meaning at work	Currently, how often do you spend time working towards the things that matter to you at work?		1% of my time - 99% of my time (7 point)
Meaning outside of work	Currently, how often do you spend time working towards the things that matter to you in your personal life?		1% of my time - 99% of my time (7 point)
Perceives colleagues' interests and self-interest as overlapping		Adaptation of Inclusion of Other in the Self scale (Aron, Aron and Smollan, 1992).	No overlap - 7 Highest overlap
Perceives company interests and self-interest as overlapping		Adaptation of Inclusion of Other in the Self scale (Aron et al., 1992).	No overlap - 7 Highest overlap
Perceives community interests and self-interest as overlapping		Adaptation of Inclusion of Other in the Self scale (Aron et al., 1992).	No overlap - 7 Highest overlap
Meaning and impact at work	My work has special meaning: this is not just a job. When I look at what we accomplish, I feel a sense of pride. I feel good about the ways we contribute to the community. I'm proud to tell others I work here.	Index formed by adding together responses. From Great Places to Work Survey used in Gartenberg et al. (2019)	1 Strongly disagree - 7 Strongly agree (×4)
Intrinsic Motivation	I feel confident that I can do things well on my job. I feel my choices on my job express who I really am. At work, I feel close and connected with other people who are important to me. I feel insecure about my abilities on my job. I feel the relationships I have at work are just superficial. My daily activities at work feel like a chain of obligations.	Index formed by adding together responses. Subset of questions from the BPNSF-Scale (Chen, Vansteenkiste, Beyers, Boone, Deci, Van der Kaap-Deeder, Duriez, Lens, Matos, Mouratidis, Ryan, Sheldon, Soenens, Van Petegem and Verstuyt (2015); Schultz, Ryan, Niemiec, Legate and Williams (2015)). Reverse coded. Reverse coded. Reverse coded.	1 Strongly disagree - 7 Strongly agree (×6)
Team collaboration	I have been able to collaborate effectively with the members of the teams I am part of.		1 Strongly disagree - 7 Strongly agree
Relationship with manager	I have been able to be open with my line manager about my goals and priorities.		1 Strongly disagree - 7 Strongly agree
Commitment with work	I am inspired to go the extra mile in my job.		1 Strongly disagree - 7 Strongly agree
Job satisfaction	Overall, I am satisfied with my job. I am inspired to go the extra mile in my job. I have been able to be open with my line manager about my goals and priorities. I have been able to collaborate effectively with the members of the teams I am part of.	Index formed by adding together responses.	1 Strongly disagree - 7 Strongly agree (×4)
Satisfaction with life scale	In most ways my life is close to my ideal. The conditions of my life are excellent. I am satisfied with my life. So far I have got the important things I want in life. If I could live my life over, I would change almost nothing.	Index formed by adding together responses. From the SWL (Diener, Emmons, Larsen and Griffin, 1985).	1 Strongly disagree - 7 Strongly agree (×5)
Life Satisfaction	All things considered, how satisfied are you with your life as a whole these days?	World Values Survey.	1 Completely Dissatisfied - 7 Completely Satisfied
Subjective Happiness Scale	Compared to your peers, how would you describe your overall level of happiness and peace of mind?	Question adapted from SHS (Lyubomirsky and Lepper, 1999).	1 Very Unhappy or Discontent - 7 Very Happy and Content