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Abstract: 5ŜăLJλűŜ ø2YŜy¤ă NJŜŌŜyű ∃I·λyã λy˘ŜŘdzŌI·űλ2y˘I·yŘ ŜYLJf2èYŜyűΣ Kdzăō I·yŘă ăűλff űŜyŘ ú2 2dzűπŜI·NJy˘űKŜΛNJ øλØŜă¢ ¢Kλă I·NJűλŎfŜ ŜËI· Y˘λyŜă úKŜ NJŜfI·úλ2yãKΛLJ ōŜűøŜŜy˘úKŜ LJI·NJűyŜNJ LJI·è ∃I·LJΣ λ¢$¢ úKŜ ŘλŦŦŜNJŜyŌŜ λy˘ŜI·NJyŜŘ λyŌ2YŜ ōŜűøŜŜy˘YI·NJNJŜŘΣ Ŏ2πNJŜăλŘŜyű LJI·NJűyŜNJăΣ I·yŘ fλŦŜ ăI·űλăŦI·ŏűλ2y¢ /2yűNJI·NJè ú2 LJNJŜØλ2dză ăűdzŘλŜăΣ øŜ λyØŜăűλ∃I·úŜ úKŜ ŜŦŦŜŌŜă 2Ŧ NJŜŌŜyű ŌKI·y∃Ša λy˘NJŜfI·úλØŜ ŜI·NJyʎy∃ă øλűKλy˘Ŏ2dzLJfŜă I·ă øŜff I·ă tI·ō2dzNJ YI·NJ˥ŜúNJI·yãλúλ2yã¢ ¦ăλy∃ ăŜØŜNJI·t øI·ØŜă 2Ŧ úKŜ ¦Y I 2dzăŜK2fŘ [2y∃λűdzŘλyI·t {údzŘèΣ øŜ NJŜØŜI·t úKI·úYŜy˘ŜËKλōλű I·y˘λyŌNJŜI·ăŜ λy˘fλŦŜ ăI·úλăŦI·ŏűλ2y˘λy˘NJŜăLJ2yãŜ ú2 I· NJŜŌŜyű λyŌNJŜI·ăŜ λy˘úKŜΛNJ LJNJ2LJ2NJúλ2yI·t ŜI·NJyʎy∃ă¢ C2NJ ø2YŜy˘úKŜΛNJ LJNJ2LJ2NJúλ2yI·t ŜI·NJyʎy∃ă KI·Ř y2 ŜŦŦŜŌű 2y˘fλŦŜ ăI·úλăŦI·ŏűλ2y˘λy˘2yŜ Y˘2ŘŜfΣ I·yŘ λy˘I· Y˘2ŘŜf úKI·ú I·ŌŌ2dzyűŜŘ Ŧ2NJ úKŜΛNJ NJŜŌŜyű ŜYLJf2èYŜyű ŌKI·y∃ŜăΣ ø2YŜy˘ŜËKλōλúŜŘ ŘŜŌNJŜI·ăŜŘ fλŦŜ ăI·úλăŦI·ŏűλ2y¢ ² Ŝ I·fă2 ŦλyŘ ăŜŌ2yŘI·NJèπŜI·NJyʎy∃ Kdzăō I·yŘă NJŜLJ2NJű f2øŜNJ I·ØŜNJI·∃Ŝ fλŦŜ ăI·úλăŦI·ŏűλ2y˘úKI·y˘LJNJλYI·NJèπŜI·NJyʎy∃ YŜy£ øKλfŜ ădzŌK ŘλŦŦŜNJŜyŌŜă øŜNJŜ y2ű Ŧ2dzyŘ Ŧ2NJ ø2YŜy¢ ¢KŜ I·yI·fëăλă 2ŦŦŜNJă Ŏ2YLJŜffλy∃ ŜØλŘŜyŌŜ 2Ŧ úKŜ NJ2fŜ 2Ŧ ∃ŜyŘŜNJŜŘ y2NJYă λy˘úKŜ ădzăúŜyI·yŌŜ 2Ŧ úKŜ LJI·NJűyŜNJ LJI·è ∃I·LJ¢

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Title 'The Partner Pay Gap – Associations between Spouses' Relative Earnings and Life Satisfaction among Couples in the UK'

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Abstract

Despite women's recent gains in education and employment, husbands still tend to out-earn their wives. This article examines the relationship between the partner pay gap, i.e. the difference in earned income between married, co-resident partners, and life satisfaction. Contrary to previous studies, we investigate the effects of recent changes in relative earnings within couples as well as labour market transitions. Using several waves of the UK Household Longitudinal Study, we reveal that men exhibit an increase in life satisfaction in response to a recent increase in their proportional earnings. For women their proportional earnings had no effect on life satisfaction in one model, and in a model that accounted for their recent employment changes, women exhibited decreased life satisfaction. We also find secondary-earning husbands report lower average life satisfaction than primary-earning men, while such differences were not found for women. The analysis offers compelling evidence of the role of gendered norms in the sustenance of the partner pay gap.

Keywords: couples' subjective well-being, household specialisation, income comparisons, life satisfaction, partner pay gap, relative earnings.

1. Introduction.

Research on the partner pay gap, that is, the size of the difference in earned income between co-resident partners, suggests that, within couples, men tend to substantially out-earn their female partners (Bertrand et al., 2015; Moen and Sweet, 2003; Van Berkel and De Graaf, 1998). Many of these studies conclude that women's earnings, within households, are secondary, with women often earning approximately one third of total household income (Bianchi et al., 1999; Stier and Mandel, 2009). Despite the rapid decline of the traditional male breadwinner/female homemaker model in Western societies (Cunningham, 2008) and a rise in female employment (OECD, 2019), most households remain characterised by gender specialisation in the allocation of paid and unpaid work. Not only has the partner pay gap changed very little over time, there is even some evidence that it has risen in some countries (Author A), which is suggestive of a 're-traditionalisation' of gender roles. The partner pay gap, therefore, represents a powerful measure of enduring inequalities within modern coupledom which goes against expectations of progressive equality between the sexes.

While researchers have become increasingly aware of the extent and persistence of the partner pay gap, there has been comparatively little analysis of the inter-personal mechanisms which might sustain it. Rather, studies have emphasised the macro socio-structural impediments to equal earning. Research has found families' working arrangements to be structured by policy regimes (Daiger von Gleichen and Seeleib-Kaiser, 2018) and economic and labour market conditions (Sánchez-Mira and O'Reilly, 2019). While we recognise the important role of macro-economic and institutional structures, our research agenda, rather, focuses on the role of micro-social interpersonal dynamics in the maintenance of the partner pay gap. We do so through an examination of the implications of the partner pay gap on the psychological well-being of women and men. Our analysis allows us to uncover the relationship between gendered

identities, earning position within the household and well-being, extending current knowledge by offering new insights into the role of normative structures on working practice. Using multiple waves of the UK Household Longitudinal Study (UKHLS), we examine the effect of recent changes in within-couple earnings inequality as well as recent changes in labour force position, allowing us to better control for habituation and to portion out concurrent and, potentially, competing predictors of life satisfaction. The analysis offers compelling evidence of the role of gendered norms on the sustenance of the partner pay gap, with men found to earn a 'psychological dividend' when they out-earn their female partners.

2. Literature.

2.1 Income and life satisfaction.

Governments have begun to recognise the role of subjective well-being as a target for social policy and as an indicator of policy success (Dolan and White, 2007; OECD, 2013). Subjective well-being indicators are used to assess the impact of income (e.g., Easterlin, 2001, 2003) and employment (e.g., Clark, 2001, 2003; Clark and Oswald, 1994) on individual well-being. Studies of these and other life domains suggest that individuals do not form evaluations of their lives in isolation – rather there is evidence of interdependence in life satisfaction (Veenhoven, 1991). For example, numerous studies suggest that, rather than absolute income, what really matters for subjective well-being is *relative income*, i.e. how one's income compares to that of relevant others - a reference group - due to social comparison (Clark et al., 2008; Easterlin, 1995). In one study, the income of the reference group is about equally important to individual well-being as one's own income (Ferrer-i-Carbonell, 2005) while other studies suggest that relative income dominates absolute income in well-being evaluations (Easterlin, 2001).

The definition of a reference group in these studies often includes people outside the respondent's core household, such as neighbours (people living in the same geographic area; e.g., Luttmer, 2005), family members and friends (McBride, 2001), colleagues, one's parents and high school mates (Senik, 2009). Only a handful of studies have considered a spouse as a relevant reference group for income comparisons even though the interdependence of spousal well-being is evident. For instance, men and women's life satisfaction is negatively affected by their spouse's unemployment in Germany, but these negative effects last longer for wives than for husbands (Nikolova and Ayhan, 2018), perhaps reflecting the economic dependence of many women within marriage. Income comparisons between spouses could be exacerbated by gendered expectations of who 'should be' the breadwinner and we would therefore expect men's well-being to be more prone to economic considerations, especially if out-earned by their wives. For some women, earnings and jobs appear to be less central to their self-worth as they base part of their identity on family-related responsibilities rather than paid work. For example, women report high levels of job satisfaction despite having, on average, objectively worse jobs than men in terms of salaries and career advancement (Clark, 1997), suggesting greater emphasis in their evaluations on non-pecuniary aspects of employment. Therefore, we could anticipate women who infringe gendered norms of female economic dependence within marriage to display few psychological benefits to their pecuniary success.

2.2 Household specialisation and the partner pay gap.

The literature on the within-family dynamics that produce household specialisation offers little discussion of the relationship between economic inequalities within households and their impact on well-being for either women or men. What is clear from those who engage in empirical examination of family dynamics is that few anticipate economic equality within (heterosexual) relationships for women. Early theoretical accounts of household specialisation,

advocated by Gary Becker (1981), viewed conventional allocations of paid and unpaid labour within the home to be both economically and biologically optimal. Household specialisation places male partners in paid work, allowing households to profit from men's stronger earning capacity, while female partners are allocated unpaid care work, allowing households to maximise on her biological disposition to reproduction and care work. Similar accounts can be found in functionalist sociology (Parsons and Smelser, 1956). While modern theoretical variants refute the biological determinism of early perspectives, the economic rationality of household specialisation is expected to remain until, or if, women's economic outcomes match men's (Breen and Cooke, 2005). Similarly, Killewald and Gough (2013) describe a middle-ground, where women may also work for a wage but where her career takes a back seat to her husband's.

Whether gender norms cause, affect, or mutually reinforce a family's economic strategy, they too are deemed to be rigid in their allocation of paid and unpaid labour by biological sex (Shelton and John, 1996; West and Zimmerman, 1987). Evidence of rigidities in gender roles can be found in evidence of 'doing gender'. For instance, economically dependent husbands have been found to contribute less to household tasks than husbands who contribute more to household income, suggesting that they 'do gender' to maintain their ideals of masculinity by avoiding housework (Brines, 1994). Although in more recent studies, men do more housework in households where women are majority earners, men's contributions to housework still lag behind the contributions of women (Lyonette and Crompton, 2015). In a German sample, the share of housework and share of household income are inversely related for both men and women; however, women tend to increase their share of housework if their income exceeds that of their partners (Procher et al., 2018). This tendency of women to contribute more to domestic work when their paid work threatens traditional views of gender can be interpreted

as a ‘gender deviance neutralisation’ strategy (Simister, 2013), or ‘compensatory’ for transgressing male breadwinning norms (Bittman et al., 2003). Possibly such ‘status-reversal’ wives judge their lives based on their status as wives and mothers (Tichenor, 1999), which might influence their well-being evaluations.

While the pay gap literature offers a strong sense of rigidity in earnings inequalities within couples, one aspect which remains unclear is the impact of earnings inequalities on life satisfaction. Such an investigation would allow us to reveal whether earnings inequalities between couples are psychologically optimising, and, if they are, whether this operates in a similar manner for both women and men.

2.3 Relative earnings and subjective well-being.

An associated assumption of household specialisation is that couples form a financial unit with undifferentiated satisfaction with their households’ financial position. However, reported financial satisfaction often differs between spouses and has been found to be related to spouses’ relative income within a household (Bonke and Browning, 2009) and to employment status (De Henau and Himmelweit, 2013).

A study by Ahn *et al.* (2014) finds that in Denmark, a highly gender-egalitarian society, both men and women report higher financial satisfaction when they contribute a greater share to household labour income, though for women this association is only significant for cohabiting and not married women. Similarly, in a US sample, the spouse with the higher relative income within the couple reports higher levels of satisfaction with the household’s financial situation, regardless of the respondent’s sex or their level of gender traditionalism (Eirich and Robinson, 2017). This goes against assumptions that gender norms always trump economic considerations

– at least with respect to financial satisfaction. However, well-being measures that encompass more than just the financial domain seem to reveal different patterns. In Germany, families with female breadwinners report reduced life satisfaction for both members of the couple (Salland, 2018), while in a US sample, it is only men's well-being which decreases when wives' relative income increases (Rogers and DeBoer, 2001).

Some of these observed relationships are moderated by respondents' gender role ideologies suggesting that women's economic dominance in the household is only problematic for couples with traditional views. In Hungary, the woman's share of a couple's income is negatively associated with the life satisfaction of both partners; except for respondents with low levels of traditional gender norms (Hajdu and Hajdu, 2018). Adherence to gender norms also affects the relationship between contributions to household tasks and relationship satisfaction (Blom et al., 2017), as well as marital well-being and wives' income shares (Furdyna et al., 2008).

What most of these studies neglect is the crucial role of temporality in the relationship between subjective well-being and intra-couple relative earnings with the psychological process of *habituation* expected to diminish measurable effects over time (e.g., Easterlin, 2001). People's tendency to return to previous levels of subjective well-being after changes in circumstances, also known as hedonic adaptation (e.g., Frederick and Loewenstein, 1999), is especially prevalent when it comes to income (Easterlin, 2003), suggesting that discontent in earnings inequalities within couples is more likely to be expressed if a change in earning status has been recently experienced.

In addition, a comprehensive analysis of the partner pay gap needs to take into account that earnings result from employment, which in itself is an important predictor of subjective well-

being (e.g., Clark et al., 2001; Clark and Oswald, 1994); not just because of the income generated by it but also the non-monetary aspects of employment such as social relationships at work, social status or the meaning conveyed by the work itself (e.g., Clark, 2001). Couples' proportional earnings proxy labour force participation and it is thus crucial to ensure that any associations between earning contributions and life satisfaction are estimated independently of labour market status. The negative effects of unemployment on subjective well-being are well-documented (Clark et al., 2001), and in some cases women may become primary earners through the involuntary unemployment of their husbands. For women, transitions from equal-earning to minority-earner status in the household are often related to a full or partial withdrawal from the labour market after child birth. Contrary to previous studies, this article accounts for such recent employment transitions and also considers the timing of changes in proportional earnings.

2.4 Hypotheses.

The following hypotheses, based in the literature reviewed, address to what extent absolute income (H1), relative income within the household (H2.1 and H2.2), changes in income (H3), as well as their variants by socio-economic group (H4), predict the life satisfaction of married co-resident couples. As others have found before us, we expect to find *absolute household income to be positively associated with life satisfaction (H1).* We also expect gender norms to differentially structure identity formation and satisfaction by sex. For men, the male breadwinner ideology will likely remain a central plank of identity formation. For women, due to some changes in gendered ideologies, we anticipate a psychological benefit to equal-earning but not to female breadwinning which remains gender non-conforming behaviour. For women who continue to disproportionately bear responsibility for unpaid care work, the dual-burden might negate the positive effects of equal-earning, however. We therefore expect that: *Men will*

be more satisfied with their lives when they earn more than their partners, compared to other relative earning positions (H2.1), and that: women will be more satisfied with their lives when they earn a similar amount to their partners, compared to other relative earning positions (H2.2).

We expect: *recent changes in relative earning status will be positively (negatively) associated with men's (women's) life satisfaction (H3),* with recent changes in earnings position unaffected by habituation to new income and gender norms affecting the direction of association by sex. Finally, we expect: *the association between life satisfaction and relative earning position will decline by socio-economic status (H4),* with economic need likely to trump gender norms in economically disadvantaged households.

3. Data and Method.

Data

We use the UK Household Longitudinal Study (UKHLS, also known as Understanding Society; University of Essex, 2017), waves 1-7 (2009-2016)[i]. The dataset is a nationally representative panel survey based on a sample of approximately 40,000 households (Knies, 2017). Individual-level information was collected on all adults within the household, with the household the primary sampling unit. While household-level information was collected from the household head, we match partner information within households allowing for a measure of the partner pay gap based on *individually* reported earnings. This maximises the accuracy of estimates of within-household inequalities compared to data that collates such information at the household level (Cooke, 2006). The final sample consists of married co-resident couples, with the expectation that household specialisation strategies will be more entrenched among

those with legally formalised unions. This sample better tests the relationship between life satisfaction and earning inequalities with unmarried cohabiting unions known to dissolve more readily should discontent arise (Kalmijn et al., 2007). Those aged less than 20 and more than 60 years were excluded given the disproportionately precarious working and earning strategies at the beginning and the end of working life. The final sample is based on respondents with full information on key covariates for at least two consecutive years; it covers 18,096 person-year observations.

Measures

The outcome variable, life satisfaction, reflects respondents' life satisfaction on a scale ranging from (1) completely dissatisfied to (7) completely satisfied. In line with previous studies, life satisfaction was positively skewed for both men (mean = 5.28) and women (mean = 5.32).

The three covariates central to our hypotheses include: (1) relative earnings inequality (the partner pay gap), (2) *changes* in relative earnings between t-1 and t and (3) *changes* in labour market status between t-1 and t. The main covariate of interest, (1) relative earnings inequality, was defined as the respondent's total earned income contribution divided by the sum total of own income and the co-habiting spouse's income. The variable ranged from 0, for those who contributed nothing to total household income, to 100 for those who shouldered the full weight of financial contributions. We introduce the variable to the models categorically and distinguish between (a) secondary earners, those earning between 0-39% of total earned income, (b) equal earners, those contributing between 40-59% of total earned income and (c) primary earners, those earning 60% or more of total earned household income. These cut-offs are similar to those found in other studies in the field (e.g., Author A). The models further include a measure of (2) *changes* in relative earnings between t-1 and t. This variable is of

central importance for two reasons: First, due to the psychological process of *habituation* we anticipate recent changes in relative income will better reflect potential discontent with the partner pay gap than (potentially) long-term relative earnings status. Second, the inclusion of a change variable helped us to control for a portion of unobserved heterogeneity in the model, which improved the precision of our estimates. The model further accounted for (3) *changes* in labour market status between t-1 and t by distinguishing between those who remained in employment in both time periods, the reference category, with those who had recently entered paid employment, recently left paid employment and those who remained economically inactive in both time periods. Consequently, any positive association between increased earnings and life satisfaction between t-1 and t can be understood to be independent from the expected positive association between job entry and life satisfaction in the same time period. The analysis further includes measures of absolute income in quartiles to determine variation in life satisfaction by relative wealth across households (Blanchflower and Oswald, 2004; McBride, 2001).

The model also includes the following, theoretically pertinent, individual-level demographics: age and its square as life satisfaction has previously been found to be u-shaped in age, i.e. life satisfaction is typically highest at young and old ages (Blanchflower and Oswald, 2008); level of education (see Dolan et al., 2008 for an overview), with a distinction provided between those with no educational qualifications, those with mid-level secondary schooling, higher-level secondary schooling and those with degree-level education; as well as health status, with poor health at risk of skewing results if not controlled for; and ethnic minority status, distinguishing between eight different ethnic groups. Given inequalities in caring responsibilities between women and men and the expectation that disproportionate responsibility for care work might affect life satisfaction, a series of detailed measures of household composition were introduced

to the model. These identify the presence of; a new-born, the number of small children (4 years and younger), primary school (between 5 and 11 years) and older children (aged 12 and older) in the household, as well as the sum total of household members, as it is not purely dependent children who can increase care work demands.[ii] We also tested the effects of within-couple educational homogamy, defined as couples with the same educational level using a five-category scale, as marital homogamy is thought to increase life satisfaction and thereby should mediate key covariates (Groot and Maassen van den Brink, 2002). Our tests of martial homogamy were insignificant and the variables were removed from final models.

Analytic strategy

Associations between spouses' relative earning status and life satisfaction were estimated with a lagged dependent variable regression (Halaby, 2004) which controlled for the relationship between the dependent variable, life satisfaction, at t and at t-1. The majority of the explanatory variables were lagged to t-1. The model has an implied causal ordering and the efforts to control for Y at t-1 are assumed to improve precision in estimates with the lagged value of Y correlated with, and so acting as a proxy for, time-constant unobserved heterogeneity (Morgan and Winship, 2007).[iii] Each model was run separately for women and for men, given the aim to identify gendered differences in the predictors of life satisfaction. Equation 1 presents the econometric formulation of the model.

$$Y_{it} = \alpha \quad + \beta Y_{it-1} + \beta earnst_{it-1} + \beta(Propinc_{it} - Propinc_{it-1}) + \beta(LFstat_{it} - LFstat_{it-1}) + \beta x_{it-1} + \varepsilon_{it}$$

The model identifies the within-household earner status of each respondent at t-1 and further includes *changes* in the proportion of household income earned between t and t-1

$(Propinc_{it} - Propinc_{it-1})$. This change variable was scaled to 10 and varied from -10 to +10, with most responses in and around 0, indicating stable relative income positions. Those with values of +10 had gone from contributing 0-10 percent of household income to 90-100 percent of it.

4. Findings.

The means of our key covariates underscore the earnings inequalities within married, cohabiting unions in the UK, which are suggestive of the household specialisation strategies of new home economics.[iv] We find significant differences in relative contributions to household income by sex. Married cohabiting men's earnings account for 61% of total household income on average, while women's earnings accounted for 33% on average. A categorical examination of equality in proportional contributions showed that while only 8% of female respondents were primary earners (defined as contributing 60% or more of total household income) this was true of 54% of the male sample. Equal-earning was the second most common category for both sexes, accounting for about a third of the male and female sample. Meanwhile minority-earning, which describes those whose earnings contributed to less than 40% of total earned income, was the majority category for women, accounting for 61% of the female sample, while it accounted for a comparatively small, 12%, of the male sample. With regards to changes in proportional contributions, there was a small average increase for both women and men.

Table 1 presents the estimated coefficients of our key predictors in lagged dependent variable regressions. The aim of the regression analysis is to determine whether men and women in the UK were equally content with the within-household economic inequalities which underpin household specialisation. The results were estimated in a nested-model sequence; equation 1

assessed the relationship between life satisfaction and proportional earnings while equation 2 added controls for recent labour market transitions to ensure that any effect of earning status was independent of the effect of labour market status. Each model was run separately for women and for men, revealing strong differences in the predictors of life satisfaction by biological sex.

TABLE 1 here

As expected, both men and women with incomes in the first (lowest) and second income quartiles reported significantly lower levels of life satisfaction than those in the fourth (highest) quartile, confirming that absolute income matters for well-being (Hypothesis 1). It is interesting to note that men's subjective well-being seemed more sensitive to economic position than the subjective well-being of women who have smaller predicted coefficients.

It was hypothesised that male identity and thus male life satisfaction would benefit from a *psychological dividend* in instances where men out-earn their female partner (Hypothesis 2.1). This hypothesis was based on the expectation that gender norms continue to promote a male breadwinner ideal which problematizes both equal-earning and female primary-earning for men. The analysis showed that (potentially unchanging) proportional earnings affected men's life satisfaction. Men who were secondary earners at t-1 reported significantly lower levels of life satisfaction than male primary earners. Nonetheless, it is also worth noting that while the modal category for men was to be the primary earner within their home, a third of this sample of married men were in equal-earning households and these equal-earning men showed no differences in their reported life satisfaction from primary-earning men. So, again, the main source of male unhappiness in their relative earning status concerned those who found

themselves in the unusual category of being minority contributors to household income. In addition, men exhibited higher life satisfaction when their proportional earnings *increased* between t-1 and t, thus lending support to Hypothesis 3. This finding is important as it demonstrates how recent changes in proportional earnings, which likely have not yet been influenced by habituation, are related to life satisfaction. Tests suggest that this effect is driven by increases in respondent's earnings, rather than a drop in their spouse's earnings.

Women were hypothesised to have a preference for equal-earning and a reticence for primary-earning (Hypothesis 2.2). They were also expected to display lower life satisfaction in instances of a recent positive change in their earning status, with research in this area suggesting that women 'do gender' to compensate for gender non-conforming behaviour (Hypothesis 3). Equation 1 finds no significant effects of proportional earnings contributions on women's life satisfaction, either in terms of recent changes in their proportional earnings or in terms of their earning status within the household. It is quite striking to compare the differences by sex, and to note that women who were secondary earners and equal earners were no different in their reported life satisfaction than primary earners.[v]

Equation 2 provided an important test of the effect of relative earnings on life satisfaction in its introduction of controls for recent labour market transitions. Here the reference (and majority) category concerned those who remained in employment in both time periods. Those who were in stable employment were compared to those who had either: recently entered employment, recently left employment and those who remained out of paid employment in both time periods. Men who had recently left employment as well as men with two consecutive years of non-employment, on average, reported lower life satisfaction compared to those in continuous paid employment. Crucially, the introduction of these controls for labour market

transitions did not affect the association between earning status and subjective well-being in equation 1, suggesting that the psychological dividend men gained from out-earning their female partners was statistically independent of labour market transitions. Similarly, in equation 2, women reported, on average, higher life satisfaction in continuous employment, the reference category, than women who were not employed at t and t-1 and women who had recently left employment. However, unlike men, women exhibited even higher life satisfaction on recent entry to paid employment than women in continuous employment – a euphoria which did not appear to last for more than a year. For women, equation 2 differed in that we established a statistically significant association between changing proportional earnings and life satisfaction. Here we found evidence to support hypothesis 3, with women experiencing a penalty to increased proportional earnings, independent of changes in labour market position. The finding underscores the importance of a modelling strategy which can portion out effects which have not succumbed to habituation.[vi] Again, as with the models for men, tests suggest that this relationship is driven by those who experienced a pay increase.

The lagged dependent variable operated consistently and in line with expectation (Author A) as higher levels of life satisfaction in the past were correlated with higher present life satisfaction. The controls for socio-demographic variation in respondents showed the expected associations; older respondents were less satisfied than younger respondents as were those with poor health. Education was positively associated with life satisfaction, though only for women.

TABLE 2 here

Table 2 presents a test of interaction effects between *the psychological dividend* attached to the partner pay gap for men, and the penalty for women, by socio-economic group (proxied by income quartiles). It was hypothesised that men in low income households might be less likely to display a psychological dividend if they out-earned their partners as the financial precarity of lower income households might diminish the normative desire to out-earn one's female partner, with a similar dynamic hypothesised for women (Hypothesis 4). Here we found differential effects for equal-earning by socio-economic group for men. Men in equal-earning households reported a psychological *premium* if they were in poorer income groups. This suggests that lower-earning men are more comfortable with egalitarian earning profiles than wealthier households, confirming the expectation that transgressions of gendered norms of male primary earning are most supported under conditions of economic need.[vii] We found no divergence in effects between relative earner status and income group for women.

5. Discussion and Conclusion.

The aim of the present study was to investigate the gendered psychological premium (or penalty) of the partner pay gap by looking at its association with life satisfaction. Household specialisation and the resulting discrepancies in relative earnings between spouses could be assumed to be inconsequential for spouses' well-being when partners pool their incomes and agree on their optimal division of paid and unpaid work. However, in this sample of married, co-resident British couples, this was not always the case. Lagged dependent variable regressions revealed the differential effects of earning disparities by sex: men who were secondary-earners reported significantly lower average life satisfaction than primary-earning men (confirming H2.1). In contrast, relative earnings did not affect wives' life satisfaction. These associations did not differ by socio-economic background in general, with the exception of equal-earning men who were more likely to report higher life satisfaction if they belonged

to lower socio-economic categories. These results suggest that whilst deviation from traditional gendered earning norms is problematic for men, economic necessity does trump gendered earning norms under certain conditions (confirming H4). The women in our sample neither experienced a psychological penalty nor dividend when they out-earned their husbands, contradicting hypothesis (H2.2) as well as findings from other countries (e.g., Hajdu and Hajdu, 2018). While this may reflect more gender egalitarian views in our sample compared to older studies, it may more simply reflect the marginal role of earning position on married women's psychological well-being.

This study diverges in important ways from previous investigations of the partner pay gap by taking into account recent changes in spouses' employment and earning positions. This allows us to control for habituation, and to rule out confounding factors, with decreased life satisfaction potentially due to involuntary unemployment or the temporary shock of losing primary- or equal-earning status. The results highlight the importance of doing as exit from employment appears to account for some of the association between relative earning status and life satisfaction. In addition, recent changes in relative earnings are positively associated with the life satisfaction of men and negatively with that of women (confirming H3). Interestingly, women's life satisfaction is not significantly associated with relative earning position but with recent change in proportional household income, suggesting that women may habituate more quickly to such changes. This is further supported by women's short term psychological gains to job entry.

These results matter as the psychological dividend enjoyed by primary-earning men might contribute to the persistence of the partner pay gap as it provides an incentive for pursuing a traditional division of paid and unpaid labour. Men who benefit psychologically from out-

earning their wives may be more reluctant to share parental leave, prioritise their wife's employment, or make any other employment decisions that might put them in a less advantageous earning position at home. Women who are traditionally more used to prioritising their partner's employment and earning prospects over their own, on the other hand, do not experience a psychological penalty based on their earning positions.

The interplay between working and earning strategies and life satisfaction for co-resident married couples was found to be highly gendered. For men, the spouse appears to be part of their reference group for income comparisons; perhaps seeing their wife's income as the minimum income they aim to achieve. Such income comparisons could be exacerbated by gender norms which we are, unfortunately, not able to directly assess in our analysis, but previous studies suggest that the pressure of gender norms may outweigh the potential positive effect of a higher proportional income (Furdyna et al., 2008). Bertrand et al. (2015) are most damning in their findings that the gender norm: 'women must earn less than their husbands', when operationalised, is highly predictive of the success of their marital unions.

It is possible that some of the associations between life satisfaction and spouses' relative earnings reported in this study will no longer hold for future generations as gender role attitudes become more egalitarian. For example, the financial satisfaction of women of older birth cohorts is equally associated with their own and their spouse's wealth in a sample of German couples (Lersch, 2017), while women of younger birth cohorts and men of all birth cohorts are more concerned about their own, rather than their spouse's, wealth with respect to their financial satisfaction, clearly demonstrating generational shifts in gender role attitudes. Indeed, in our sample, equal-earning men reported the same average life satisfaction as primary-

earning men, suggesting that being the primary breadwinner is no longer crucial for male identities.

Our results are relevant to policies supportive of gender egalitarianism in the following: the labour market participation of both partners appears to be welfare-enhancing by increasing overall household income which is positively associated with life satisfaction (H1). We also found no significant difference between primary and equal-earning men, in their life satisfaction in the majority of cases. However, dual-earning, dual-career households structurally require not one but two job openings that are supportive of work-life reconciliation if couples aim to maintain similar careers. They require an affordable and accessible child-care and schooling system which supports the needs of dual-career households. In short, the structural precursors for equality in earnings within households are recognised to be simultaneously very high, while being low on politician's agendas. Nevertheless whilst equal-earning men were relatively happy with their lot, we still found that the partner pay gap is supported within households by the psychological premium it affords many men. Men seem to like earning more than their wives. It remains an open question whether that premium is of long-term benefit for men overall and for society as a whole. Future research would also benefit from examining whether the short-term psychological gains women exhibited at job entry could be maintained over the longer-term should work-life reconciliation policies become more widespread.

Endnotes.

[i] Understanding Society is an initiative funded by the Economic and Social Research Council and various Government Departments, with scientific leadership by the Institute for Social and Economic Research, University of Essex, and survey delivery by NatCen Social Research and Kantar Public. The research data are distributed by the UK Data Service.

[ii] While the UKHLS does collect information of housework hours, it only does so every two years, and therefore these variables are only included as tests as they place dramatic restrictions on the model sample.

[iii] We regard the model specification chosen to be superior for theoretical and methodological reasons to a fixed and/or random-effects specification and offer a detailed defence of our rationale in the statistical appendix.

[iv] Table A1 in the statistical appendix presents summary statistics by sex.

[v] Separate tests, available from the lead author on request, suggest that there was also no difference in the life satisfaction of women who were equal and secondary earners.

[vi] Robustness checks were conducted to determine whether the differential effect of labour force transitions for men and women were a function of the different composition of labour force inactivity for each group, with labour force inactivity including those who are; unemployed, in unpaid care work, in education or training and those who are long-term sick or disabled. Selecting only respondents who experienced employment and unemployment in both time periods, we find that the category denoting those continuously out of the labour force is no longer significant for men, though the significance is maintained for women, and that women lose the significance of recently moving in and out of labour market inactivity.

[vii] In separate tests available from the lead author on request, interaction terms between changes in proportional earned income and a household's socio-economic quartile were not found to be significant.

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Tables

Table 1. Lagged Dependent Variable Regressions of Life Satisfaction by Biological Sex.

	Men	**Men**	**Women**	**Women**
	Eq1	Eq2	Eq1	Eq2
Change in Proportional Hhold Income	0.052***	0.027*	-0.012	-0.027**
Equal Earner	-0.027	-0.014	-0.006	0.003
Secondary Earner	-0.200***	-0.108*	0.003	0.037
ref: Primary Earner				
Recent Entry to Employment		0.075		0.183*
Recent Exit from Employment		-0.516***		-0.244**
Not Employed at t and t-1		-0.341**		-0.157***
ref: Employed at t and t-1				
Income Quartile 1 (poorest)	-0.266***	-0.244***	-0.175***	-0.162***
Income Quartile 2	-0.159***	-0.153***	-0.097**	-0.097**
Income Quartile 3	-0.085*	-0.085*	-0.030	-0.033
ref: Income Quartile 4 (richest)				
Life Satisfaction at t-1	0.370***	0.367***	0.369***	0.367***
Age in years	-0.012	-0.014	-0.036**	-0.039**
Age in years squared	0.000	0.000	0.000*	0.000*
Higher Educated	0.019	0.018	0.174***	0.173***
A levels	-0.054	-0.056	0.142*	0.145*
GCSE	-0.035	-0.038	0.135**	0.135**
ref: Less than secondary ed				
Constant	3.832***	3.863***	4.284***	4.325***
R-squared	0.1809	0.1837	0.1769	0.1792

N	8465	8465	9631	9631

Notes: p<=.001, ***; p<=.01, **; p<=.05, *; p<=.10, ^. The model was run on waves 3-7 of the UKHLS. The table displays most, but not all, estimated coefficients. The full model can be viewed in the online statistical appendix, it further controls for: the number of children aged between 0-2, 3-4, 5-11 years, ethnic minority group, and time period. All variables other than those variables relating to differences between t and t-1, were lagged to t-1.

Table 2. Lagged Dependent Variable Regressions of Life Satisfaction by Biological Sex.

Interactions with income quartiles.

	Men	Women
Change in Proportional Hhold Income	0.025*	-0.028**
Equal Earner	-0.124*	-0.109
Secondary Earner	-0.103	0.023
ref: Primary Earner		
Income Quartile 1 (poorest)	-0.313***	-0.311*
Income Quartile 2	-0.179***	-0.122
Income Quartile 3	-0.159***	-0.07
ref: Income Quartile 4 (richest)		
Equal Earner *q1	0.168*	0.246
Equal Earner *q2	0.085	0.086
Equal Earner *q3	0.199**	0.153
Secondary Earner*q1	0.076	0.117
Secondary Earner*q2	-0.083	-0.007
Secondary Earner*q3	-0.017	-0.03
Constant	3.910***	4.375***
R-squared	0.1846	0.1798
N	8465	9631

Notes: p<=.001, ***; p<=.01, **; p<=.05, *; p<=.10, ^; The model was run on waves 3-7 of the UKHLS. The table displays most, but not all, estimated coefficients. The full model controlled for the same variables as listed in Table 1 and can be seen in full in the online appendix.

Statistical Appendix

Defence of the Econometric Model Chosen.

While panel data affords some the ability to remove time-constant unobserved heterogeneity through the application of fixed or random effects models, it is common for such models to be inappropriate for both theoretical and methodological reasons (Halaby, 2004) as is the case here. For the present study, both transformations go against the theoretically informed hypotheses which seek to determine changes in earning levels between two time periods, while *simultaneously determining the precise changes in labour force status which might account for a portion of differences in earning position*. Here, clear expectations of causal ordering require the chosen model specification. Both fixed and random effects models would only allow us to determine an average effect of proportional earnings on life satisfaction and would also not allow to distinguish between different labour force transitions. Essentially, a fixed or random effects specification, would only allow us to determine the average effect of all labour market transitions if movement across labour market transitions occurred. Additionally, both fixed and random effects specifications would prevent us from examining recent changes in circumstances, which is one important means of controlling for habituation. We are not as interested in average change over several years, but of recent change in the preceding time period. Finally, fixed and random effects specifications would also be inappropriate as a means of answering our research question as the transitions out of employment were very rare for the male sample, making this variable essentially time-constant for many men and thus incompatible with a fixed effects regression.

Table A1: Descriptive statistics of all variables used in the analysis.

	Men		**Women**	
	Mean	SD	Mean	SD
Life Satisfaction at t-1	5.28	1.30	5.32	1.36
Change in Proportional Hhold Income	0.12	1.51	0.13	1.48
Proportional Earning Contribution	61.33	21.75	33.47	22.98
Majority Earner	0.54	0.50	0.08	0.27
Equal Earner	0.34	0.47	0.31	0.46
Minority Earner	0.12	0.33	0.61	0.49
Recent Entrant to Employment	0.01	0.12	0.03	0.16
Recent Exit from Employment	0.01	0.12	0.03	0.16
Not Employed at t and t-1	0.03	0.16	0.12	0.33
age	45.91	9.31	43.50	9.34
Higher Educated	0.42	0.49	0.49	0.50
A levels	0.10	0.29	0.09	0.28
GCSE	0.30	0.46	0.28	0.45
Less than secondary ed	0.19	0.39	0.14	0.35
Life Satisfaction at t-1	5.30	1.29	5.34	1.35
N of Children aged 0-2years	0.15	0.36	0.17	0.37
N of Children aged 3-4years	0.12	0.32	0.13	0.34
N of Children aged 5-11 years	0.29	0.46	0.32	0.47
Total Household Size	3.34	1.08	3.44	1.13
In Poor health at t-1	0.02	0.13	0.02	0.15
White UK	0.90	0.30	0.87	0.34
White other	0.04	0.20	0.06	0.24
Mixed-race	0.01	0.09	0.01	0.09
Indian	0.02	0.14	0.02	0.15
Pakistani	0.00	0.06	0.01	0.09
Bangladeshi	0.00	0.04	0.00	0.05
Black	0.01	0.10	0.01	0.10
Other	0.01	0.11	0.02	0.14
Income Quartile 1, £2679	0.24	0.42	0.26	0.44
Income Quartile 2, £4009	0.26	0.44	0.25	0.43
Income Quartile 3, £5295	0.26	0.44	0.24	0.43
Income Quartile 4, £8502	0.25	0.43	0.25	0.43

Notes. The sample was based on a matched sample of married and cohabiting men and women, the N of women and men in the sample were not equal, however, due to slightly different rates of missingness on key covariates, married men had higher rates of missingness than married women as a whole.

Table A2: Lagged Dependent Variable Regressions of Life Satisfaction by Biological Sex with all predictors (Table 1 in the article).

	Men	**Men**	**Women**	**Women**
	Eq1	Eq2	Eq1	Eq2
Change in Proportional Hhold Income	0.052***	0.027*	-0.012^.	-0.027**
Equal Earner	-0.027	-0.014	-0.006	0.003
Minority Earner	-0.200***	-0.108*	0.003	0.037
ref: Primary Earner				
Recent Entry to Employment		0.075		0.183*
Recent Exit from Employment		-0.516***		-0.244**
Not Employed at t and t-1		-0.341**		-0.157***
ref: Employed at t and t-1				
Income Quartile 1 (poorest)	-0.266***	-0.244***	-0.175***	-0.162***
Income Quartile 2	-0.159***	-0.153***	-0.097**	-0.097**
Income Quartile 3	-0.085*	-0.085*	-0.03	-0.033
ref: Income Quartile 4 (richest)				
Life Satisfaction at t-1	0.370***	0.367***	0.369***	0.367***
Age in years	-0.012	-0.014	-0.036**	-0.039**
Age in years squared	0	0	0.000*	0.000*
Higher Educated	0.019	0.018	0.174***	0.173***
A levels	-0.054	-0.056	0.142*	0.145*
GCSE	-0.035	-0.038	0.135**	0.135**
ref: Less than secondary ed				
N of Children aged 0-2years	-0.009	-0.005	0.052	0.067
N of Children aged 3-4years	0.024	0.024	0.052	0.063
N of Children aged 5-11 years	-0.037	-0.036	0.052	0.057
Total Household Size	-0.034*	-0.031*	-0.060***	-0.056***
In Poor health at t-1	-0.742***	-0.648***	-0.675***	-0.617***
White other	-0.072	-0.076	-0.022	-0.02
Mixed-race	0.145	0.148	-0.051	-0.041
Indian	-0.076	-0.081	-0.053	-0.05
Pakistani	-0.223	-0.237	-0.381*	-0.329
Bangladeshi	0.471**	0.475**	-0.251	-0.217
Black	-0.372*	-0.367*	-0.243	-0.249
Other	-0.025	-0.033	-0.07	-0.037
ref: White UK				
Year	0.046***	0.045***	0.030***	0.029**
Constant	3.832***	3.863***	4.284***	4.325***
R-squared	0.1809	0.1837	0.1769	0.1792
N	8465	8465	9631	9631

Notes: p<=.001, ***; p<=.01, **; p<=.05, *; p<=.10, ^. The model was run on waves 3-7 of the UKHLS.

Table A3: Lagged Dependent Variable Regressions of Life Satisfaction by Biological Sex with all predictors. Interaction with income quartiles. (Table 2 in the article).

	Men	Women
Change in Proportional Hhold Income	0.025*	-0.028**
Equal Earner	-0.124*	-0.109
Minority Earner	-0.103	0.023
ref: Primary Earner		
Income Quartile 1 (poorest)	-0.313***	-0.311*
Income Quartile 2	-0.179***	-0.122
Income Quartile 3	-0.159***	-0.07
ref: Income Quartile 4 (richest)		
Equal Earner *q1	0.168*	0.246
Equal Earner *q2	0.085	0.086
Equal Earner *q3	0.199**	0.153
Minority Earner*q1	0.076	0.117
Minority Earner*q2	-0.083	-0.007
Minority Earner*q3	-0.017	-0.03
Age in years	-0.014	-0.040**
Age in years squared	0.000	0.000*
Higher Educated	0.018	0.173***
A levels	-0.054	0.146*
GCSE	-0.037	0.136**
ref: Less than secondary ed		
Life Satisfaction at t-1	0.367***	0.366***
N of Children aged 0-2years	-0.002	0.068~
N of Children aged 3-4years	0.027	0.064
N of Children aged 5-11 years	-0.035	0.059~
Total Household Size	-0.032*	-0.056***
In Poor health at t-1	-0.649***	-0.620***
Recent Entry to Employment	0.046	0.186*
Recent Exit from Employment	-0.521***	-0.244**
Not Employed at t and t-1	-0.367**	-0.158***
ref: Employed at t and t-1		
White other	-0.078	-0.022
Mixed-race	0.153	-0.048
Indian	-0.082	-0.05
Pakistani	-0.234	-0.329~
Bangladeshi	0.480**	-0.231
Black	-0.364*	-0.248~
Other	-0.034	-0.034
ref: White UK		

Year	0.046***	0.030***
Constant	3.910***	4.375***
R-squared	0.1846	0.1798
N	8465	9631

Notes: p<=.001, ***; p<=.01, **; p<=.05, *; p<=.10, ^; The model was run on waves 3-7 of the UKHLS.