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Title: Do Parents Affect the Early Political Prioritisation of Nature in their Children?

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Non-technical Summary

In this paper I engage with a growing literature on the role of parents in the formation of environmental attitudes and beliefs in children. In it I overcome the general deficiency in comparative large scale data on pro-environmentalism in parents and children by focussing substantively upon individual greener political choices made by families living in the same household. The notion that children form a very early political awareness based around their parents' political ideology is tacked in some detail by Connell (1971) through a series of interviews held with young children. He believed that children were very much wrapped up in their immediate social environments of home and school thus their external influences generally limited to family, teachers, classmates and neighbours. In his research he finds signs of early political consciousness in children as young as 5 years of age who have a vague political awareness about the world and the special people in it who make important decisions. He concludes that children begin to adopt some vague idea of political parties and making choices between them at between the ages of 7 to 10 years and more importantly the key influencing agents in this process are the parents. In this paper I test the extent to which, parents are able to influence the greener political choices made by their children and discuss the importance of this to the further conceptualisation of parents as green educators and role models to their children.

Do Parents Affect the Early Political Prioritisation of Nature in their Children?

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2.1 Abstract

This study is concerned with the roots of environmentalism in young people in Britain and in particular the role parents play in the formation of deep green political attitudes in their children. Using a series of multiple logistic regressions on a pooled sample of children aged 11 to 16 (n=6,590) it is observed that compared to any other political party the odds of a child choosing the Green Party are greater if the father or the mother is also partisan to the green party. Contrary to other empirical research there is no significant difference found between the size of the effects of mothers and fathers on their children and provided the parent is more likely to be politically aligned with ideals of ecologism, this study observes an increased probability in their children's choice of the green party compared to the average child.

Keywords: Eco-Parenting, Green Political Ideology, Ecologism, Ecocentrism, Green Partisanship

2.1 Introduction

Whilst historically there has been a lack of empirical research into environmental attitudes held by children this is now being addressed by studies that not only look at various forms of pro-environmentalism in children but also the role of particular agencies in the formulation of these attitudes and behaviours. Studies which have focussed upon parenting as a potential mechanism have tended to conclude that the home itself is an important social environment in which children learn from their parents. Through a variety of mechanisms including conversation, imitation, interaction and play, children develop their awareness of the environment and nature based on their parent's views and behaviours. In their empirical work Eagles and Demare (1999) find that greener attitudes in young people can be directly associated with talking about the environment at home, watching nature films and reading about the environment. Wells and Lekies (2006) find through exposing children to the wilder aspects of nature during early childhood, parents affect their children's perspective of nature beyond childhood, into adulthood. Kola-Olusanya (2005) concludes from his research that the home is the foundation of development, interest and sensitivity towards the environment.

One important motivation for parents to behave more environmentally friendly in the home is to protect the planet for future generations. Another is to teach their children about the environment and nature (Ballantyne, Connell & Fien 1998). Through a mechanism they refer to as 'eco-parenting' Ballantyne et al (1998:289) suggest children, not only learn to behave more sustainably from their parents, but they also begin to develop their moral standing with respect to nature. It is entirely conceivable, therefore, that some parents proactively seek to engage their children in particular discourses related to the

environment and climate change. Empirical work undertaken by Dunlap & Van Liere (1978) suggests pro-environmentalists can be distinguished by a distinctive set of values and beliefs which deviate from dominant societal views, based on continued economic growth and faith in abundance. According to their New Environmental Paradigm framework environmentalists, in contrast are more likely to believe in the need for balance between human behaviour and nature, the development of a steady state economy, finite resources and greater equality between humans and nature (Dunlap & Van Liere 1984, 1978). If there is indeed some transmission of attitudes, values and beliefs between parents and their children, this suggests some parents are likely to pass on very distinctive views with respect to nature and the political economy to their children.

2.2 Parents and Ideological Identification in Children

Studies with children and young people have consistently shown that children take their early political cues from their parents. Through a mixture of education, conversation, socialisation and behaviours within and outside the home, children develop their citizen role and ideological character within the larger world of politics based around their parents' partisanship (Zuckerman, Dasovic, Fitzgerald, 2007; Jennings, 1984; 1967; Dalton, 1982; Butler, 1969).

Empirical research dating back to 1950 fully supports the broad hypothesis that parents are the primary political socialisation agents and play an important role in ideological reproduction within their children. Whilst this research supports theories with regards to direct parent to child transmission of main left/right political ideologies in Westernised democracies (Zuckerman et al., 2007; Jennings, 1984; Jennings and Langton, 1969; Jennings and Niemi, 1968) greener ideology, as a distinctive set of beliefs and values,

has yet to be observed as similarly transferable between family members. Only in his 1984 study did Jennings attempt to test the intergenerational transmission of the broadly accepted new-left ideology, post-materialism. Finding that parents are passing on a weakened version of this to their children in some European nations (with the interesting exception of Britain and Italy), Jennings theorises that as a new left ideology, post-materialism will not transcend a generation but remain a cohort effect, observable only whilst there is a feeling of economic well-being.

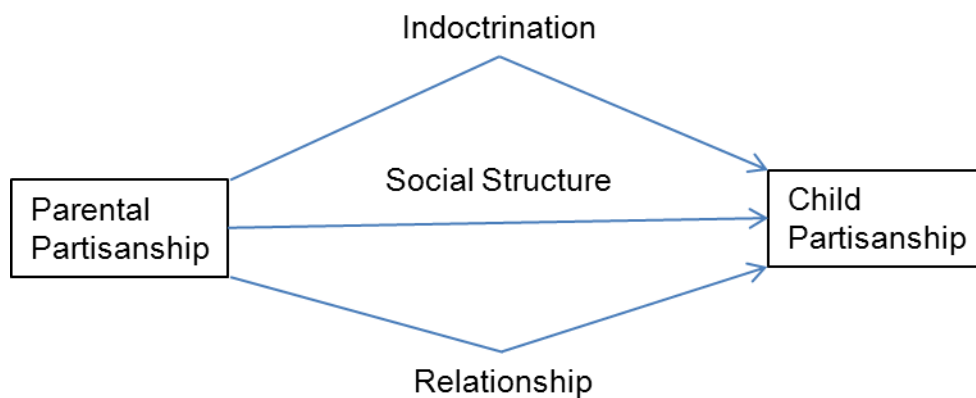


Figure 1 – Pathways to Political Socialisation (Lane 1959)

Political socialisation theory has identified and tested many models to explain ideological reproduction between parents and their children. One of the earliest and least complex models is the “Mendelian law of politics” (Lane, 1959). This model identifies three ways through which political loyalties and beliefs are transferable from parent to child (figure 1). The first is through indoctrination such that the child picks up the loyalties, beliefs and values from the parent through imitation of beliefs and behaviours. The second is social structure, through placing the child in a social context giving him ethnicity and class position. The third is relationship. Parents shape political beliefs through their personal

relations with the child, which helps them to develop a social orientation. It is certainly conceivable that these pathways to political socialisation in theory may apply to the reproduction of green ideology. In living out their ideology within the home, greener parents are likely to initiate and enforce greener household rituals and routines such as recycling, energy conservation, frugal lifestyles or self-sufficiency that the child may learn to follow. Campbell, Converse, Miller and Stokes' (1960) interpersonal transfer model similarly supports the notion that family roles and rituals and norms of behaviour can become politicised within the home and be transferred into the child's own citizen role. Jennings (1967) even suggests objects can be politicised and turned into a form of political cue and it would not be inconceivable that objects within the home could be turned into a form of green political cue for the child.

The notion, however, that green ideas and attitudes are transferable from parents to children in the reproduction of social class implied not only by Lane (1959) but also in Dalton's (1982) definition of social class as an indirect pathway to ideological reproduction is more questionable. Seen, as a very distinctive ideology with its own left/right political interpretations (Dobson, 2007; Eccleshall et al, 2003; Talshir, 2002; Pichardo et al, 1998; Freeden, 1995; Young, 1991; Minar, 1961), green ideology neither prioritises the interests of the wealthy or the poor but instead prioritises nature and according to both Minar (1961) and Pichardo et al (1998) distinctly is lacking in class basis. Theoretically therefore greener parents are unlikely to be intent upon reproduction of their class identity, but more a moral identity with regards to nature and the future sustainability of the planet.

Some empirical work has examined the direct mechanisms theorised by Lane (1959) and Dalton (1982) that act as mediators to ideological reproduction between parents and

their children. In their research into the motherhood and fatherhood role, Acock and Bengston (1978) observed mothers have a stronger effect than fathers upon the political and religious socialisation of their children, theorising this as due to the disproportionate amount of time that mothers spend with their children compared to fathers. Jennings and Langton (1969) further qualified this difference as dependent upon the relative levels of politicisation between mothers and fathers. They concluded that where mothers were more politicised, they had more power than fathers on the outcomes in the child and it could be that combined within the mothering role is not only a high propensity to spend time caring for the child but also the opportunity to develop a relationship through which political views are exchanged and reinforced. Indeed Baker (1974) found that the transmission process between parents was improved where the child was happier with relationships in the household.

However, Davidson & Freudenburg (1996) observe fundamental differences between the ways that men and women live out their environmental ideals with men more likely to engage in public sphere behaviours such as political activism and women more likely to engage in private sphere environmental behaviours such as household recycling, vegetable growing and greener consumption. It might well be therefore that the overall effects of mothers on political outcomes observed in their children might also be smaller than fathers.

2.3 The Present Research

Whilst research discussed so far suggests parents who are proactive in educating their children about nature have a positive effect upon their child's environmental awareness and that some of these effects endure into adulthood, what is still unexplored is

whether parents also influence their child's ideology and moral philosophy with respect to nature. Do parents influence the way that children think about or prioritise the environment above other issues? In their study, Cohen and Horm-Wingerd (1993) find that children as young as three years old show evidence of making some moral judgement about the effects of pollution on nature.

In this study I look at whether parents who are supporters of the deep ecology movement in Britain influence greener political ideals in their children. Even though children are not eligible to vote until age 18, research suggests that from as young as 7 years of age children begin to develop their awareness of the political environment (Connell 1971). Drawing upon political socialisation theory as it has been proven to apply to mainstream political parties, I test the following two hypotheses in this study:

H₁ Children, whose parents are partisans to the green party, are more likely to choose the green party themselves.

H₂ The size of the effect of the mother on the child's choice of a greener political party is larger than that of father.

2.4 Method

The data for this study comes from the British Household Panel Data Survey (BHPS). The BHPS is an annual survey consisting of a nationally representative sample of in the region of 5,500 households recruited in 1991. In 1994 a youth panel was introduced whereby interviews were also held with all consenting children aged 11 to 16 within those households. In total 6,590 children are observed from 2,938 different households over 14 waves (1994 to 2007). Children are observed for a minimum of once up to a maximum of 5 times (due to their birth dates a few children are still in the study at age 16). In the past

empirical studies into deep green attitudes and behaviours have been hindered by the very small relative sample sizes of people who present as ecologist compared to other major ideologies. In this study repeated measures on the same children and parents are pooled in order to obtain a large enough sample. Models are then fitted which allow for the complexity of the sampling design in which estimates are adjusted for clustering based upon the individual primary sampling unit. This is a unique measure for each household which identifies the probability of members being originally sampled into the survey. In this manner adjustments are made in the modelling for siblings living in the same household as well as repeated measures on the same child. Important further points to note with regards to the validity of this dataset for the topic of interest is (a) it contains young children and their parents living in the same household which according to Dalton's (1992) is an important factor in the transmission of parental ideology and (b) political choices, which forms the basis of this study, have been collected independently for children and their mothers and fathers, therefore not subject to the bias of proxy data collection through children and/or their parents criticised in other studies by Connell (1972).

The ideological beliefs of parents and their children are operationalized in this study using their partisanship to the Green Party in England, Scotland and Wales. Theoretically this is supported by a comprehensive deconstruction of green ideology by Freeden (1995) in which he synthesises the fundamental ideals of ecologism with the core concepts of green ideology. The important point to make here is that in line with more radical ecologist thinking, these core concepts support a vision for a society that identifies nature as equal, resources as finite and quality of all life a priority. Since the 1970's in England, Scotland, Wales and Northern Ireland dedicated and ideologically deeper green political parties have emerged which challenge mainstream environmental ideology with this deeper ecological

perspective. Although these parties have yet to fully establish a significant presence within the electorate, in the 2005 general election the Green Party achieved 1% of the total electorate vote in Britain (Birch, 2009), they do provide the mechanism through which greener individuals can politically identify. Although other mainstream political ideologies such as conservatism and socialism do share some of the environmental ideals contained in ecologism, they are not prioritised to the same extent, instead remain peripheral with according to Freedon (1995) an anthropocentric and reformist vision for the future of the human relationship with nature. It is this dichotomy therefore that provides the basis for Freedon's dismissal of mainstream political ideology that contains green elements as light green, shallow green or anthropocentric but more importantly for this study supports the notion that parents and children can be ideologically distinguished as green through their support of the Green Party. Freedon's (1995) deconstruction is therefore used to establish a definitive link between followers of ecologism/deep green ideology and partisanship to the Green Party in England, Scotland and Wales. This notion of political partisanship was established by Campbell, Converse, Miller and Stokes (1960), who proposed that enduring party choice or loyalty to any one party could be explained by personal and often inherited identification with a particular political party and its cause. This identification, they hypothesised, often transcended generations and was rooted in passive socialisation (Bartle & Bellucci, 2009).

The dependent variable used is the choice of political party identified by children when asked, "If you could vote for a political party, which one would you vote for?" This is an unordered categorical variable through which children are given a number of options covering not only main political parties, labour, conservative, liberal and green, but also other minority political parties in England, Scotland and Wales. Because the topic of

interest is parental influence upon ideological reproduction within children, those occasions in which any child did not choose to identify with any political party (52.3% of 13,813 total occasions) are not used for analysis, leaving a total of 6,590 observations. This decision was reached after several multinomial logistic regression models comparing choice between parties and choice of no party were found to be producing similar results to ordinary logistic regression which only compared choice of green party to all other. Therefore for simplicity in the modelling and presentation of findings, the dependent variable is constructed as a binary variable such that 1=partisan to green party and 0=partisan to other party (labour, conservative, liberal or other minority party). There are of course potential dangers in doing this. The data suggests that it is more likely for a younger child than an older child to not identify with any political party and girls rather than boys were also more likely to not politically identify themselves. To control for these effects, both a child's age and gender are included as controls in all regression models.

Two independent variables are used, the first of which is parental partisanship. In the BHPS all adults are asked initially whether they feel closest to any one political party and then asked to name that party. Responses are coded according to a number of major categories including 'political party identified', 'not applicable' (do not identify with party), 'other answer', 'refusal or 'don't know' (do identify but cannot name the party). Theoretically political partisanship in adulthood is enduring and unlikely to change very much across time. In this study therefore, advantage is taken of the longitudinal nature of this data such that where partisanship is identified in any one wave by an individual this is imputed manually into subsequent waves where the respondent's answer is either missing or coded as inapplicable. Through this method for mothers' partisanship an additional 44 'green' and 1,642 'other party' observations are imputed into the final dataset. For fathers

an additional 19 'green' and 1,633 'other party' observations are imputed into subsequent waves. The final variable for parental partisanship is formed as a categorical variable which identifies whether a mother or father identifies as (1) green (green party) (2) other party (conservative, labour, liberal or other minority party) or (3) No party (don't know, other answer, inapplicable). In order to further compare the relative effects of mothers and fathers, a combined variable is also used such that 1=neither mother nor father are green partisan 2=father is green partisan and 3 mother is green partisan. The single case in which both parents were green partisan is dropped from further analysis.

The second independent variable used is parent's education. Research by Box-Steffensmeier & De-Boef (1996) suggests that more highly educated adults will more accurately match their ideological views with an appropriate political party. In order to test whether education strengthens the parental effects, interactions are created between mothers green partisanship and education and fathers green partisanship and education.

In addition to controlling for child's gender and age, social class is also controlled within all models. A family's social class status has been observed in past empirical research to interact between direct mechanisms of transmission such as parent effects, hence in this study social class is operationalised and controlled using two measures (1) mother's perceived quality of household standard of living and (2) equivalised household income.

Initially a series of tables are constructed which examine the green political choices made by children and their parents between 1994 and 2007. More detailed analysis is then performed through a series of multiple regression logistic models. Model 1 looks for a correlation between mother's green partisanship and the child's when controlling for the

child's age, gender and social class and reports odds ratios, robust standard errors which are further adjusted for clustering and significance at 99% and 95% level of confidence. Model 2 builds upon this in order to examine whether this relationship is moderated by the mother's education. Although odds ratios are presented in both models 1 and 2, the interaction term included in model 2 is further tested to examine the extent to which it varies in terms of significance across the range of predicted probabilities (Norton, Wang and Chunron 2004) and revised log odds, z-scores and standard errors reported. Models 3 and 4 then report the same effects for fathers on the political voting choices of their children. Models 1 to 4 all test for H_1 . Finally Model 5 tests the relative effects between greener mothers and fathers using a new variable which combines and compares their effects on the child. Post estimation predicted probabilities are then drawn from this model and bootstrapped confidence intervals are used to compare whether there are significant differences between the effects of mothers and fathers on the green choice of political party made by their children to directly test H_2 .

2.5 Results

Between 1994 and 2007, on average 10.5% of total occasions were those in which children chose the Green Party (table 1).

	1994	1995	1996	1997	1998	1999	2000	Total
Green	16.14	12.81	11.43	6.17	9.52	15.57	10.56	10.50
Other	83.86	87.19	88.57	93.83	90.48	84.43	89.44	89.50
N	446	359	315	454	420	366	549	6,590
	2001	2002	2003	2004	2005	2006	2007	Total
Green	7.68	10.08	14.13	6.62	6.92	10.91	13.73	10.50
Other	92.32	89.92	85.87	93.38	93.08	89.09	86.27	89.50
N	599	526	460	559	636	486	415	6,590

This percentage does vary within individual years between 6.17% in 1997 to 14.13% in 2003. The propensity for children to change their minds year on year is more easily observed by comparing the average probability and table 2 shows children are fairly inconsistent in their choices, on average children who chose the Green Party in any particular year have only a 46% chance of choosing it again the following year, compared to a 54% chance of choosing a different party.

Table 2
Transition Matrix of Percentage Probability of Change in Youth Green Choice

	Green	Other Party	N
Green	46.44	53.56	323
Other Party	5.50	94.50	2,743
N	301	2,765	3,066

In contrast to their children, a much smaller percentage of total occasions, (1.02%) of political party identification by mothers are green (table 3).

Table 3
Marginal Percentage of Green Support in Mothers of children aged 11 to 16

	1994	1995	1996	1997	1998	1999	2000	Total
Green	1.09	1.26	1.39	1.43	1.62	1.24	0.85	1.02
Other Party	70.08	73.18	76.63	78.37	76.31	76.97	70.87	68.78
No Party	28.83	25.56	21.97	20.20	22.07	21.79	28.28	30.21
N	732	716	719	698	743	725	1,174	13,464
	2001	2002	2003	2004	2005	2006	2007	Total
Green	0.67	0.41	0.59	0.97	0.97	1.28	1.31	1.02
Other Party	70.55	69	67.85	65.52	63.12	60.46	56.10	68.78
No Party	28.78	30.59	31.56	33.51	35.92	38.26	42.58	30.21
N	1,192	1,229	1,185	1,134	1,136	1,090	991	13,464

Although green is not as frequently chosen in mothers as children, mothers appear to be more enduring in their partisanship.

	Green	Other Party	No Party	N
Green	85.42	14.58	0.00	96
Other Party	0.22	99.15	0.63	6,693
No Party	0.04	1.66	98.31	2,774
N	98	6,696	2,769	9,563

Table 4 shows that on average mothers who identify in any one wave as green have an 85% chance of choosing green in the following year.

	1994	1995	1996	1997	1998	1999	2000	Total
Green	1.19	1.04	0.35	0.35	0.49	0.51	0.32	0.69
Other Party	78.27	80.28	83.25	82.80	81.83	80.47	76.68	75.56
No Party	20.54	18.69	16.41	16.84	17.68	19.02	23	23.75
N	589	578	579	564	611	594	939	10,580
	2001	2002	2003	2004	2005	2006	2007	Total
Green	0.42	0.82	0.76	0.8	0.81	0.99	0.82	0.69
Other Party	77.43	74.72	74.54	73.38	70.66	68.36	63.56	75.56
No Party	22.15	24.46	24.7	25.82	28.52	30.65	35.62	23.75
N	948	977	927	879	859	806	730	10,580

Similarly to mothers, on average a much smaller percentage of father occasions are green (0.69%) (table 5) compared to mothers (1.02%) but like mothers, on average fathers are also more loyal to the green party than their children and have on average a 78% chance of choosing green in subsequent years (table 6).

	Green	Other Party	No Party	N
Green	77.78	22.22	0	54
Other Party	0.16	98.57	1	5,795
No Party	0.00	2.74	97.29	1,697
N	51	5,770	1,725	7,546

Although these percentages do suggest that parental green partisanship is not the only explanation for a child's choice of the Green Party, model 1 (table 7) shows the effects of mother's partisanship on the odds of their child's green partisanship (controlling for child's gender, age and household social class).

Table 7
Multiple Logistic Regression Examining the Effects of Mother's Partisanship on Child's Green Partisanship, controlling for gender, age and social class

	Model 1		Model 2	
	Odds Ratio		Odds Ratio	
Female	1.220*	[0.130]	1.225*	[0.127]
Age	0.950	[0.030]	0.948*	[0.030]
Standard Living				
Poor (below 60% median equivalised gross household income)	1.110	[0.132]	1.166	[0.144]
Difficult Standard Living (ref comfortable, alright, getting by)	1.256	[0.192]	1.300*	[0.191]
Mum Partisanship (ref: other Party)				
Mum Green	8.405**	[2.929]	3.216*	[1.814]
Mum No Party	1.422**	[0.175]	1.419*	[0.177]
Mum Degree			1.110	[0.127]
Mum Degree x Mum Green			5.426**	[3.836]
N	6,237		6,173	

*denotes significant at 95% level confidence ** significant at 99% level confidence, [robust standard errors]

It suggests that there is a statistically significant relationship between mother's green partisanship and the child's, such that a child whose mother chooses the green party is more than 8 times (8.4046) more likely to make a choice of the green party than any other political party. A Wald test, testing the null hypothesis that mothers have no effect upon their children can be rejected at the 0.01 level of confidence ($X^2 = 37.31$, $df=1$, $p>0.01$), and this provides support for H_1 . An additional and unexpected finding in model 1 is that also a child whose mother expresses no particular partisanship is also more likely to choose the Green Party (1.4222) and this is also statistically significant at 99% level of confidence ($p>|z|$)

= 0.004). It would appear that in the absence of maternal partisanship, children are more likely to choose the Green Party.

Model 2 (table 7) examines whether the observed effects of mothers on their children are moderated by the mother's education which, according to Box-Steffensmeier & De-Boef (1996), provides a measure of the strength of ideological identification in the mother. What is observed in the model is an indication that there is a statistically significant relationship between the marginal changes in the two interaction terms (mother green and has degree) and the probability of a child choosing the green party. Further investigation into the significance of these effects across the range of predicted probabilities by allowing for non-linearity (Norton, Wang and Chunron 2004) provides revised log odds of 0.4045 (compared to 1.6815 in model 2) with a revised Z score of 2.6892 which remains statistically significant. This provides further evidence that there is a significantly different effect upon the child if the mother is green partisan and has a degree level education.

Table 8
Multiple Logistic Regression Examining the Effects of Father's Partisanship on Child's Green Partisanship, controlling for gender, age and social class

	Model 2		Model 3	
	Odds Ratio		Odds Ratio	
Female	1.263*	[0.151]	1.123*	[0.156]
Age	0.951	[0.033]	0.9609	[0.036]
Standard Living				
Poor (below 60% median equivalised gross household income)	1.061	[0.161]	1.116	[0.195]
Difficult Standard Living (ref comfortable, alright, getting by)	1.303	[0.246]	1.323	[0.282]
Dad Partisanship (ref: other Party)				
Dad Green	7.049**	[2.390]	8.069**	[5.864]
Dad No Party	1.489**	[0.213]	1.333*	[0.199]
Dad Degree			1.237	[0.170]
Dad Degree x Dad Green			1.905	[0.816]
N	4,795		4,407	

*denotes significant at 95% level confidence ** significant at 99% level confidence, [robust standard errors]

Model 3 (table 8) looks at the effects of fathers green partisanship on the green choice made by the child and similarly shows a statistically significant relationship between child Green Party choice and father’s partisanship. The odds of a child choosing the Green Party compared to all other political parties are slightly more than 7 times greater (7.05) when the father identifies as green partisan. This significance is confirmed by a Wald test ($\chi^2 = 33.07$, $df = 1$, $p < .01$) and provides some further support for H_1 . Similarly there is also a statistically significant relationship between a child’s choice of Green Party and their father’s lack of ideological identification and it would also seem that also in the absence of father’s political ideology within a household, children are statistically significantly more likely to choose the Green Party than any other party. Interestingly in model 4, the inclusion of the interaction term between a father’s education and their green partisanship is not significant and this is further confirmed when revised coefficients, standard errors and Z scores are similarly examined.

In this study I also hypothesised that mothers are likely to have a larger effect on the greener outcomes in their children than fathers. This hypothesis is initially tested by comparing the size of the Wald statistic for model 1 ($\chi^2 = 37.31$, $df=1$, $p > 0.01$) and model 3 ($\chi^2 = 33.07$, $df = 1$, $p < .01$) which compares the overall effects between mothers and fathers and mildly supports the notion that mothers have a larger effect than fathers (controlling for child’s gender, age and social class).

Table 9
Multiple Logistic Regression Examining the Effects of Mother and Father’s Partisanship on Child’s Green Partisanship, controlling for gender, age and social class

	Model 7 Odds Ratios	
Female	1.284*	[0.154]
Age	0.944	[0.033]
Standard Living		

Poor (ref. above 60% median equiv income)	1.090	[0.166]
Difficult Standard Living (ref: comfortable, alright, getting by)	1.299	[0.244]
Who Partisan (ref: neither parent green)		
Father only	9.570**	[3.353]
Mother only	6.344**	[0.204]
N	4,792	

*denotes significant at 95% level confidence ** significant at 99% level confidence, [robust standard errors]

Model 5 (table 9) however, compares the effects between parents on the child using a variable derived from the individual parent effects, distinguishing between children whereby neither parents are green partisan, father but not mother, and mother but not father. What the model suggests is that the odds of a child, whose father is green partisan but mother is not, are higher than the odds for a child whose mother is green partisan but whose father is not (compared to neither parent). However, in order to support H₂ what needs to be established is whether these odds are statistically significantly different from each other.

Post estimation predicted probabilities are obtained from model 5 and these suggest that children whose fathers are green partisan are 10% more likely to choose the Green Party themselves compared to children whose mothers are green partisan (table 10).

Table 10
Predicted Probability for Ideal Child Types, Dependent upon Mothers/Fathers Characteristics, controlling for Child Gender, Age and Social Class

Ideal Type	Predicted probability of child choosing green party [95% confidence interval]	Predicted probability of child choosing other party [95% confidence interval]
An average child	10.09 [9.15, 10.90]	89.91 [89.10,90.85]
A child whose mother is green partisan but not father	41.25 [25.18, 57.31]	58.75 [42.69, 74.82]
A child whose father is partisan but not mother	51.22 [34.42, 68.01]	48.78 [31.99, 65.58]

Note, bootstrapped confidence intervals in square brackets

Computing bootstrapped confidence intervals in accordance with Guan (2003), shows that the confidence intervals between the predicted probabilities actually overlap and are not statistically significantly reliable to reject H_2 (table 10). It is likely that the small sample sizes used are not reliable enough to distinguish between these effects.

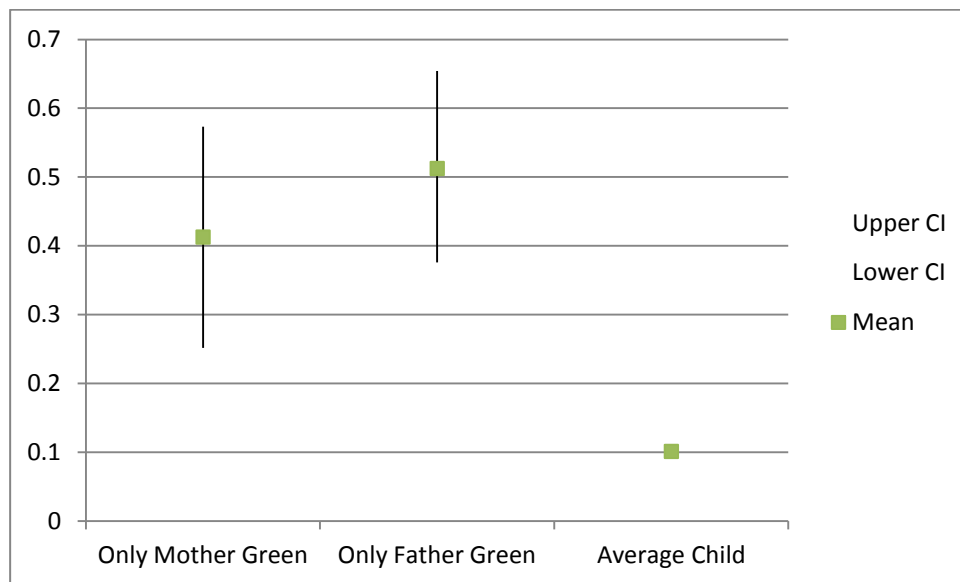


Figure 2 - Average predicted probabilities for Ideal Child Types
(Derived from Model 5 showing bootstrapped upper and lower confidence Intervals)

These findings, illustrated in figure 2, show that the effects of greener mothers and greener fathers on the predicted probability of their children choosing the Green Party are not statistically significantly different from each other providing insufficient evidence to reliably reject H_2 .

2.6 Discussion

In this research I set out to examine whether greener political choices in parents could be similarly observed in their children, the substantive issue being, whether like parents who subscribe to more mainstream political ideologies, green parents also play a

major part in the greener political socialisation of their children. Whilst no direct causal relationship has been established, I am able to conclude that similar to socialism, liberalism and conservatism, early signs of ecologism are more likely to be observed in a child whose father or mother identifies as partisan to the Green Party in England, Scotland and Wales.

Interestingly for mothers only, this effect is moderated by their level of education such that the association between mother's green partisanship and child's is stronger for more educated women. Box Steffensmeier & De Boef (1996) suggest that educated adults are more likely to accurately match their ideological views with an appropriate political party and this would explain the increased effect upon the green political views of the child for mothers. These findings are also consistent with earlier empirical research by Jennings and Langton (1969) who conclude that mothers need to be highly politicised in order for an effect to be observed on the child. Although Jennings and Langton (1960) do not elaborate on this mechanism I offer two possible explanations. The first relates to identity political theories in particular Green, Palmquist & Schickler (2002) who distinguish between two main mechanisms through which people identify as partisan to political parties. One they suggest is consistent with earlier notions of party identification as due to empathy with a party and affinity with its ideology. The other is through self-identification and self-categorisation. People, they say, see themselves or wish to be seen as green, socialist, liberalist or conservative and in this manner partisanship forms either part of a person's core identity or part of their self-image. Whilst this explanation is possible it does suggest that women are somehow less genuine in their identification with green ideology, certainly where it is operationalized politically. A different explanation can be drawn from the Private Sphere Theory put forward by Davidson & Freudenburg (1996) who observe there are important differences between how men and women live out their environmental

values, with women as the home-makers, care-givers and nurturers, more likely to live out their ideological values through this role. Through the mothering role there might be more transmission of broader environmental values and behaviour rather than more political outcomes.

In this paper I am also substantively interested in observing a relationship between greener parents and greener outcomes in their children which empirically supports the notion of eco-parenting. A mechanism through which Ballantyne, Connell & Fien (1998) theorise that parents influence the environmental attitudes, values and behaviours of their children. My findings certainly suggest that there is some association between parents and early greener choices their children make and this area is worthy of more research. As more households are encouraged to engage in sustainable behaviour, parents are inevitably in an important influential role in terms of initiating and sustaining behaviour throughout the household and in so doing establish important beliefs and practices with which children may continue to engage, into their adult lives.

With respect to green political values, and a child's motivation to influence the political economy, it is of course another matter as to whether children of greener partisan parents remain green partisans long enough to affect their voting behaviour. Of substantive interest in future research would be a longitudinal study of these children's political views and subsequent behaviours into adulthood.

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