Article:

Johnston, R., Pattie, C. orcid.org/0000-0003-4578-178X, Jones, K. et al. (1 more author) (2020) Intersectionality and English voting behaviour: and was there a 2017 Youthquake? Political Studies Review, 18 (2). pp. 294-303. ISSN 1478-9299

https://doi.org/10.1177/1478929919875055

Political Studies Review

Intersectionality and English Voting Behaviour – And Was There a 2017 Youthquake

Journal:	*Political Studies Review*
Manuscript ID	PSR-05-19-ER-0002.R1
Manuscript type:	Early Results
Keywords:	intersectionality, voting, general election, England 2017

Abstract:	Intersectionality is an increasingly popular concept across several social sciences but has received little explicit attention within British political science. This note introduces the concept, identifies some problems in its application to the study of voting behaviour, and illustrates its use by addressing the extent to which there was a 'youthquake' at the 2017 UK general election

Intersectionality and English Voting Behaviour – and Was There a 2017 Youthquake?

ABSTRACT
Intersectionality is an increasingly popular concept across several social sciences but has received little explicit attention within British political science. This note introduces the concept, identifies some problems in its application to the study of voting behaviour, and illustrates its use by addressing the extent to which there was a 'youthquake' at the 2017 UK general election

Intersectionality is an increasingly important concept across several social sciences, covering both quantitative and qualitative studies. Although the concept per se is relatively new, and only recently gaining traction in the quantitative literature, the arguments behind it are not; they have not been fully developed in some areas, however, such as quantitative political science in the UK. This note introduces the concept, identifies some problems in its application to the study of voting behaviour, and illustrates its use by addressing a recent issue – the extent to which there was a 'youthquake' at the 2017 UK general election.

Intersectionality

The core argument underpinning the concept of intersectionality originated within feminist scholarship:[1] individuals have multiple, overlapping, sometimes intersecting and complex identities – one of which is gender – and appreciation of their behaviour requires analyses that incorporate those intersections. Analyses should not be simply additive but should identify non-additive relationships. Bauer (2014, 11, following Hancock, 2007), for example, categorised research strategies into:

1. *Unitary approaches*, which focus on a single identification category – such as socio-economic class in many 20th century analyses of British voting behaviour;
2. *Multiple approaches*, which include several categories – such as age, ethnicity and socio-economic class in voting studies – in an additive modelling framework, such as multiple regression; and
3. *Intersectional approaches*, which incorporate the interactions among the chosen categories, which Bauer terms 'intercategorical approaches'.

All three occur in the voting behaviour literature, but the third is much less well represented than the first two.

Intersectionality and voting

Standard modelling approaches to voting behaviour incorporate a range of variables in multiple regression frameworks; they represent the multiple approaches in the Hancock-Bauer trilogy, but largely assume that the impact of those variables, and the identities they represent, are additive. Most of those analyses deploy survey/poll data with individual voters as the observations. Their dependent variable may have more than two categories and the independent variables are similarly categorical. Most multinomial logistic regressions applied to such data focus on only the marginal totals in the relevant contingency tables; with four parties, five age groups and five educational qualification categories, therefore, this would produce a 4 x 5 x 5 contingency table containing 100 cells (or intercategories) but the analysis would focus on just eleven categorical variables. Variation

[1] Its origins are usually ascribed to Crenshaw (1989).

across all 100 cells is rarely explored, thereby, as Elwert and Winship (2010) and Gelman (2008) express it, ignoring much of the data set's potential richness. Such approaches assume, for example, that variations between age groups are the same across each educational qualifications category; but young voters with no educational qualifications may differ from their older contemporaries also lacking qualifications.

An intersectional approach explores differences not only between the contingency table's marginal rows and columns but also across its internal cells. This can be achieved – as in some voting studies (e.g. Russell, 1997) – by incorporating interaction variables; these indicate the extent to which (and, if desired, the statistical significance thereof) the value in any one cell differs from the additive impact of the relevant marginal rows and columns.

Using interaction variables faces problems, especially in multinomial logistic regression modelling, however. The underpinning theory might point to particular intersections that could be tested with an interaction variable – people aged 25-34 with degrees are much more likely to vote for the Green Party than would be expected from the addition of the separate coefficients for those two variables. But many (most?) such analyses are exploratory only, seeking patterns across the contingency table with no specific hypotheses. With a 4 x 5 x 5 table this would involve a large number of interaction variables and considerable loss of degrees of freedom. More importantly, interpretation of interaction coefficients is not straightforward – especially where three-way or more complex interactions are explored. Further, even with a large sample, many contingency table cells may include only a few individuals (with a 4 x 5 x 5 table, for example, the mean number per cell with a survey of 2,000 respondents would be only 20, and with variation around that some could be much smaller); in such cases, standard errors for the interaction coefficients may be large and the estimates far from robust. Moreover, using interactions does not address the critiques of quantitative studies exploring intersectionality (such as Bauer 2014) because, even without the complexity of multiple categories, they are still firmly set within the additive model of inquiry.

To avoid such difficulties and provide robust estimates of the interaction effects an alternative method based in multilevel modelling and Bayesian statistics, commended by Gelman (2011), is deployed. The method has been set out in detail elsewhere (Jones et al., 2016) and is just summarised here. An expected value for each cell in the multi-level contingency table is derived using a null hypothesis of no difference – assuming, for example, that the abstention rate at an election is invariant across all categories of the independent variables (e.g. the rate is 25 per cent in every cell). But how robust are those relative rates, given the stochastic variation likely to occur with small observed values in many cells? That is addressed by modelling the rates using a two-level, random-effects, Poisson regression model with a shrinkage component – what is known as a Bayesian pooling of information across adjacent cells, a data-driven adaptive procedure for handling the uncertainty associated with sparse data (Gelman 2014). This ensures a conservative approach to making comparisons across cells with few observations, but does not reduce the power of identifying true differences where there are more observations.

The Bayesian framework means that each cell's modelled observed:expected rate has an associated credible interval (CI), which can be interpreted in the same way as a standard confidence interval, except that the Bayesian CIs may be asymmetric. The output is thus a rate for each contingency table cell: if it is greater than 1.0 and the lower credible interval does not fall below 1.0 then the rate is significantly greater than expected; if it is less than 1.0 and the higher credible interval does not exceed 1.0 then the rate is significantly smaller than expected. In this way, analysts can identify which cells have significantly large and small rates, and if these vary along the contingency table's rows – e.g. there are large rates for some age groups in a particular qualifications category but small rates for other age groups – this would be evidence of intersectionality.

Voting in the England in 2017: 'Youthquake' and a new cleavage?

To illustrate intersectional approaches we address an issue that has attracted considerable contemporary debate – whether there was a 'youthquake' at the 2017 British general election. Although an occupational class divide remains – notably in turnout variations (Evans and Tilley, 2018) – analysts argue it has been replaced by cleavages associated with educational attainment and age, as at the 2016 Brexit referendum (e.g., Goodwin and Heath, 2016; Clarke et al., 2017; Johnston et al., 2018a). According to Sloam et al. (2018, 4), the 2017 election was characterised by a combination of 'an unexpected surge in youth turnout and the overwhelming support of younger voters for Jeremy Corbyn's Labour party'. Others questioned that 'surge' (Curtice and Simpson, 2018; Prosser et al., 2018), but not the much greater support for Labour among younger voters, leading to arguments that age had become the major cleavage within the British voting population (Curtice, 2017).

Cleavages in British voting: 2005-2017

Recent analyses of British voting patterns pre-2017 identified three main cleavages – age, sex, and educational qualifications (Johnston et al., 2018b) – and a data set has been assembled from the relevant British Election Studies panel surveys containing those three variables plus voting at each of the four latest general elections – 2005, 2010, 2015 and 2017.[2] (Data are analysed for England only, to avoid the extra dimensions that would be introduced if Scotland and Wales were included because of the role of the nationalist parties there.) By analysing the four elections, this allows any changes in 2017 to be clarified.

The data matrix has five dimensions: election (four years); vote (six categories – Conservative, Labour, Liberal Democrat, Green, UKIP and Non-Vote;[3] the small number who voted for other parties was excluded); sex (two categories); age group (five categories: 18-24; 25-34; 35-49; 50-64; 65 and over); and educational qualifications (four categories: none; GCSE or equivalent; A-level or equivalent; degree or equivalent). This gave a 4 x 6 x 2 x 5 x 4 contingency table, comprising 960 cells with a total of 67,313 observations. The average number of observations per cell was thus 70.1, but with considerable variation; the standard deviation was 102.5, one-fifth of the cells had six or fewer observations (with zero in forty cases) and a further fifth had 112 or more.[4]

---

[2] For the last two elections these used the internet panel survey which also recorded the respondents' recollected vote at the earlier two contests.

[3] One problem with using the BES panel surveys – indeed most contemporary surveys – is the low proportion of abstentions reported compared to the actual value. In 2015, for example, the reported percentage of non-voters was 7.1, which compares with the 26.5 per cent in the much smaller BES 2015 face-to-face survey and 34 per cent in the actual result. As the focus in this intersectional analysis is on relativities between various groups, however, if they are the same in the panel survey as in the face-to-face the correct patterns and relationships will be revealed. That is the case; non-voting was greatest among the young and those with no or few qualifications – and especially among the young with no or few qualifications – and also greater among females than males. All these differences emerge in the intersectional analysis here but the much larger sample (only 2987 responded to the face-to-face survey) means that analysis of the panel survey produces much more robust estimates.

[4] Inclusion of further 'independent' variables would have produced many more cells with near-zero or zero values, substantially reducing the likelihood of getting non-robust (statistically 'insignificant') findings. Even with such a large data set Occam's Razor must be deployed.

The modelling strategy applied the null hypothesis that the percentage of respondents undertaking the specified behaviour – e.g. voting Labour – was invariant across all cells (i.e. the 160 cells in the year by sex by age by qualifications matrices for each of the six voting options). The output was a table of estimated rates comprising 160 cells for each of the six voting options.

The 'youthquake' argument has two components. The first was of significantly greater turnout by younger voters in 2017 than at previous elections. If the argument is correct then the rates for non-voting at the 2017 contest for younger voters should be much smaller than at the preceding three contests.

Table 1 provides evidence for evaluating that argument; in this and later tables rates significantly greater than 1.0 are in bold and those significantly smaller than 1.0 are underlined. The large and significant rates greater than 1.0 show much higher levels of non-voting among those aged between 18 and 34 in 2005 and 2010 than among older voters, for both males and females. The rates were also substantially higher for those with no or few qualifications than for those with higher attainments, clearly indicating an intersectional effect – members of those age groups varied in their turnout according to their qualifications. The same general pattern occurs in 2015 – the older were again much less likely to abstain - but with fewer significant rates exceeding 1.0.

In 2017 non-voting rates were significantly larger than expected among those with no qualifications and (more so for females than males) those with only GCSE or the equivalent, across all groups aged under 65. Younger voters with qualifications in the higher two categories, however, were not significantly more likely to abstain than expected; older voters were, as at previous elections, much less likely to abstain than expected.

This intersectional analysis provides a clear caveat to the general argument regarding turnout and a youthquake, therefore. Non-voting rates in 2017 were lower among younger voters than at earlier elections but only among those with the higher educational attainment levels. Those with no or only low-level qualifications were, as previously, significantly more likely to abstain rather than vote. The youthquake in terms of turnout was thus only partial; it varied among the young according to qualifications.

The youthquake's argument second component suggests a growing age cleavage between support for the Conservatives and Labour. Table 2 suggests relatively little variation across the four elections in the pattern of Conservative voting; older voters were significantly more likely to vote Conservative than their younger contemporaries, across all four qualifications categories and both sexes.

For voting Labour, however, Table 3 shows considerable change, largely in line with the hypothesis. In 2005, for example, when Labour won most votes overall (35.2 per cent of the British total), its support was significantly concentrated among middle-aged voters, especially those with few qualifications. In 2010, , compared to the average situation across all four elections it performed particularly badly among younger voters, but in 2015 there was a substantial shift towards Labour, across all age groups except the eldest among those with degrees or the equivalent for males and those with A-levels or the equivalent among females. These shifts were accentuated in 2017, with significant rates above 1.0 for all but the oldest voters. Intersectionality was also clear: within each age group, in general the higher the educational attainment the larger the likelihood of a Labour vote in 2017 compared to the average across the four elections; and within each qualifications category, the younger the voters the larger the estimated rate.

The second component is thus largely validated; younger voters were much more likely to vote Labour in 2017 than previously, especially those younger voters (and slightly more so among females than males) with higher qualifications. The 2017 election was not characterised simply by an age cleavage, therefore; there were significant differences by qualifications and sex as well, intersecting with those for age.[5]

Conclusions

The concept of intersectionality has attracted some implicit recognition within British voting studies, but few analyses have explicitly adopted the intersectional approaches identified in Bauer's (2014) categorisation. Its relevance to such studies is very clear, however. Many, if not most, voters face cross-cutting cleavages when determining which party, if any, to support; the decades of a single dominant cleavage – class – are long over. Further, while underpinned by a general theoretical appreciation of voting behaviour most studies are, at least partly, exploratory, searching a data set for patterns consistent with those general expectations. Large data sets with information about a wide range of voter characteristics are now regularly deployed in such explorations, but making full use of the multivariate contingency tables that can be derived from them is not straightforward with the traditional modelling procedures. This paper has introduced and illustrated a methodology that allows a full appreciation of the extent of intersectionality in voting patterns.

The illustration of the methodology presented here addresses claims that the 2017 British general election was characterised by a 'youthquake' with two components: young voters turned out in larger proportions than at previous contests; and they were much more likely to vote Labour than Conservative than before. The analyses verify the second of those claims, but the first was only partly correct: greater turnout than at the previous three general elections was a feature of younger voters with higher educational qualifications but not of those with none or few. The intersectional approach and method has provided insights that others obscure.

References

Bauer, G. R. (2014) Incorporating intersectionality theory into population health research methodology: challenges and the potential to advance health equity. *Social Science & Medicine*, 110, 10-17.

Clarke, H. D., Goodwin, M. and Whiteley, P. (2017) Why Britain voted for Brexit: an individual-level analysis of the 2016 referendum vote. *Parliamentary Affairs*, 70, 439-464.

Clarke, H. D., Goodwin, M. and Whiteley, P. (2018) Yes, there was a "youthquake" in the 2017 general election – and it mattered? *New Statesman*, 20 February, https://www.newstatesman.com/ politics/staggers/2018/02/yes-there-was-youthquake-2017-snap-election-and-it-mattered.

Crenshaw, K. (1989) Demarginalising the intersection of race and sex: a black feminist critique of antidiscrimination doctrine, feminist theory and anti-racist politics. *University of Chicago Legal Forum*, 139-167.

[5] In this brief note we have not provided comparable tables for voting Liberal Democrat, Green or UKIP: copies can be obtained from the first-named author. In brief both the Liberal Democrats and the Greens gained greater than average support from the better-qualified and the young (the former notably in 2005 and 2010, the latter in 2015, especially from young females); UKIP's greater than average support, notably in 2015, came from older, less-qualified and, especially male voters.

Curtice, J. (2017) General election 2017: a new two-party politics. *Political Insight* (September), 4- 8.

Elwert, F. and Winship, C. (2010) Effect heterogeneity and bias in main-effects only regression models. In R. Dechter, H. Geffner and J. Y. Halpern (eds.) *Heuristics, Probability and Causality: a Tribute to Joseph Pearl*. London: College Publications, 327-336.

Evans, G. and Tilley, J. (2018) *The New Politics of Class: the Political Exclusion of the British Working Class*. Oxford: Oxford University Press.

Gelman, A. (2008) Interactions. *Statistical Modelling, Causal Inference and Social Science Blog*. http://andrewgelman.com/2008/08/20/interactions/.

Gelman, A. (2011) Small world: MIT, asymptotic behavior of difference-differential equations. *Statistical Modelling, Causal Inference and Social Science Blog*. http://andrewgelman.com/2011/01/07/small_world_mit/.

Gelman, A. (2014) How Bayesian analysis cracked the red-state, blue-state problem. *Statistical Science*, 29, 26-35.

Goodwin, M. and Heath, O. (2016) The 2016 referendum, Brexit and the left behind: an aggregate level analysis of the result. *The Political Quarterly*, 87, 323-332.

Hancock, A.-M. (2007) When multiplication doesn't equal quick addition: examining intersectionality as a research paradigm. *Perspectives on Politics*, 5, 63-79.

Johnston, R. J., Manley, D., Pattie, C. J. and Jones, K. (2018a) Geographies of Brexit and its aftermath voting in England at the 2016 referendum and the 2017 general election. *Space and Polity*, 22, 162-187.

Johnston, R. J., Jones, K. and Manley, D. (2018b) Age, sex, qualifications and voting at recent English general elections: an alternative exploratory approach located in the funnel of causation. *Electoral Studies*, 51, 24-37.

Jones, K., Johnston, R. J. and Manley, D. (2016) Uncovering interactions in multivariate contingency tables: a multi-level modelling exploratory approach. *Methodological Innovations*, 9, 1-17.

Prosser, C., Fieldhouse, E., Green, J., Mellon, J. and Evans, G. (2018) Tremors but no earthquake. Measuring changes in the age and turnout gradients at the 2015 and 2017 British General Elections. *SSRN Papers*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3111839.

Russell, A. T. (1967) A question of interaction: using logistic regression to examine geographic effects on British voting behaviour. In C. J. Pattie, D. Denver, J. Fisher and S,. Ludlam (eds.) *British Elections and Parties Review, 7*. London: Frank Cass, 91-109.

Sloam, J., Ehsan, R. and Henn, M. (2018) 'Youthquake': how and why young people reshaped thepolitical landscape in 2017. *Political Insight* (April), 4-8.

Table 1. The modelled rates for Non-Voting. Rates significantly larger than 1.0 are in bold; those significantly smaller than 1.0 are underlined. (Key. Eln – Elections: 05, 2005; 10, 2010; 15, 2015; 17, 2017. M – Male; F – Female. Q – Qualifications: 0, None; 1, GCSE or equivalent; 2, A-level or equivalent; 3, Degree or equivalent.)

Eln		05				10				15				17			
M	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	**4.28**	**3.43**	**2.99**	**2.60**	**3.70**	**3.44**	**2.97**	**1.60**	1.21	**2.37**	1.02	0.78	**2.45**	1.27	0.70	0.84
	25-	**3.71**	**3.11**	**1.94**	**2.03**	**3.35**	**2.21**	**1.89**	**1.32**	**2.24**	1.46	1.29	0.74	**3.49**	**2.02**	1.02	0.76
	35-	**2.21**	**1.74**	**1.54**	1.14	**2.10**	**1.80**	1.17	1.03	**1.79**	1.02	0.88	0.56	**1.72**	**1.64**	0.98	0.81
	50-	1.26	1.05	1.06	0.75	1.12	**1.25**	0.95	0.58	1.25	0.75	0.69	0.35	**1.61**	1.08	0.73	0.47
	65-	0.49	0.58	0.92	0.72	0.76	0.58	0.57	0.38	0.53	0.54	0.44	0.34	0.85	0.62	0.62	0.38
Eln		05				10				15				17			
F	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	**5.25**	**5.58**	**4.78**	**3.29**	**4.44**	**4.45**	**3.01**	**2.17**	**2.18**	**3.22**	**1.51**	0.9	**2.66**	**2.40**	1.16	1.27
	25-	**4.70**	**3.36**	**2.57**	**2.44**	**3.96**	**3.43**	**2.52**	**1.86**	1.52	**2.73**	**1.47**	0.92	**3.41**	**2.57**	**1.43**	0.99
	35-	**2.58**	**1.60**	1.18	**1.20**	**3.31**	**1.98**	1.00	1.12	**1.83**	1.18	0.65	0.79	**3.34**	**1.83**	1.02	0.97
	50-	**1.59**	0.95	0.72	0.71	**1.74**	0.83	0.84	0.67	1.14	0.78	0.67	0.48	**1.52**	0.94	0.73	0.58
	65-	0.92	0.57	0.51	0.49	0.81	0.51	0.53	0.47	0.55	0.35	0.44	0.44	0.96	0.58	0.56	0.31

Table 2. The modelled rates for voting Conservative. Rates significantly larger than 1.0 are in bold; those significantly smaller than 1.0 are underlined. (Key. Eln – Elections: 05, 2005; 10, 2010; 15, 2015; 17, 2017. M – Male; F – Female. Q – Qualifications: 0, None; 1, GCSE or equivalent; 2, A-level or equivalent; 3, Degree or equivalent.)

Eln		05				10				15				17			
M	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	0.50	0.75	0.63	0.80	0.50	0.69	0.77	0.97	0.92	0.64	0.96	0.89	0.97	0.55	0.79	0.64
	25-	0.52	0.80	0.97	0.96	0.71	1.00	1.09	1.10	0.74	0.97	0.98	1.11	0.50	0.96	0.86	0.83
	35-	0.68	0.99	**1.18**	0.97	0.85	1.12	**1.28**	1.11	0.51	0.99	**1.27**	1.07	0.79	**1.24**	**1.27**	1.03
	50-	1.13	**1.44**	**1.47**	**1.16**	1.10	**1.35**	**1.38**	**1.21**	0.81	1.03	**1.15**	1.04	1.11	**1.41**	**1.47**	**1.23**
	65-	**1.48**	**1.47**	**1.67**	**1.77**	**1.44**	**1.74**	**1.90**	**1.55**	1.13	**1.47**	**1.55**	**1.33**	**1.92**	**1.94**	**2.04**	**1.60**
Eln		05				10				15				17			
F	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	0.36	0.48	0.59	0.53	0.43	0.60	0.89	0.58	0.50	0.49	0.66	0.87	0.48	0.46	0.43	0.44
	25-	0.42	0.65	0.78	0.70	0.56	0.86	0.90	0.85	0.56	0.79	0.91	0.86	0.38	0.81	0.89	0.56
	35-	0.74	1.10	1.09	0.90	0.72	1.02	**1.18**	0.96	0.70	0.98	**1.21**	0.85	0.77	**1.15**	**1.23**	0.85
	50-	1.16	**1.52**	**1.56**	**1.13**	**1.23**	**1.55**	**1.52**	**1.23**	0.92	**1.31**	**1.35**	**1.19**	**1.13**	**1.63**	**1.52**	**1.26**
	65-	1.17	**1.62**	1.34	**1.59**	**1.35**	**1.86**	**1.86**	**1.49**	**1.30**	**1.70**	**1.78**	**1.35**	**1.88**	**2.06**	**2.12**	**1.60**

Table 3. The modelled rates for voting Labour. Rates significantly larger than 1.0 are in bold; those significantly smaller than 1.0 are underlined. (Key. Eln – Elections: 05, 2005; 10, 2010; 15, 2015; 17, 2017. M – Male; F – Female. Q – Qualifications: 0, None; 1, GCSE or equivalent; 2, A-level or equivalent; 3, Degree or equivalent.)

Eln		05				10				15				17			
M	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	0.90	1.20	1.21	0.93	0.75	0.85	0.62	0.85	1.34	1.10	1.08	**1.24**	0.84	**1.73**	**1.98**	**2.15**
	25-	1.26	**1.22**	**1.38**	1.09	0.82	0.95	0.91	0.83	0.69	1.26	1.27	**1.21**	1.27	1.29	**1.82**	**1.81**
	35-	**1.68**	**1.36**	1.10	**1.29**	1.28	1.02	0.92	0.96	**1.54**	1.17	1.12	**1.23**	**1.66**	**1.33**	**1.49**	**1.55**
	50-	**1.36**	**1.14**	0.92	1.04	1.13	0.95	0.72	0.86	1.18	**1.13**	1.08	**1.25**	**1.33**	**1.29**	**1.21**	**1.45**
	65-	1.05	1.07	0.73	0.70	0.99	0.80	0.59	0.70	1.04	0.92	0.89	1.04	0.80	0.95	0.78	1.01
Eln		05				10				15				17			
F	Q	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Age	18-	0.76	0.70	0.78	0.86	0.60	0.65	0.60	0.75	1.47	1.22	**1.47**	**1.40**	1.27	**1.78**	**2.36**	**2.35**
	25-	0.98	1.15	**1.28**	1.14	0.73	0.80	0.81	0.84	1.30	1.12	**1.36**	**1.46**	1.49	**1.46**	**1.81**	**2.19**
	35-	**1.39**	**1.41**	**1.27**	**1.38**	1.33	1.07	1.04	1.03	1.12	**1.31**	**1,37**	**1.52**	1.31	**1.40**	**1.63**	**1.81**
	50-	**1.33**	1.02	0.98	**1.19**	0.87	0.83	0.79	0.97	**1.32**	1.06	0.99	**1.38**	**1.48**	**1.21**	**1.28**	**1.52**
	65-	**1.64**	1.03	0.78	0.99	1.16	0.73	0.58	0.89	1.15	0.77	0.71	1.05	0.94	0.87	0.76	**1.20**