



The
University
Of
Sheffield.

What kind of work is the most meaningful? The impact of job type on eudaimonic well-being

Andrew Bryce, University of Sheffield

Supervisors: Jennifer Roberts and Mark Bryan

Quality of life and personal well-being: Research and data showcase, London,
27 November 2017



The
University
Of
Sheffield.

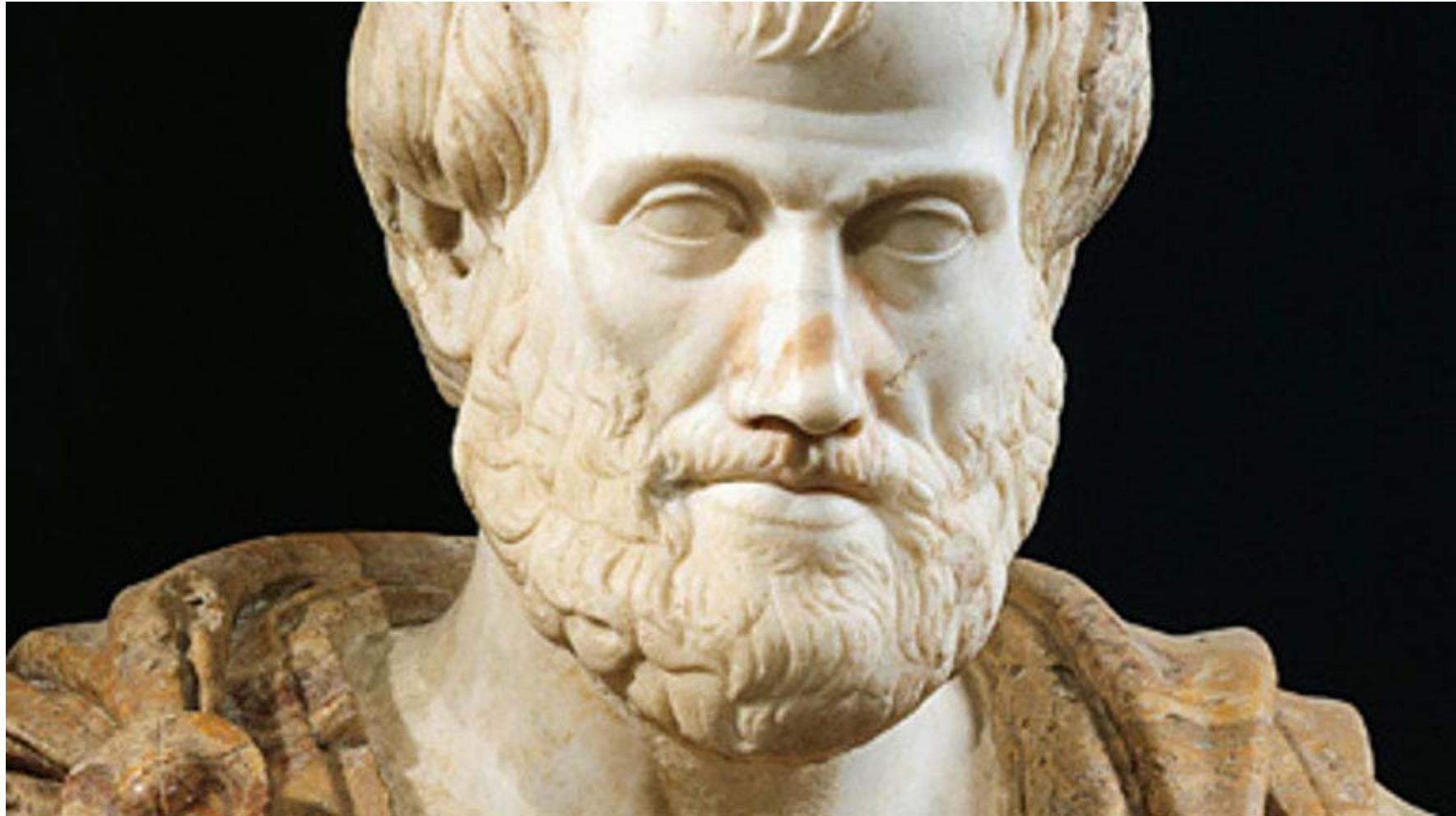
What is eudaimonic well-being?



The
University
Of
Sheffield.

Aristotle

3





The
University
Of
Sheffield.

Bentham

4



Utility versus eudaimonia

Utility	Eudaimonia
Subjective – every person has different preferences	Prescriptive – a person with eudaimonia has certain set of characteristics, deeming him/her to be “praiseworthy”
Amoral – you don’t have to be good to feel good	Moral – the vicious person does not have eudaimonia even if he/she is happy, only virtuous people can have eudaimonia
Cumulative – utility is experienced instantaneously and accumulates over the life course	Teleological – eudaimonia is a goal or a purpose which we aim towards
Passive – utility is experienced as a result of choices	Active – eudaimonia is experienced through action
Maximising – the best outcome is where utility is maximised	Moderating – eudaimonia is achieved through a balanced life avoiding extremes of character



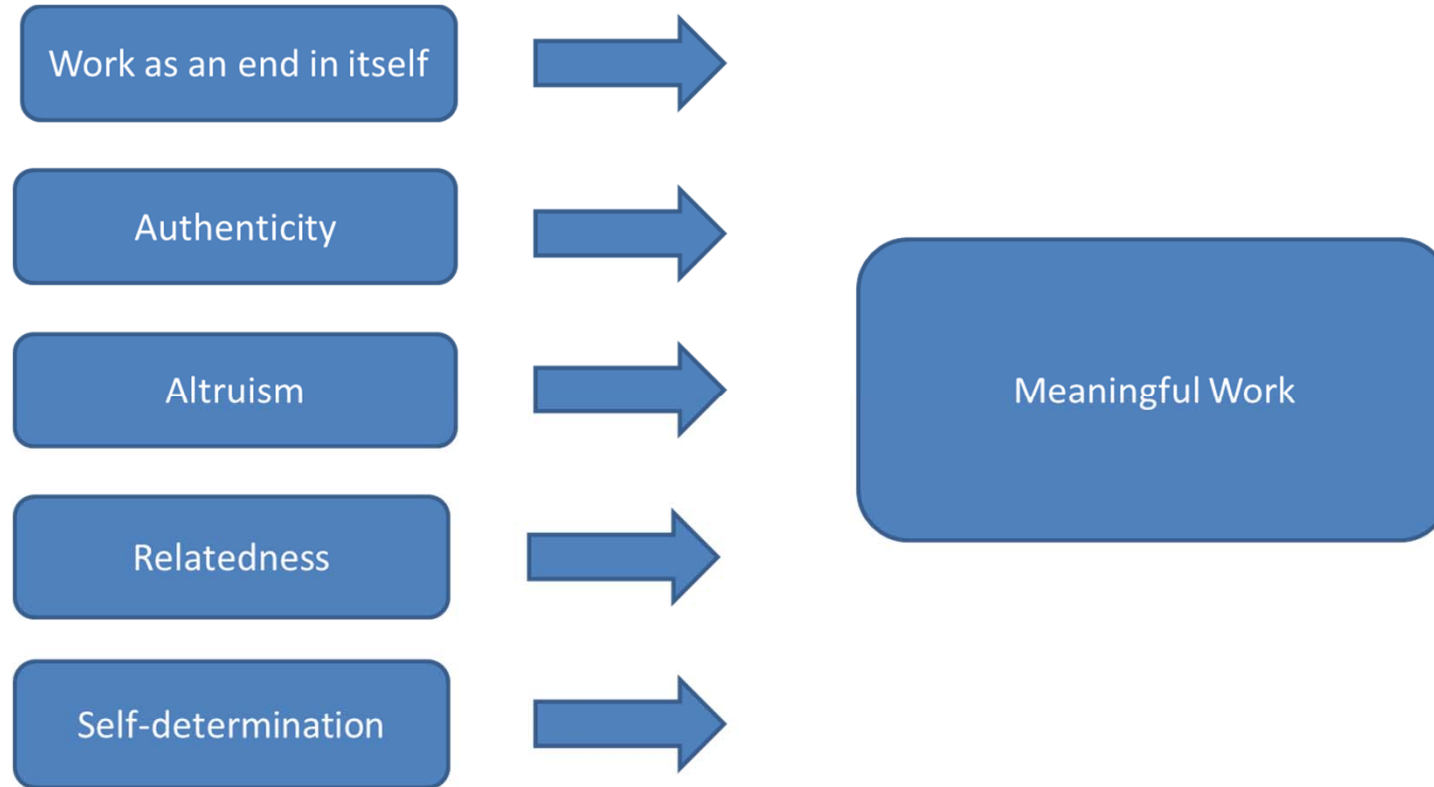
The
University
Of
Sheffield.

Eudaimonic well-being at work



$$U_{\text{JOB}} = f(X_{\text{EXTRINSIC}}, X_{\text{INTRINSIC}})$$

- Besley and Ghatak (2005, AER) – Some workers have preferences for “mission” (making a positive contribution to society through their work) so working for a mission-oriented employer compensates for lower extrinsic rewards
- Akerlof and Kranton (2005, JEP) – Workers get utility directly from effort if this affirms their sense of identity





The
University
Of
Sheffield.

Analysis of US data

Data (US)

- American Time Use Survey – 20,055 employed individuals surveyed in 2010, 2012 and 2013 (subsample of CPS)
- Respondents report everything they did in the last 24 hours – categorised into activity types
- For three randomly selected activities, they report how meaningful they found that activity (scale of 0-6) – $20,055 \times 3 = 60,165$ observations
- They also report how they were feeling during the same activities, in terms of happiness, sadness, pain, stress and tiredness



Model (US)

- Each observation (activity) is coded into one of 18 top level categories giving a set of dummy variables $(A_{1in}, A_{2in}, \dots, A_{18in})$ describing the n th activity of individual i , where $n = \{1, 2, 3\}$. $A_{1in} = 1$ denotes that the activity is “work-related”. \mathbf{A}_{in} is the 17x1 vector containing these activity types dummies.
- Other activity-level characteristics (time of day, duration etc.) are contained in \mathbf{X}_{in}
- In each model, each individual is categorised into one of K job types, each of which is interacted with whether or not the activity is work-related giving a set of interaction parameters $(J_{1i}A_{1in}, J_{2i}A_{1in}, \dots, J_{Ki}A_{1in})$. \mathbf{J}_{in} is the $(K-1)$ x1 vector containing these interactions.
- All parameters are demeaned across n and thus relative meaningfulness (and other well-being outcomes) of each activity can be estimated by the fixed effects specification:

$$\ddot{S}_{in} = \alpha + \ddot{\mathbf{J}}'_{in} \boldsymbol{\beta} + \ddot{\mathbf{A}}'_{in} \boldsymbol{\gamma} + \ddot{\mathbf{X}}'_{in} \boldsymbol{\delta} + \ddot{\varepsilon}_{in}$$

Results (US)

	Meaning	Happy	Pain	Sad	Stress	Tired
Working and work-related activities	4.42	3.96	5.12	5.32	3.78	3.61
Personal care	3.83*	3.16*	3.09*	4.62*	4.04	2.12*
Household activities	4.13*	4.15*	5.18*	5.48*	4.78*	3.73*
Caring for and helping household members	5.17*	4.76*	5.45*	5.66*	4.62*	3.30*
Caring for and helping non-household members	4.90*	4.72*	5.29*	5.41	4.76*	3.75
Educational activities	4.58	3.73*	5.45*	5.39	3.38*	3.07*
Consumer purchases	3.82*	4.18*	5.32*	5.50*	4.66*	3.98*
Professional and personal care services	4.31	3.86	4.82*	5.12*	4.26*	3.87*
Household services	4.03	3.62	5.37	5.50	4.33*	4.02
Government services and civic obligations	4.50	3.17*	5.28	5.78	4.06	4.61*
Eating and drinking	4.46	4.61*	5.33*	5.55*	4.93*	3.88*
Socialising, relaxing and leisure	4.05*	4.48*	5.29*	5.50*	5.05*	3.65
Sports, exercise and recreation	5.03*	4.85*	4.93*	5.70*	5.19*	3.94*
Religious and spiritual activities	5.66*	5.04*	5.51*	5.43*	5.34*	4.49*
Volunteer activities	5.16*	4.79*	5.35*	5.74*	4.68*	4.11*
Telephone calls	4.74*	4.42*	5.15	5.21	4.55*	3.78
Travelling	3.97*	4.37*	5.33*	5.46*	4.67*	3.80*
Unknown	4.42	4.34*	5.24*	5.47*	4.64*	3.63

Star () denotes that the mean is significantly different to the mean of work and work-related activities, according to a pairwise mean test (95% confidence interval). Note that the scales for pain, sadness, stress and tiredness have been reversed and therefore a higher score denotes higher well-being.*

Results (US)

	Meaning	Happy	Pain	Sad	Stress	Tired
Work	0.034 (0.097)	-0.181 (0.077)**	-0.016 (0.053)	-0.014 (0.058)	-0.285 (0.080)***	-0.024 (0.090)
Work * Govt	-0.096 (0.087)	-0.102 (0.069)	0.007 (0.048)	-0.106 (0.052)**	-0.206 (0.072)***	-0.096 (0.081)
Work * Profit	-0.218 (0.072)***	-0.119 (0.057)**	0.006 (0.039)	-0.089 (0.043)**	-0.179 (0.059)***	-0.113 (0.066)*
Work * Non-profit	0.102 (0.105)	-0.024 (0.083)	0.008 (0.057)	-0.066 (0.062)	-0.266 (0.087)***	-0.030 (0.097)
“A” controls	Yes	Yes	Yes	Yes	Yes	Yes
“X” controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.09	0.05	0.02	0.01	0.08	0.08
N	60,108	60,108	60,108	60,108	60,108	60,108

Omitted variable: Work * Self-employed; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Results (US)

Top five most meaningful occupations

- Community and social service
- Education, training and library
- Legal
- Healthcare practitioner and technical
- Arts, design, entertainment, sports and media

Bottom five least meaningful occupations

- Transportation and material moving
- Office and administrative support
- Production
- Installation, maintenance and repair
- Protective service

Results (US)

Top five most meaningful industries

- Educational services
- Agriculture, forestry, fishing and hunting
- Professional and technical services
- Health care and social services
- Real estate and rental and leasing

Bottom five least meaningful industries

- Manufacturing - non-durable goods
- Transportation and warehousing
- Wholesale trade
- Management, administrative and waste management
- Public administration



The
University
Of
Sheffield.

Analysis of UK data

Data (UK)

- Annual Population Survey – cross-sectional dataset, over 800,000 people pooled across the years 2011/12 to 2015/16
- Each person is asked to report their well-being on four 0-10 scales: life satisfaction, happiness yesterday, anxiety yesterday, and “to what extent do you feel that the things you do in your life are worthwhile?” – this is the proxy for eudaimonic well-being
- Pre-treatment variables – characteristics that may determine but not be determined by career choice: gender, age, ethnicity, qualifications, religion, marital status, disability, region.
- Treatment variables – dummy variables denoting current labour market status: whether working, whether economically active, whether self-employed, whether public sector, dummy variables for each sector (type of organisation), industry and occupation.
- Job covariates – whether full time, whether temporary job, whether new job, log of earnings



Model (UK)

- Each individual i either receives or does not receive a “treatment” (i.e. their current labour market status either does or does not fit a defined category) such that $J_i = \{0,1\}$
- Their propensity for receiving the treatment assumed to depend on a vector of pre-treatment characteristics \mathbf{X}_i such that $e(\mathbf{X}_i) = p(J_i=1 | \mathbf{X}_i)$
- The average treatment effect of job type J_i on well-being S_i is estimated by inverse probability weighting such that:

$$\tau = E \left[\frac{J_i S_i}{e(\mathbf{X}_i)} - \frac{(1 - J_i) S_i}{1 - e(\mathbf{X}_i)} \right]$$

Results (UK)

Pre-treatment weights: Dependent variable	Birth pre-treatments only				All pre-treatments			
	Worthwhile	Satisfied	Happy	Anxious	Worthwhile	Satisfied	Happy	Anxious
Whether working	0.400 (0.004)***	0.381 (0.004)***	0.249 (0.005)***	0.236 (0.006)***	0.155 (0.004)***	0.145 (0.004)***	-0.006 (0.005)	0.011 (0.007)
Whether active	0.285 (0.004)***	0.220 (0.004)***	0.188 (0.005)***	0.200 (0.007)***	-0.019 (0.004)***	-0.070 (0.004)***	-0.114 (0.005)***	-0.088 (0.007)***
Whether self-employed	0.133 (0.005)***	0.032 (0.005)***	0.105 (0.006)***	0.002 (0.008)	0.154 (0.005)***	0.044 (0.005)***	0.116 (0.006)***	0.026 (0.009)***
Whether public sector	0.206 (0.005)***	0.047 (0.006)***	0.066 (0.007)***	-0.025 (0.010)**	0.143 (0.005)***	0.008 (0.006)	0.033 (0.007)***	-0.013 (0.010)

*Each cell represents a separate regression and shows the coefficient and associated standard error pertaining to the explanatory variable of interest in the WLS regression. Other covariates not shown are whether full time, whether permanent, whether new job and log net weekly earnings. The Working and Active regressions do not include any covariates and the Self-employed regression only includes whether full time and whether new job; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$*

Results (UK)

Top five industries for feeling that the things you do in your life are worthwhile

- Education
- Health and social work
- Other service activities
- Agriculture, forestry and fishing
- Households as employers

Bottom five industries for feeling that the things you do in your life are worthwhile

- Wholesale, retail, repair of vehicles
- Admin and support services
- Information and communication
- Accommodation and food services
- Financial and insurance activities

Results (UK)

Top five occupations for feeling that the things you do in your life are worthwhile

- Construction and building trades supervisors
- Welfare professionals
- Therapy professionals
- Senior officers in protective services
- Health professionals

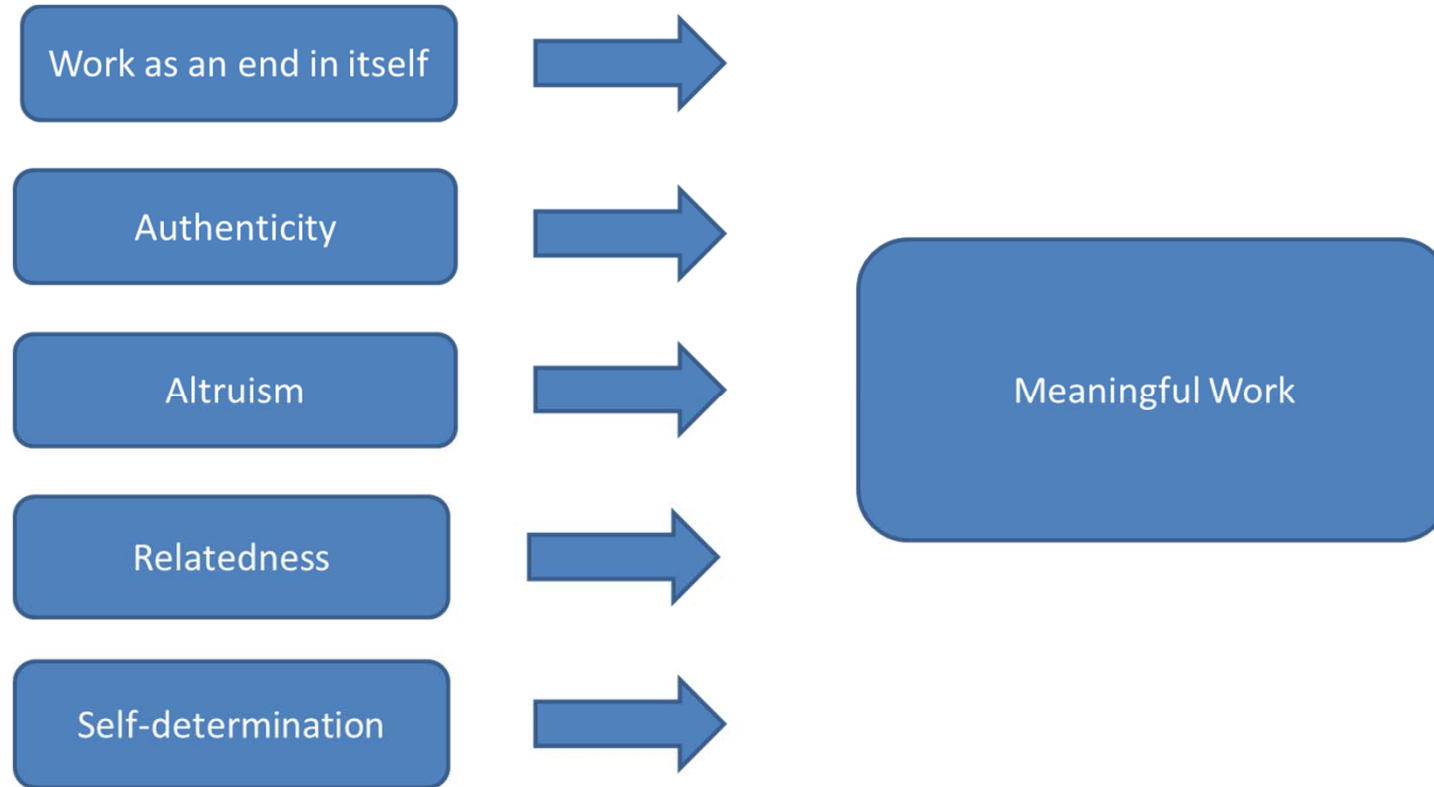
Bottom five occupations for feeling that the things you do in your life are worthwhile

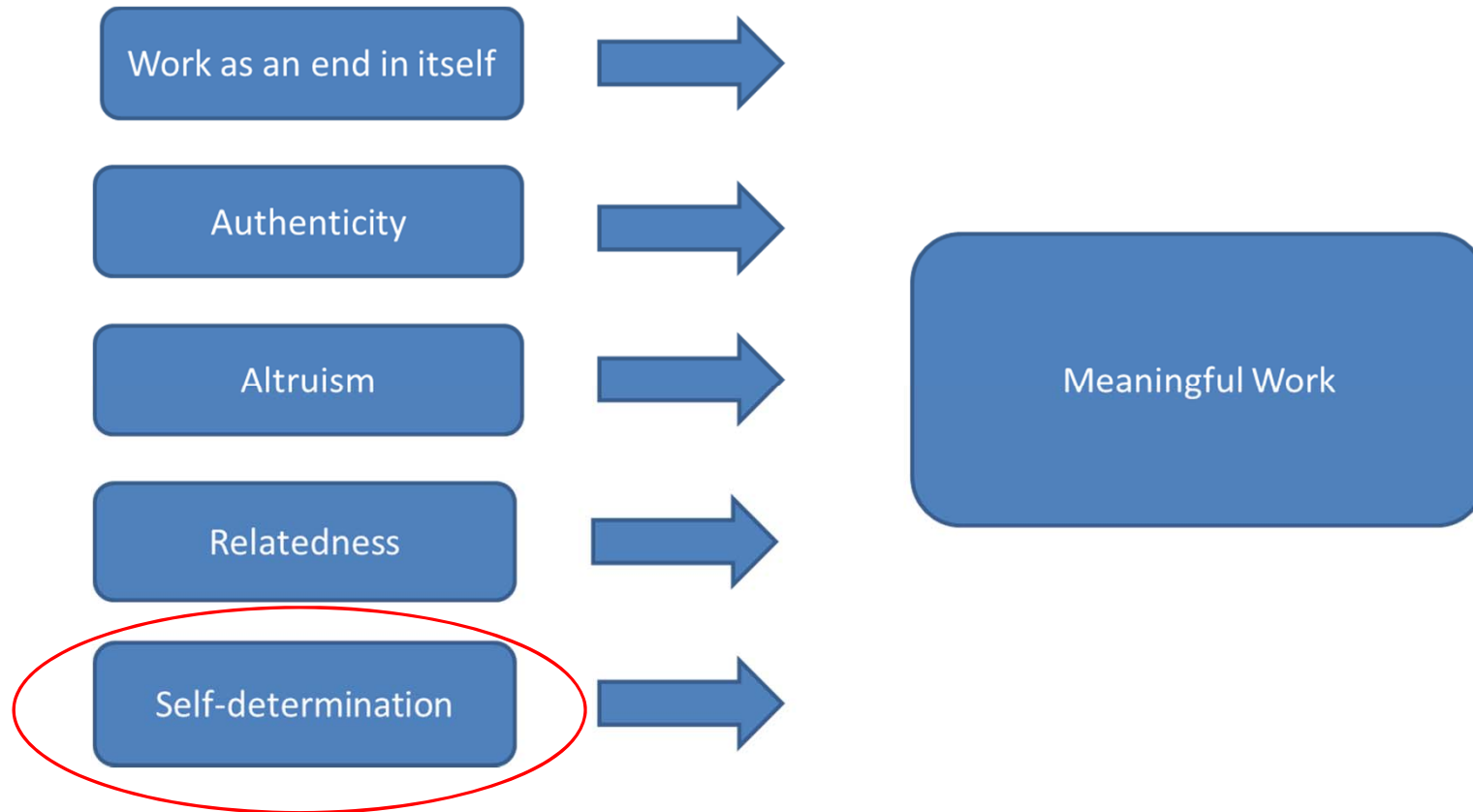
- Elementary sales occupations
- Elementary storage occupations
- Elementary cleaning occupations
- Sales assistants and retail cashiers
- Information technology and telecommunications professionals

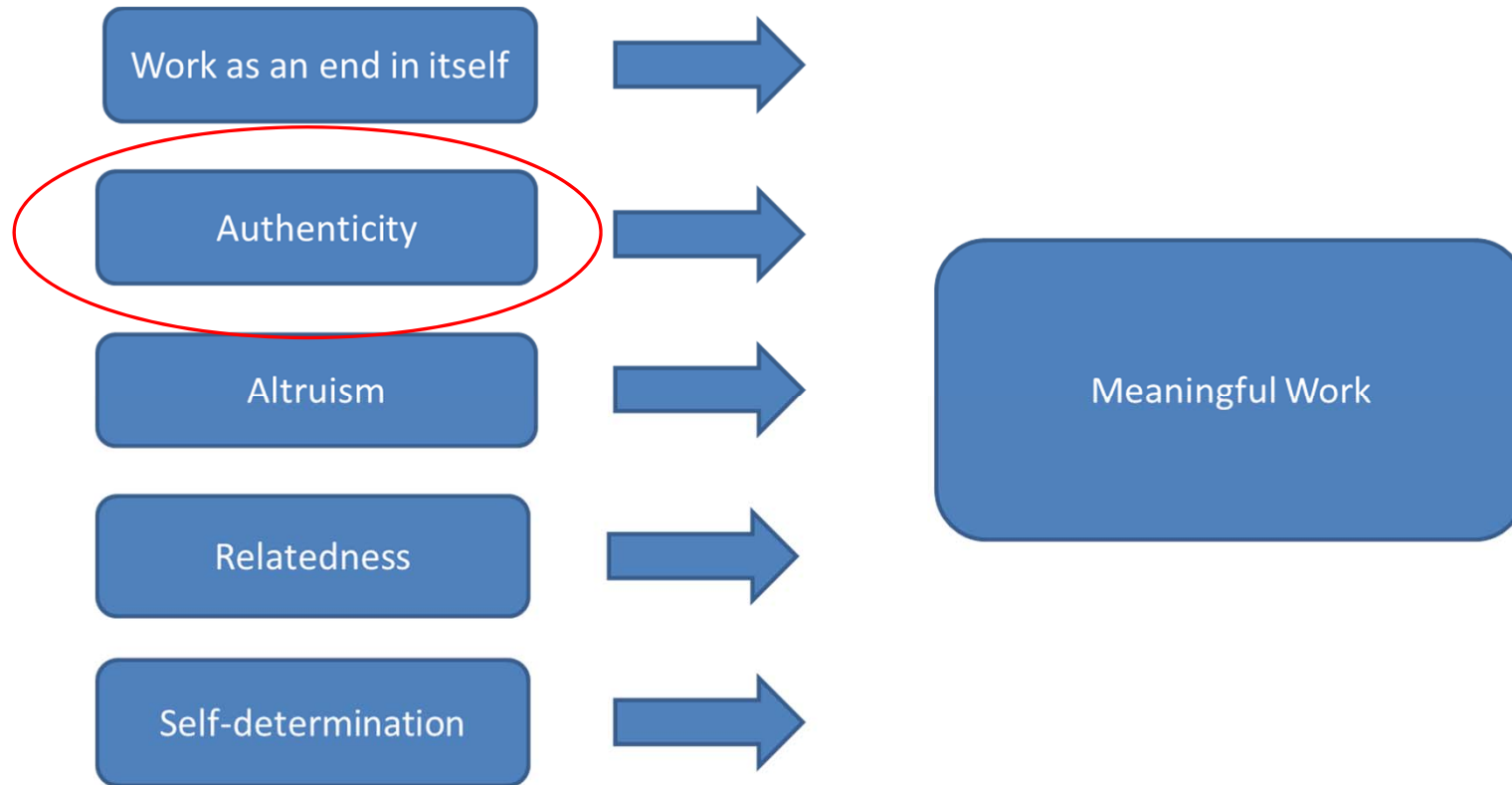


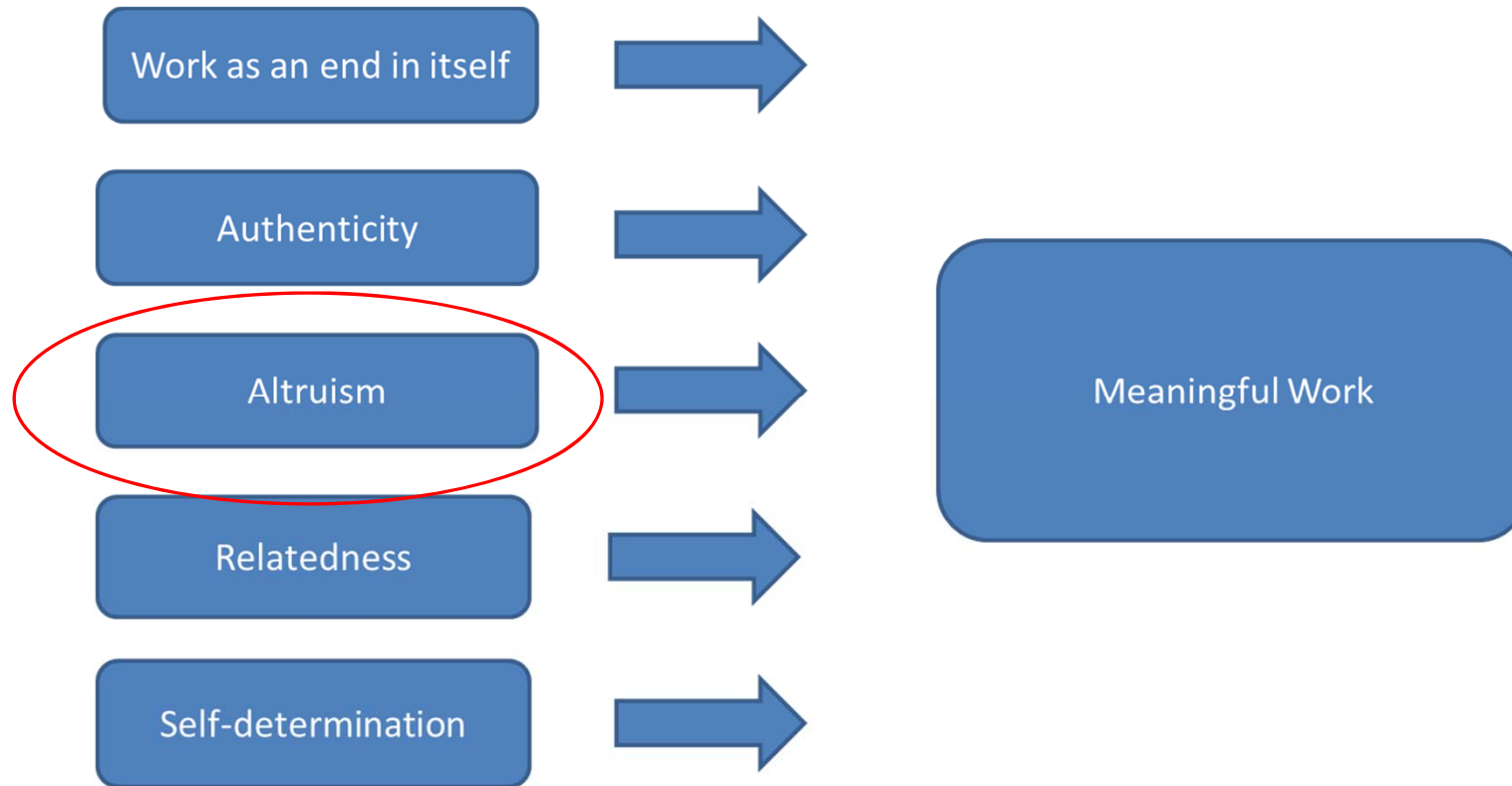
The
University
Of
Sheffield.

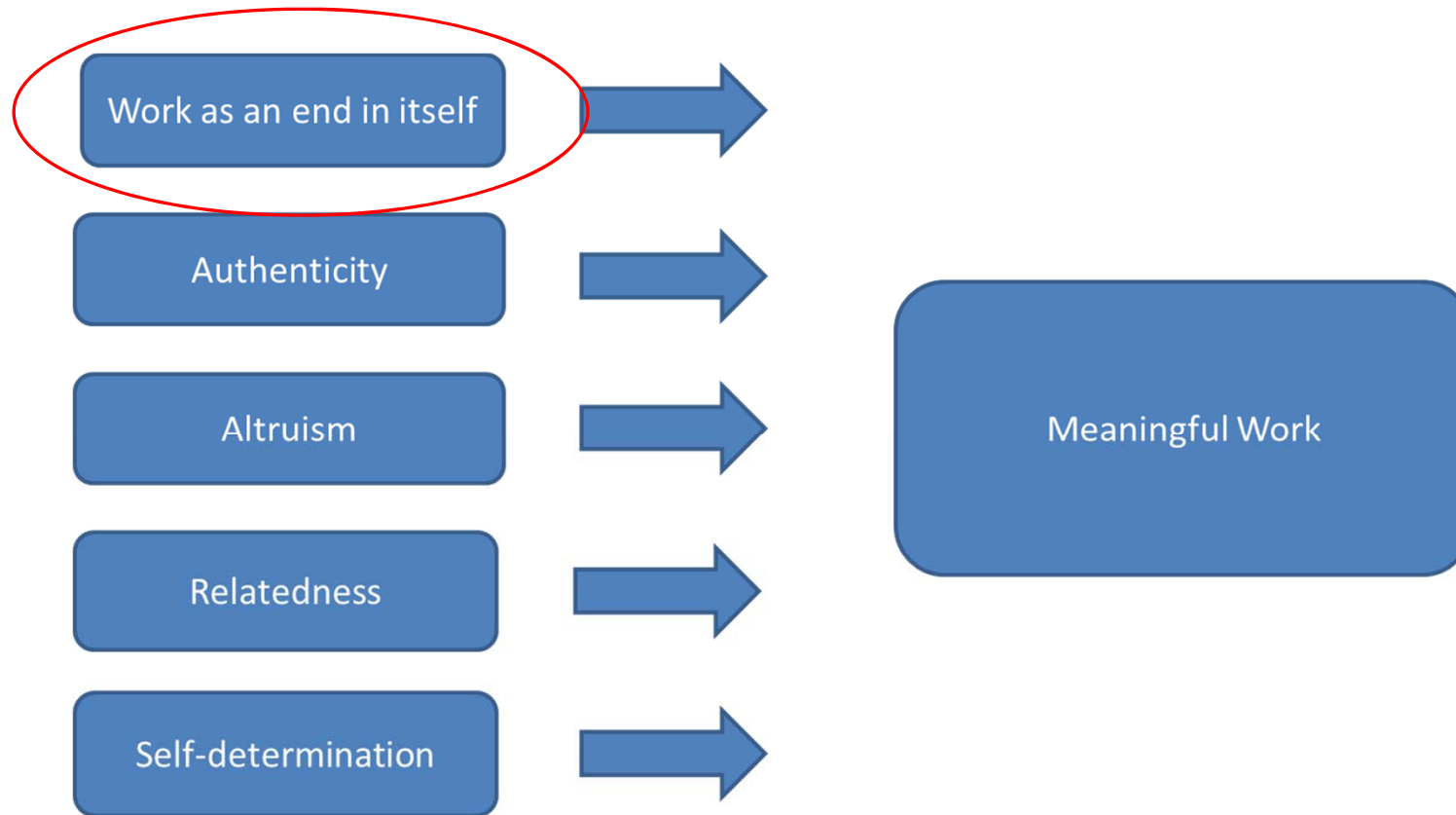
Discussion













The
University
Of
Sheffield.

Conclusions



Conclusions

- This research suggests that some types of work are considered more meaningful than others
- Higher skilled / higher authority occupations associated with more meaningfulness, perhaps due to more scope for authenticity and self-determination
- Work that has a direct and substantial impact on the lives of others is also found to be more meaningful
- Having a job makes life feel more worthwhile but working is not the most meaningful activity that people do
- Eudaimonic well-being plays an important role in labour supply

References

- Akerlof, G. A., & Kranton, R. E. (2005). Identity and the Economics of Organizations. *Journal of Economic Perspectives*, 19(1), 9–32.
- Aristotle (2002). *Nicomachean Ethics*, tr. by Broadie, S. & Rowe, C. Oxford: Oxford University Press.
- Bentham, J. (1907). *An Introduction to the Principles of Morals and Legislation*. Oxford: Oxford University Press.
- Besley, T., & Ghatak, M. (2005). Competition and Incentives with Motivated Agents. *American Economic Review*, 95(3), 616–636.
- Binder, M. (2016). "...Do it with joy!" - Subjective well-being outcomes of working in non-profit organizations. *Journal of Economic Psychology*, 54, 64–84.
- Chalofsky, N. (2013). An emerging construct for meaningful work. *Human Resource Development International*, 6(1), 69–83.
- Deci, E.L. & Ryan, R.M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry*, 11(4), 227-268.
- Dolan, P., Layard, R., & Metcalfe, R. (2011). *Measuring Subjective Well-being for Public Policy*. Office for National Statistics.
- Dolan, P. & Kudrna, L. (2016). Sentimental Hedonism: Pleasure, purpose and public policy. In Vitterso, J., *Handbook of Eudaimonic Wellbeing*. Springer.
- Hinchcliffe, G. (2004). Work and Human Flourishing. *Educational Philosophy and Theory*, 36(5), 535–547.
- Huppert, F. A., & So, T. T. C. (2013). Flourishing Across Europe : Application of a New Conceptual Framework for Defining Well-Being. *Social Indicators Research*, 110, 837–861.
- Kamerade, D., & McKay, S. (2015). Is There a Subjective Well-Being Premium in Voluntary Sector Employment ? *Voluntas*, 26, 2733–2754.
- Krueger, A.B., Kahneman, D., Schkade, D., Schwarz, N. & Stone, A.A. (2008) National Time Accounting: The Currency of Life. *Princeton University Working Paper #523*.
- Lips-Wiersma, M., Wright, S., & Dik, B. (2016). Meaningful work : differences among blue- , pink- , and white-collar occupations. *Career Development International*, 21(5), 534–551.
- Lopes, H. (2011). Why Do People Work ? Individual Wants Versus Common Goods. *Journal of Economic Issues*, 45(1), 57–73.
- Marshall, A. (1961). *Principles of Economics*. Ninth (Variorum) Edition. London: Macmillan.
- Menard, J., & Brunet, L. (2011). Authenticity and well-being in the workplace : a mediation model. *Journal of Managerial Psychology*, 26(4), 331–346.
- Polidori, P., & Teobaldelli, D. (2013). Prosocial behavior in the production of publicly provided goods and services : an overview. *International Review of Applied Economics*, 27(2), 285–296.
- Rosen, S. (1986). The theory of equalizing differences. In Ashenfelter, O. & Layard, R. (Eds.), *Handbook of Labor Economics*. Amsterdam: North-Holland.
- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work : A theoretical integration and review. *Research in Organizational Behavior*, 30, 91–127.
- Ryff, C. D. (1989). Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081.
- Spencer, D. A. (2015). Developing an understanding of meaningful work in economics: the case for a heterodox economics of work. *Cambridge Journal of Economics*, 39, 675–688.
- Turban, D. B., & Yan, W. (2016). Relationship of eudaimonia and hedonia with work outcomes. *Journal of Managerial Psychology*, 31(6), 1006–1020.