# Welsh Language Transmission and Use in Families 

RESEARCH INTO CONDITIONS INFLUENCING WELSH LANGUAGE TRANSMISSION AND USE IN FAMILIES

Title: Research into Conditions Influencing Welsh Language Transmission and Use in Families

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Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government.

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## Glossary

| Acronym/ <br> Key word | Definition |
| :--- | :--- |
| BFLA | Bilingual First Language Acquisition. The process whereby two <br> languages are acquired simultaneously in the home (see also ESLA <br> and De Houwer (2009)). |
| ESLA | Early Second Language Acquisition. The process whereby one <br> language is acquired via parental transmission and another is <br> acquired prior to the start of formal education (see De Houwer <br> (2009)). |
| FLP | Family Language Policy focuses on language use in the home and <br> the factors which influence this use. Work in this field attempts to <br> shed new light on the way in which languages are 'managed' in the <br> home. This has been largely neglected in studies in BFLA (see Smith- <br> Christmas and Smakman (2009); Smith-Christmas (2012, 2014, <br> 2016)). |
| OPOL | One Parent One Language. Where either or both parents may have a <br> repertoire of languages to choose from, one parent will consistently <br> speak in language X to their child, where the other will consistently <br> speak in language Y (see Döpke (1992)). |
| SRBAI | Self-reported Behavioural Automaticity Index (See Gardner et al. <br> 2012). |
| TPB | The Theory of Planned Behaviour, postulated by (Ajzen 1991). |
| WLB | Welsh Language Board. A statutory body created by the Welsh <br> Language Act 1993, charged with the promotion and facilitation of the <br> Welsh language. The WLB was abolished by the Welsh Language <br> (Wales) Measure 2011 and its functions transferred to the Welsh <br> Language Commissioner and the Welsh Government. See Welsh <br> Language Board (2012) for a review of the Board's activities, and Mac <br> Giolla Chríost (2016) for a critical overview of the processes that led <br> to the formation of the office of Welsh Language Commissioner. |

[^0]
## Introduction

1.1 In November 2015, Cardiff University was commissioned to undertake a research study on behalf of the Welsh Government. The research's aim is to enhance understanding of how the Welsh language is transmitted from generation to generation in families. The research is intended to help the Welsh Government to:

- refine its understanding of the patterns of Welsh language transmission and use in families with children between 0 and 4 years old across Wales; and to
- increase its understanding of the factors influencing these trends.


## Policy Background

1.2 The results of the research presented in this report may play a part in developing the direction of future language planning actions in Wales.
1.3 The Welsh Ministers' five-year Strategy for the Welsh language, A Living Language: a Language for Living (Welsh Government 2012) outlined the Welsh Government's vision to 'see the Welsh language thriving in Wales' (Welsh Government 2012, p. 14). Strategic Area 1 of the Strategy (Welsh Government 2012, pp. 25-27) deals specifically with 'The Family.' Its desired outcome is 'more families where Welsh is the main language used with the children by at least one adult family member in regular contact with them' (Welsh Government 2012, p. 25).
1.4 An Evaluation Framework for the Strategy (Welsh Government 2013) was developed to create an evidence base which would ascertain the degree to which the Welsh Government's strategic aims in its Welsh language strategy documents had been achieved. The research presented here was commissioned under that Evaluation Framework.
1.5 The Welsh Government (2014a, pp. 18-19) strategy document Moving Forward (created following a 'national conversation' consultation exercise on Welsh language policy) provided further detail on how A Living Language: A Language for Living would be implemented. It emphasises that intergenerational language transmission is a key priority.

The Welsh Government's 2016/17 action plan (the final in the 5-year life of $A$ Living Language: A Language for Living) announced a 'Welsh for Children scheme to support new parents to introduce Welsh to the family' (Welsh Government 2016b, p. 11).
1.7 In August 2016, a consultation exercise was launched (Welsh Government 2016a) for a new strategy which will be implemented when A Living Language: A Language for Living comes to an end (the Government of Wales Act 2006 requires Welsh Ministers to prepare, review, and update a strategy to promote and facilitate the use of the Welsh language). The consultation version of the strategy espouses a long-term aim, envisions a million Welsh speakers by the year 2050, and places emphasis on the contribution of the education system towards this aim. The consultation document also emphasises the importance of the family setting for creation of new Welsh speakers, noting:

As well as education, it will be essential to increase the number of people who transmit the language to their children. We also need more opportunities for people to use it in a variety of settings, and encourage more of them to take up those opportunities. These include opportunities as individuals, for the family, by taking part in local activities, or as members of networks or wider communities of interest that may be scattered throughout the world (Welsh Government 2016a, p. 4).
1.8 This consultation version of the strategy also links the education system with intergenerational transmission as a possible link in a supply chain for the creation of further speakers, aspiring that the education system will itself create a multiplier effect (by creating more Welsh speakers [from non-Welshspeaking families] 'who will transmit the language to their own children' (Welsh Government 2016a, p. 7).
1.9 Since the first work on intergenerational transmission of Welsh was published by Harrison et al. (1981) (this work is reviewed in 2.40) a wide variety of status language planning measures have been taken in law which mean that Welsh is now much more visible in the linguistic landscape ${ }^{2}$ (See, for example, HM Government (1981); HM Government (1988, 1993, 1998, 2006, 2010); National Assembly for Wales (2011)). The availability of Welsh

[^1]language television, radio, and other media is now much wider, and there has been a substantial growth in Welsh-medium schooling (Williams 1989; Williams 2000; Williams 2003; Redknap et al. 2006; Lewis 2008). Welsh as a second language has been established as a central pillar of the curriculum in Wales, although with concerns about its efficacy (see, for example, the report of the working group chaired by Professor Sioned Davies-Welsh Government 2014b). There is also widespread reported public support for Welsh in attitudinal surveys (e.g. NOP Social and Political (1996); Beaufort Research et al. (2013)).
1.10 The Welsh-medium education system has been viewed as a central aspect of language revitalisation in Wales, but little research has been conducted into the link (if any) between Welsh-medium education and whether those who attend it from non-Welsh-speaking families actively use the Welsh language with their children when they become parents. The Welsh Government (2012, p. 25), echoing Fishman (1991a, p. xii), ${ }^{3}$ warns of the dangers of an over-reliance on solely systemic interventions in the intergenerational language transmission of Welsh:

Passing the language from one generation to the next is one of the two most important areas of language planning-the other being education. It is unlikely that Welsh will thrive as a community and social language if it is dependent on the education system alone as a means for new speakers to learn the language. It needs to be the language of the home for as many children as possible—and there is no doubt that learning the language in this way is a natural and effective way to become a fluent Welsh speaker.
1.11 Despite the education system per se being outside the scope of this research project, all the Welsh-speaking respondents we interviewed will of course have been educated at some point in the school system. The possible link between education and intergenerational transmission of Welsh is salient to the research given the recently declared desire of the Welsh Government to ensure 1 million Welsh speakers by the year 2050. The

[^2]consultation version of its strategy document (Welsh Government 2016a, p. 7) notes a desired causal connection from one to the other:

There is a limit to the additional number of Welsh speakers that can be created through transmission from one generation to the next unless more parents decide, in the first place, to learn Welsh, and secondly to pass it on to their children. Therefore, it is essential to create speakers through the education system who will transmit the language to their own children.

Having established the drivers for the commissioning of the current research project, the next section of the report turns to the detail of the research itself.

## Research Questions

1.13 This research addresses the following main research questions:

- What are the conditions that facilitate Welsh language transmission within families, and the conditions that make Welsh language transmission less likely?
- What are the conditions that influence patterns of Welsh language use within families with children in the 0-4 age group?
1.14 To answer these questions, we present data from 60 primary caregivers of children aged 0-4, living in north west and south east Wales. Data were elicited via written questionnaire and oral interview.
1.15 The quantitative data are taken from an analysis of (non-)transmission of Welsh by parents viewed through a prism of several linguistic, societal, and pragmatic factors. In addition to considering features which have been found to be salient in previous work on language transmission (such as parents' linguistic background), we also consider aspects of behavioural psychology. Firstly, we examine the extent to which (non-)transmission is a considered activity and draw upon models couched in the Theory of Planned Behaviour (TPB). Secondly, we investigate whether parents' wider social values influence transmission. We analyse how automatic a behaviour language transmission is and whether perceptions of national identity and social norms are salient predictors of a likelihood to transmit Welsh. We believe that this is the first time that such an interdisciplinary, mixed-methods framework has been adopted for the analysis of intergenerational transmission and that our analysis therefore offers a unique perspective, which meshes behavioural
psychology, parent experiences, with both a qualitative and quantitative approach.


## Project Scope and Limitations

1.16 The results from the primary data we collected (due to the small sample size) should not be taken as statistically generalizable to the population of Wales at a national level but rather as an exploratory analysis of transmission. What the research does offer is an original approach to intergenerational language transmission, i.e. a significant and rigorous analysis using a mixed-methods and social psychological approach. We also base our findings on a specially commissioned analysis of decennial Census figures and a review of relevant literature. These provide a Wales-level context to the primary statistical and qualitative data we analyse.
1.17 Several restrictions to the scope of the research should be made clear at the outset:

- There have been several policy interventions in the field of intergenerational language transmission in Wales, for example: Twf (Growth), which encouraged those parents who could speak Welsh to transmit it to their children, and the associated Tyfu gyda'r Gymraeg (Growing with Welsh) which supported bilingual families. This research does not evaluate these or any other intervention or policy development carried out by the Welsh Government or other organisation-it analyses primary research data collected from main caregivers of children aged 0-4, selected according to the methodology noted in Chapter 4 (Methodology).
- $\quad$ The research collects self-reported data from the main caregivers of a child in an interview setting. It does not contain an observational element (e.g. participant observation), i.e. it does not analyse whether respondents' behaviour pertaining to the research questions is different from a behaviour reported to us by that caregiver.
- The research depends on respondents' self-reported data. We neither interview nor observe children, nor do we test or assess children's language repertoires, grammar, fluency etc.
- The research does not analyse styles or registers of speech used between respondents and their children, i.e. it does not have as a primary aim the investigation of code-switching or mixing, translanguaging or corrective feedback strategies (i.e. how a respondent may correct a child's language). However, where such themes arise from the data, these are analysed in 6.48-6.53.
- The research does not collect primary data from any individuals who are not main caregivers. Teachers, extended family members, or any other individuals did not contribute to the data collection process.
1.18 We outline the limitations of the research design further in the methodology (see 4.50) and discuss the consequences of this for both our quantitative (e.g. 5.28; 5.31; 5.34) and qualitative (e.g. 6.8) results. We also make recommendations for future research which consider the limitations of the current research (see 7-Discussion, Conclusions and Recommendations).


## Conceptual framework

1.19 The conceptual framework of this research is located mainly in the field of sociolinguistics (informed by social psychology) as we research factors relating to language behaviour in the context of intergenerational language transmission. SIL International (1996) defines a sociolinguistic conceptual framework as 'a system involving the attitudes of a speech community toward their language, the identity of social groups, standard and nonstandard forms of language, patterns and needs of national language use, the social basis of multilingualism.' The current research considers several sociolinguistic aspects in its methodology and analysis, e.g.:

- Parents' self-reported language use with their children
- Personal, family and social use of the Welsh language
- $\quad$ Perceptions of ability in the Welsh language
- More general perceptions of the Welsh language
- The extent to which intergenerational transmission of Welsh is an 'automatic' behaviour, together with an analysis of national identity and personal values.


## Structure of the Report

Chapter 2 (Theoretical Framework) deals with relevant studies of intergenerational language transmission. Firstly, theoretical and international literature is critiqued, followed by an analysis of the research and evaluation carried out into intergenerational transmission of the Welsh language in Wales. In Chapter 3 (Statistical Analysis of National Census Data), we detail the statistical background of intergenerational transmission of Welsh in Wales (gleaned from a review of relevant secondary statistical literature, and from a new analysis of decennial Census data carried out by the team).

Chapter 4 (Methodology) then turns to the methodological aspects of our own primary research, with Chapters 5 (Applying Behavioural Approaches to Language Transmission) and 6 (Qualitative Data Analysis) presenting our findings. In Chapter 7 (Discussion, Conclusions), we draw conclusions from the literature, and from our primary and secondary research, and offer recommendations. A series of respondent "stories", together with detailed statistical background information, all research instruments, references and other associated documentation are included in the Appendices.

## 2. Theoretical Framework

2.1 This chapter outlines the theoretical framework for the current research. Firstly, we define intergenerational language transmission and the various approaches taken to examine language use within the family. Secondly, we summarise the factors which have been shown to influence the use of more than one language in the home. Thirdly, we examine the various strategies used by parents transmitting more than one language in the home. Finally, we highlight how this work is relevant to the study of transmission in the Welsh context and show the contributions which this research makes to the wider field.

## Intergenerational language transmission

2.2 Intergenerational language transmission is defined by Chrisp (2005, p. 150) as 'the ongoing process whereby a language is transferred from generation to generation through the normal familial interactions of parents and children.' Specifically, studies of intergenerational language transmission examine the use of minority languages (both heritage languages and autochthonous minority languages) in bilingual and multilingual families. ${ }^{4}$ Such studies therefore exclude by definition children who acquire a second language through immersion education or later in life (so-called 'new speakers', see O'Rourke et al. (2015)).

## Bilingual child language development

2.3 Most studies of bilingual child language development have focussed on the simultaneous acquisition of two languages by babies (Bilingual First Language Acquisition (BFLA)) rather than the sequential acquisition of two languages by young children (Early Second Language Acquisition (ESLA), see De Houwer (2009, p. 4)). The earliest study of bilingual child language development (Ronjat 1913), was an observational account of a child's simultaneous development in German and French and provided a general overview of language development. More modern studies tend to focus on the acquisition of particular aspects of language (e.g. grammar or phonology, see however Caldas (2006) who documented his children's bilingual development across different areas) and often compare bilingual

[^3]development with monolingual subjects in both languages. Such studies are too numerous to review here (see De Houwer (1990) and De Houwer (2009) for extensive reviews) but examine aspects of language choice and language mixing (e.g. De Houwer (1990); Genesee et al. (1995); Köppe (1996); Meisel (2001); Cantone (2007)), grammar (e.g. De Houwer (1990); Deuchar (1992); Meisel (2001); Serratrice (2002)), phonetics and phonology (e.g. Bosch and Sebastián-Gallés (2003); Paradis (2001); Kehoe (2002)) and the lexicon (e.g. Fenson et al. (1993); Thordardottir et al. (2006); Ezeizabarrena et al. (2013)).
2.4 There have been several studies which have focussed on the acquisition of Welsh and English by children (Jones 1970; Griffith 1976). More recent studies examine particular aspects of language development such as phonology (Ball et al. 2001a; Ball et al. 2001b; Munro et al. 2005; Mayr et al. 2015), grammar (Gathercole et al. 2001; Thomas 2007; Thomas and Gathercole 2007; Gathercole and Thomas 2009), and the acquisition of vocabulary (Rhys and Thomas 2013). Because of the different ways in which Welsh can be acquired by children, such as at home from both or one parent(s) or via immersion education, several of these studies have focussed on the effects of mode of acquisition on acquisition. This differs from the BFLA approach which focuses on children who are usually exposed to two languages from birth. A common finding seems to be that linguistic ability in English among Welsh-English bilingual children is not affected by children's home language to a great extent (although Rhys and Thomas (2013) did find differences between children aged 11 from Welsh-speaking homes and English-speaking homes in respect of English vocabulary) but that home language has a significant influence on how children of the same age perform in Welsh (Gathercole and Thomas 2009; Mayr et al. 2015).

## Sociolinguistic studies

2.5 Many sociolinguistic studies have, until recently, tended to consider intergenerational language transmission in the wider contexts of macro-level language maintenance, language shift, and language policy (e.g. Kloss (1966), Fishman (1991b), Clyne (1991)) rather than undertaking in-depth studies of specific communities and individuals' actions. Others focus on heritage language contexts (i.e. ethnolinguistic groups who have migrated to another country, see for example Barnes (1996) for an early study of an
indigenous language context). Such studies emphasise that the use of the minority language in the home is a crucial determiner of its use by children in later life (Fishman 1991a, p. 20; Kenji and D'Andrea 1992; Lao 2004; Park and Sarkar 2007). Fishman (1991a, p. 20) notes that this is because it is in the home that 'the bulk of language socialisation, identity socialisation, and commitment socialisation generally takes place.' Sustained transmission of a minority language in the home is therefore largely seen as a cornerstone of community language maintenance (Fishman 1991a; Kenji and D'Andrea 1992; Aitchison and Carter 1994, p. 5) and discussed within wider frameworks as contributing factor to the relative ethnolinguistic vitality ${ }^{5}$ of a language (Giles et al. 1977; Darquennes 2007; Rasinger 2013). It should be noted that there are critics of the central role that Fishman (1991a) places on intergenerational language transmission e.g. Romaine (2006), though few deny its importance (Ó hlfearnáin 2013, p. 349). Instead, critics have argued that not enough is known about transmission as a process (King et al. 2008, p. 907) and recent work, including this study, has focussed much more on patterns of language use in the home rather than on the effects of transmission on language maintenance.

In recent years, Family Language Policy (FLP) has emerged as a strand of research which focuses on language use in the home and the factors which influence this use. Such work attempts to shed new light on the way in which languages are used in the home by parents and children and how this language use is shaped by their attitudes. The focus on both interactions in situ and the role of language attitudes has been understudied in previous work on BFLA, which concentrates on the results of FLP on speech production and linguistic socialisation (Smith-Christmas 2014, p. 511), and macro-level language policy research, which has ignored the differing factors influencing linguistic behaviour in different domains (Spolsky 2012, p. 3). As King et al. (2008, p. 908) state, 'such an approach takes into account what families actually do with language in day-to-day interactions; their beliefs and ideologies about language and language use; and their goals and efforts to shape language use and learning outcomes.' There have been several approaches to the study of FLP in recent years. For example, Schwartz and Moin (2012) examine how Russian-speaking immigrant parents in Israel

[^4]assess their children's abilities in both Russian and Hebrew and the extent to which this informs their FLP. Ó hlfearnáin (2013) investigates the attitudes and practices of Irish speakers to intergenerational transmission in the context of recent language planning initiatives, and analyses quantitative and qualitative data. Smith-Christmas (2014) examines the role of extended family members on the transmission of Scottish Gaelic and considers how they negotiate FLP by taking a micro-interactional approach to data analysis.
2.7 Although FLP studies focus on the explicit decisions and ideologies in relation to home language use (Schiffman 1996; Shohamy 2006), it has been noted that use is not always explicit or the result of a conscious decision. Tannenbaum (2012, p. 57) notes that the mother tongue is a central aspect of people's internal sense of self and identity [...] even when family members are not aware of these links.' The idea that FLP is not always explicit, that is to say that families may not make conscious decisions regarding language transmission and use, has been unexplored and is a key question explored in the current research.
2.8 The current research takes a FLP approach insofar as we focus primarily on intergenerational language transmission and the use of Welsh in the home. While we recognise the importance of the transmission of Welsh within the family for the ethnolinguistic vitality and maintenance of the language, this is not under investigation here (see 2.5). Similarly, we concentrate here on one aspect of FLP, namely the extent to which parents consciously decide to transmit Welsh to children and the demographic, ideological, and attitudinal factors which influence their use of Welsh in the home with children aged 04. Further work is therefore needed to examine how FLP is negotiated by both parents and children in situ (Smith-Christmas 2014), how FLP changes over time, and how FLP directly affects the acquisition and use of Welsh and English by children themselves. We now proceed to examine the strategies used for transmission of two languages, and factors which have been shown to influence the transmission of more than one language.

## Approaches to intergenerational language transmission

2.9 As shown in 2.4 and 2.5, it is largely agreed that the use of the minority language in the home is the most influential factor influencing both acquisition and use. The extent to which intergenerational language transmission of a minority language is a conscious decision largely depends on individual families (Baker 2000, p. 5). As shown in our analysis of our research data, many parents in previous studies of Welsh language transmission report that speaking Welsh with their children happened 'naturally.' As noted in 2.7, Tannenbaum (2012) argues that the emphasis FLP studies place on explicit choices made by parents does not consider the way in which parental attitudes and ideologies may influence their linguistic behaviour with their children.

## Language presentation

An important strand of both BFLA and sociolinguistic research has therefore been to examine the relationship between the exposure which children receive in the home and their subsequent linguistic behaviour. The approaches parents take towards transmission centre on 'language presentation.' Language presentation refers to 'who speaks which language(s) to a child and how many' (De Houwer 2009, p. 107). The decisions around language presentation are often borne out differently in day-to-day interactions (see $0 ; 2.19$ ), and are influenced by a variety of factors (explored in the next section). Language presentation in homes where both parents speak two languages (Language A and Language Alpha) can crudely be classified using the schema shown in the table below.

Table 1: Possible outcomes for transmission in families where both parents are bilingual in the same languages.

| Scenario | Parent A | Parent A use <br> with child | Parent B | Parent B use <br> with child |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Language A + <br> Language Alpha | Language A | Language A + <br> Language Alpha | Language A |
| 2 | Language A + <br> Language Alpha | Language Alpha | Language A + <br> Language Alpha | Language Alpha |
| 3 | Language A + <br> Language Alpha <br> Language A + | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language A + <br> Language Alpha |
| 4 | Language A + <br> Language Alpha | Language Alpha | Language A + <br> Language Alpha | Language A |
| 5 | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language A |
| 6 | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language Alpha |
| 7 | Language A + <br> Language Alpha | Language A | Language A + <br> Language Alpha | Language A + <br> 8 |
| 9 | Language Alpha <br> Language A + | Language Alpha | Language A + <br> Language Alpha | Language A + |

2.11 Table 1 shows that bilingual parents may use the same approach to transmission (cf. scenarios 1-3) or differing approaches (cf. scenarios 4-9) and could involve the use of one language or both languages. Table 2 shows the same classification in situations where one parent (in two-parent families) is bilingual.

Table 2: Possible outcomes for transmission in families where one parent is bilingual.

| Scenario | Parent A | Parent A use <br> with child | Parent B | Parent B use <br> with child |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Language A + <br> Language Alpha | Language A | Language A | Language A |
| 2 | Language A + <br> Language Alpha | Language Alpha | Language A | Language A |
| 3 | Language A + <br> Language Alpha | Language A + <br> Language Alpha | Language A | Language A |

2.12 Many of the scenarios above can be viewed as One Parent, One Language (OPOL) approaches to transmission whereby one parent speaks one language with the child and the other parent speaks another language (see (Arnberg 1987, p. 87; Barron-Hauwaert 2004)). Studies of BFLA (which are largely interested in acquiring two languages from birth) have mainly concentrated on OPOL environments for acquisition. This is relevant to the Welsh context where this may be the strategy used by couples where one parent does not speak Welsh or does not feel confident in the language and uses English. Previous studies have shown that, while OPOL is often promoted as being the best option for the transmission of two languages, it may perhaps be an ideal for many parents which is not completely upheld in reality (Goodz 1994).
2.13 De Houwer (2007) analysed parental and child self-reports of language use in 1,899 bilingual families in Flanders (where at least one parent spoke another language). She found that the relationship between parental use and child use was complex. Nearly seventeen percent of parents used the OPOL strategy compared to $42.35 \%$ of parents who both used two languages. In the remaining $40.91 \%$ of families, one parent used both languages and the other used one (it was not stated whether these families contained two bilingual parents or one). In families with two parents (where at least one of whom used the minority language), $76.15 \%$ of the children could speak the minority language. Although this shows that transmission of the minority language in the home is successful in most cases, ${ }^{6}$ there were stark differences in the children's ability to speak the minority languages depending on the way in which parents used the minority language. Transmission was most successful where both parents used only the minority language at home (96.92\% of families had at least one child who spoke the minority language). This compared to $93.42 \%$ where one parent used both languages and the other parent spoke the minority language, $79.18 \%$ where both parents used both languages, $74.24 \%$ where parents operated a OPOL policy and $35.70 \%$ where one parent spoke Dutch and the minority language and the other parent spoke Dutch only (p. 419). This

[^5]pattern suggests that parental strategies for transmission (whether intentional or not) affect the use of the minority language. In particular, and as De Houwer (2007, p. 420) notes, 'parents in a bilingual setting have often been advised to use a one person-one language condition. [...] As many parents have unfortunately found out, and as the results of this study show, the one person-one language situation appears to be neither a necessary nor a sufficient condition [for the acquisition of both languages].' The findings of De Houwer (2007) do not mean that the OPOL strategy is not beneficial in situations where only one parent speaks the minority language. It does, however, suggest that successful transmission is more likely in contexts where the input a child receives in the minority language is maximised as far as possible. Subsequent work has emphasised the importance of so-called 'input frequency' for both monolingual and bilingual children (De Houwer (2009, p. 119).

Language use in situ: language mode, dynamic bilingualism, and discourse strategies.
2.14 In addition to this, the use of language within the family needs to consider the research which takes a more holistic approach to bilingualism which emphasises that the bilinguals' two languages are not as compartmentalised as might be assumed (Treffers-Daller and Sakel 2012). This reflects the notion of 'language mode’ (Grosjean 1989, 2001) which posits that bilingual speech can be placed on a continuum. Grosjean (2001, p. 2) states that 'in the monolingual speech mode, the bilingual deactivated one language (but never totally) and in the bilingual mode, the bilingual speaker chooses the base language, activates the other language and calls upon it from time to time in the form of code-switches and borrowings.' De Houwer (2009, p. 116) emphasises the role that situation or even preference might have on whether speakers produce monolingual or bilingual speech and defines this as 'language orientation.' García (2013, p. 112) notes that 'bilingual children growing up in bilingual households can change ways of speaking, as well as "accents" on and off, depending on the social context in which they're interacting and the identities they're performing or want to project.'

Sociolinguistic studies have put forward 'dynamic bilingualism' as a framework (see García (2009) and Lewis et al. (2012b) for an overview of similar terms ${ }^{7}$ ) for the study of daily language interactions in bilingual and multilingual contexts. The notion of dynamic bilingualism brings together various processes involved in bilingual speech, such as code-switching, translanguaging and dilingual conversations, and emphasises that bilingual language use is fluid and dependent on situational factors.

Although 'language mixing' is often cited as a stage in the development of bilingual acquisition where children 'confuse' languages (Cantone 2007, p. 13), research on code-switching (e.g. Poplack (1980)) has shown that the mixing of languages is a feature of child and adult bilingual speech influenced by a number of factors. Indeed, work in the context of Welsh has shown that intra-sentential code-switching (inserting English elements in Welsh clauses) is more likely among younger adult speakers and among those who acquire both languages at birth compared to those who acquire one of the languages later (Deuchar et al. 2016). Rather than being a sign of inadequate acquisition, therefore, code-switching is a strategy used to varying degrees by all bilingual speakers when communicating with other bilingual speakers (i.e. when they are in a more 'bilingual mode'). The bilingual child acquires such strategies as part of their sociolinguistic competence in their two languages (e.g. Lanza (2004)).
2.17 Translanguaging refers to the range of discourse practices which may be employed by bilingual speakers and emphasises the dynamic nature in the way bilinguals may use their two languages (Baker 2011, p. 288). This concept was developed in relation to education (and Welsh-English bilingual education in particular, see Lewis et al. (2012a) for an overview), but the way in which bilingual speakers translanguage in different contexts is currently the focus of investigation (García and Wei 2014). Song (2015), for instance, examines translanguaging practices in English-Korean bilingual homes in the U.S. and found that parents and children often used one language to help reinforce meanings in the other.

[^6]Another outcome of bilingual interaction may be 'dilingual' conversations, whereby both interlocutors have an understanding of two languages and use different languages in conversation with each other (De Houwer 2009, p. 361). This is noted in a number of studies of intergenerational language transmission (e.g. Nesteruk (2010); Smith-Christmas (2014); McCabe (2016)) and has often been found to lead to frustration on the part of parents at best and a feeling of emotional distance between parents and children at worst (McCabe 2016, p. 185). This also highlights the way in which parental strategies for language transmission may not be successful and possible differences between positive outcomes towards transmission and the linguistic reality (Nesteruk 2010, p. 283).
2.19 Analyses of parent-child discourse in bilingual contexts have shown that how such 'dynamic bilingual' behaviour develops may depend on the attitudes of the parents towards bilingualism. For instance, parents may respond favourably to mixing, simply move on with the conversation, or actively discourage it by employing a number of discourse strategies (see De Houwer (2009, p. 135) for an overview of such strategies) such as asking the child to repeat themselves in the other language (see Lanza (1997); Nicoladis and Genesee (1998); Lanza (2004)).
2.20 To summarise, while many studies treat bilingual language use as a binary or categorical choice, work in BFLA has shown that day-to-day interactions between parent and child typically involve both languages and, in cases where this is seen negatively by the parent, discourse strategies which aim to correct children's language choice. Similarly, sociolinguistic studies emphasise the holistic nature of the bilingual repertoire and see bilingual language choice as a dynamic process. As stated in 2.4 , our emphasis in this research is on the factors influencing the transmission of Welsh and language use in the family. While acknowledging the fluid nature of bilingual child-caregiver interactions, we concentrate on parental reports of their general language use with their children and the factors which influence this language use. In our analysis of the qualitative data we collected, we do, however, also investigate the way in which both parents' and children's language use might be more fluid.

## Factors influencing intergenerational language transmission

2.21 The previous section highlighted the approaches taken to intergenerational language transmission by parents and the subsequent use of language in the home. The aim of this section is to examine the factors which influence whether the language will be transmitted in the home.

Input factors in the home
2.22 The previous section showed that transmission approaches which favour maximal input in the minority language are most likely to facilitate successful transmission. Intergenerational language transmission appears to be more likely in situations where both parents (in two-parent families) speak the target language (so-called linguistically 'endogamous couples' in heritage contexts) compared to instances where only one of them is bilingual ('exogamous couples', see Varro (1998)). Although the reasons for this may be evident (both parents may have used the language with each other prior to the birth of the child and it may be deemed 'natural'), transmission is affected by a myriad of other factors and family type is certainly not the only factor to influence transmission. In a study of Swiss migrants in Australia, for instance, Schüpbach (2009) found no real correlation between family type and the decision to transmit Swiss German. What is apparent, from this and previous studies, is that attitudes towards bilingualism and the language influence transmission regardless of the language backgrounds of the parents.

It has also been shown that strategies towards transmission and home language(s) may change as the child grows older, particularly in heritage language cases where the child becomes increasingly socialised in the majority language. The age at which a child begins education (Arnberg 1987, p. 89) and also adolescence are particular stages. De Houwer (2009, p. 132) states that 'it is a well-known phenomenon that once young BFLA children start to attend school in one of their languages, the school language [...] "takes over." This may lead to a re-evaluation of how languages are used in the home. In many contexts, this may lead to a shift to the majority language (McCabe 2016), stricter attempts to enforce the minority language (Remennick 2003) or more dilingual discourse strategies (Smith-Christmas 2014). While such strategies seem to work in many contexts, it has also been reported that parents shift to the majority language in adolescence as
they feel that such strategies create emotional distance between them and their children (Nesteruk 2010).

A related barrier to transmission also appears to be language use between siblings. In many contexts, especially where schooling and peer-group interactions take place in the majority language, siblings have been shown to use the majority language with each other. Consequently, transmission has been noted as being easier with the oldest child where this influence is absent (e.g. Smolicz et al. (2001); Nesteruk (2010, p. 280); Velázquez et al. (2015)).

There has been much work on the relationship between gender and language use in the field of sociolinguistics but much of this work has focussed on the differences in the ways men and women speak rather than on their language use (see Labov 2001; Coates 2004; Eckert and McConnell-Ginet 2013 for overviews). Particularly, the role of parent's gender on intergenerational transmission has arguably been understudied (See Lük 1986; Lyon 1991, 1996; Leconte 1997, p. 120; Jones and Morris 2009). In studies of BFLA, heterosexual parents have been shown to have different interactional styles (Lanza 1997) but this does not appear to affect the likelihood of children's language use (De Houwer 2007). With regards to transmission itself, it should be noted that mothers have historically been more likely to be the main caregiver which may mean that it is the role of main caregiver which is important rather than the sex of the parent.

In cases where only one parent is bilingual, transmission of the minority language may be influenced by who is the main caregiver, that is to say, who spends most time interacting with the child. Lük (1986), for instance, found that it was the mother's language which influenced the language which the child used most frequently. In a study of around 400 parents from Anglesey (N. Wales), Lyon (1991) found that $72 \%$ of children used mostly Welsh when it was the mother who spoke Welsh compared to $46 \%$ in families where only the father spoke the language. In a more recent study of 12 mixed-language Welsh families, Jones and Morris (2009) found that children with Welshspeaking mothers had more opportunities for socialisation in Welsh (the mother was also the main caregiver in all but one case). Jones and Morris (2009) also found noteworthy patterns concerning parents' attitudes towards the transmission of Welsh. In the one case where a child was largely
socialised in Welsh despite having a main caregiver (the mother) who did not speak Welsh, both parents had very positive attitudes towards transmission. Similarly, those children who were largely socialised in English had parents who did not value the language or its transmission highly. This illustrates the role of parental ideologies towards transmission and it is to this which we now turn.

## Parental ideologies

It is well known that parental attitudes or ideologies play a key role in intergenerational language transmission and that this is true both for families where both parents speak the language under discussion and for families where only one parent is bilingual. In cases where only one parent is bilingual, it is apparent that transmission is more likely when the monolingual partner has positive attitudes towards bilingualism and supports the use of the language in the home (Varro 1998; Søndergaard and Norrby 2006; Jones and Morris 2009; Mejía 2015; Festman et al. 2017)

To our knowledge, there are no studies which examine the role which having a specific family language policy (compared to no strategy for language use) has on the success of transmission. Despite this, however, experts do emphasise the need for a clear plan for transmission (especially in OPOL contexts) to facilitate transmission and ensure that the child receives maximal input in the minority language (e.g. Arnberg (1987, p. 96); Cunningham and Andersson (2006, p. 18)). Baker (2000, p. 6) suggests, for instance, that 'in families where bilingualism seems more of a challenge than cloudless sunshine, language engineering is important. Careful decisions about family language planning need making.' De Houwer (2009) acknowledges that parents may not make conscious decisions regarding language use with their children but emphasises the need for parents to recognise their role in their child's language development (a so-called 'impact belief'). She states that 'parents with an impact belief will undertake specific steps to foster their children's language development. Even though their decisions here may not be very conscious, they may seek out opportunities for their children to hear more of a particular language' (De Houwer 2009, pp. 95-96). Parental attitudes towards their own ability in the minority language can also be seen as a barrier to transmission. Beykont (2010, p. 103), for instance, found this to be the case among Turkish
migrants in Australia who feared their Turkish was not 'good enough' to use with their children.

Although there have been no comparative studies of the importance of having a strategy towards transmission, it has been shown previously in this section that strategies may be fluid (see 2.6) and may not represent the reality of day-to-day interactions (see 2.14). A further factor influencing the success of transmission is therefore the child's language use in the home and parental perceptions regarding competency. For instance, parents' fears over the efficacy of transmission ${ }^{8}$ may lead to a more conscious attempt to minimise use of the majority language (e.g. Remennick (2003)). Alternatively, fears that transmission of the minority language will affect the acquisition of the majority language may lead to a more mixed use of language in the home (e.g. Ó hlfearnáin (2013)).

In many heritage language contexts, strong feelings towards the heritage ethnicity have been shown to be an important factor influencing transmission. In a study of 858 first- and second-generation Turkish migrants to Australia, Beykont (2010) found that $91 \%$ of respondents felt that the transmission of Turkish was important. Whereas only 3\% cited economic reasons for this, 53\% stated that transmission was important for the maintenance of their Turkish identity. This result has been found in a number of other heritage language situations (Smolicz et al. 2001; Park and Sarkar 2007, p. 228; Nesteruk 2010, p. 278).
2.31 There have been fewer studies which examine the influence of ethnicity in indigenous language contexts. Bankston and Henry (1998, p. 11) question the premise that the relationship between ethnicity and transmission is a straightforward one. In their study of Cajun ethnicity and the transmission of Louisiana French (U.S.), they found that French speakers who claimed a Cajun ethnicity were less likely to transmit French. They note that there is a 'profound ambivalence regarding language and ethnicity of those who identify most strongly with the ethnic group' (Bankston and Henry 1998, p. 21) and attribute this to the historic stigma attached to their variety of French.

[^7]Smolicz (1981) outlines a theoretical framework for the relationship between language and minority languages which is based on the notion of Core Values. He notes that '[core values] form the heartland of a group's culture and act as identifying values that are symbolic of the group and its membership' (Smolicz 1992, p. 279). These core values are likely to differ between groups and individuals (Smolicz 1981). Groups or even families in which language is seen as a core value of cultural identity are more likely to maintain that language via transmission (Remennick 2003, p. 437).

It is also clear that part of parents' ideologies towards transmission may be the perceived cognitive and academic (McCabe 2016, p. 180) or indeed economic benefits of bilingualism (Mejía 2015, p. 33). These perceptions have been found to exist in studies of parents who send their children to Welsh-medium schools (Hodges 2012) though it remains to be seen whether this is a factor influencing transmission.

The role of extended family, and social networks and community on language transmission

Extended exposure to the minority language through regular interaction with people other than parents has also been shown to influence transmission. In the case of heritage language speakers, trips to the homeland and regular communication over the internet with the extended family are highlighted as factors which aid transmission. This effect seems to be strengthened (though this has not been examined quantitatively) when the extended family (usually grandparents) live with the family or nearby as they provide support for the use of the minority language (Nesteruk 2010).

Languages are also more likely to be used in the home when parents and children have regular access to other people who speak the language (Nesteruk 2010, p. 273). In other words, when the family is part of a wider speech community to which it has regular access. (Meyerhoff 2011, p. 315) states that 'subjective criteria would group speakers as a speech community if they shared a sense of and belief in co-membership.' This membership may be based on geographical boundaries or on a common linguistic (and/or ethnic) identity (Cohen 1985).

A related concept is that of the 'Community of Practice' (CoP, see Eckert and McConnell-Ginet (1992)). A CoP approach examines how individuals within a speech community form a CoP based on shared values and how
social practices emerge from this. A slightly separate, though related concept, is that of the social network. While being members of a wider speech community, individuals have social networks which may comprise members from other speech communities. It is well known that speakers with denser social networks, i.e. close-knit ties with those from the same speech community, will be more likely to use the language than those with loose social networks, i.e. those with looser connections (Milroy and Milroy 1985). Members of parents' social networks may actively encourage or discourage transmission (e.g. Søndergaard and Norrby (2006). See also the family and friend 'constellations' to which Gathercole et al. (2007) refer).
2.37 Studies of intergenerational language transmission refer predominantly to the importance of ties to the wider ethnolinguistic speech community through social networks (Velázquez (2013); Velázquez et al. (2015)). More work is arguably needed to ascertain how speakers 'imagine' (Anderson 1991) their speech community, the extent to which social networks differ between families and the influence of this on transmission, and on CoPs within these communities. Although the current research does not provide an ethnographic account taking a CoP approach, we consider the extent to which parents feel part of a wider community of Welsh speakers and the extent to which their social networks comprise speakers of this community.

## Socio-economic background

2.38 The socio-economic background of parents may influence (non-) transmission of a language. In a study of Russian-speaking migrants in Israel, Remennick (2003, p. 450) notes that 'educated migrant parents perceive Russian as an important vehicle for transmission of their core cultural values' (see also Nesteruk (2010)). Other studies have, however, found this to be the case for parents from lower socio-economic groups (see 2.30) and that the extent to which this is a factor appears to depend on the sociocultural context of transmission. In their study of Louisiana French, for instance, Bankston and Henry (1998) found that the higher the education level of the head of household, the less likely that French would be transmitted. Household income was not found to be a significant predictor on transmission. It should also be noted that most studies do not investigate socio-economic background as a factor on transmission and tend to focus on migrants from similar backgrounds.

## Intergenerational Language Transmission of the Welsh Language

2.39 This section reviews literature on research and interventions in the field of intergenerational transmission of the Welsh language in Wales.
2.40 The earliest academic research which analyses intergenerational language transmission of the context of the Welsh language was conducted by Harrison et al. (1981); its main research question was 'why do some bilingual mothers in Wales rear monolingual children?' (Harrison et al. 1981, p. 1).
2.41 The study's research subjects were 311 'bilingual mothers with at least one child aged from exactly two up to seven years', who lived in areas 'that are traditionally, and still, are strong ground for Welsh' (Harrison et al. 1981, p. 1). The areas targeted had a Welsh-speaking population of at least $60 \%$ according to the 1971 Census. ${ }^{9}$
2.42 Respondents were asked about the language medium of their child's education (and about their husband's [the authors take for granted that parents in couple households were married] wishes for the child's education to ascertain whether both partners agreed on this). Questions were also asked regarding in which organisations the respondent felt knowledge of both English and Welsh would be an advantage, and whether the Welsh language was 'losing ground' and whether this was a good, bad or neutral thing. The questionnaire data were supplemented by field workers' written observations of language use in the home.
2.43 The report's main conclusion is that bilingual mothers 'do not intentionally damage the Welsh language by rearing monolingual English children. Indeed, the fact that their children do not speak Welsh is a source of concern and possible regret to them' (Harrison et al. 1981, p. 61). Rather than a conscious anti-Welsh language decision, the report found 'that bilingual mothers rear monolingual English children because the encouragement, even pressures, for that language generally are stronger and more widespread than the corresponding support and facilities fostering bilingualism in Wales' (Harrison et al. 1981, p. 61). Hindley (1991) draws similar conclusions regarding lack of intergenerational transmission of the Irish language.

[^8]2.44 The researchers note that there were striking attitudinal similarities towards the Welsh language shared both by those bilingual mothers that had, and had not transmitted Welsh to their children. The vast majority of both groups are 'collectively and solidly against Welsh declining' (Harrison et al. 1981, p. 61) and one fifth of those mothers surveyed who had reared their children to be monolingual English speakers believed that it 'would have been better had their children been bilingual.'

Sixty per cent of the overall sample thought 'that family life was better for having Welsh-speaking children, and 80 per cent of all mothers wanted their children to have education in secondary schools teaching 'in both English and Welsh' (Harrison et al. 1981, p. 61). The researchers note a valuesaction gap, a 'gulf between the generalised goodwill and the particular failures to transmit the Welsh language' (Harrison et al. 1981, p. 61). The current research project analyses attitudes towards the intergenerational transmission of Welsh in Chapter 5 (Applying Behavioural Approaches to Language Transmission).
2.46 Harrison et al. (1981) conclude that there is a class-based separation of society in terms of those mothers who do, and those who do not transmit Welsh to their children and that this social class difference manifests itself in mothers' aspirations for their children. Members of social class three (skilled manual and non-manual occupations) 'strikingly [do] not rear bilingual children' (Harrison et al. 1981, p. 62). The researchers appropriate this finding to the aspirations of mothers for the future employment of their children, those mothers not viewing their children as entering careers 'in which a knowledge of Welsh is recognised as helpful' (Harrison et al. 1981, p. 62). Our own analysis (see, in particular, Table 17 to Table 21), also provides data on transmission by social class gleaned from the decennial Census).
2.47 Harrison et al. (1981) revealed 'family tensions in some linguistically mixed marriages', and showed that where a father was antipathetic to the Welsh language, none in the sample had bilingual children. The researchers note that fathers' influence on intergenerational language transmission is overwhelming.' From this it is concluded that the provision of informational materials would be of use in ensuring that the type of mother that would otherwise have reared monolingual children would transmit Welsh.

At the time of conducting the research (1981), the researchers note with frustration that there was precious little accessible information available to mothers regarding the benefits of intergenerational transmission of Welsh. Indeed, the two last points the researchers make in the main body of their report is that '(a) bilingual mothers need to have sources of good information on bilingual children (b) that if they knew that bilingualism had a clear place in Wales and concrete support from society more bilingual mothers in Wales would rear bilingual children' (Harrison et al. 1981, p. 64). In the quarter century that has passed since Harrison et al. (1981), this information has become available, and legislative developments have given concrete support to status bilingualism for Welsh (see 1.9).
2.49 Mothers' [lack of] self-confidence in their own Welsh language skills was also a salient factor in their language transmission behaviour. Harrison et al. (1981, p. 63) believe that:
this suggests a need for material to strengthen what is already there.
Formal courses may have some scope here but such courses are, to a degree, separate from everyday life. [...] the use of Welsh for such mundane activities as shopping and in local government communications [should be encouraged]. This practice would not only extend mastery of Welsh, it would demonstrate how the language was part of the modern society in which their children were growing up.
2.50 The research found that for the parents surveyed, Welsh had become separated from the world of work which 'can hardly foster the language amongst people who seek successful careers. There is scope for a new association.' It concludes that 'while mothers can be the first means of bilingualism for their children, many bilingual mothers see schools as having that function' (Harrison et al. 1981, p. 64). This is an early mention of what we term intergenerational language donation, to which we return later in this report.
2.51 The results of Harrison et al. (1981) were also borne out in those of Lyon (1996) who carried out research into language use in family settings in Anglesey. Lyon concluded that 'a mother's language is the most powerful predictor of her child's language development.' Bellin and Thomas (1996) note that 'where both partners [surveyed by Lyon] spoke Welsh, there was considerable use of Welsh within the family [...] when the linguistic status of
the partners differed, there was a predominant influence of the male partner on the language of the household and especially on the language spoken to children. When the father was English-speaking, and the mother Welshspeaking, the mother was much less likely to speak Welsh with the children than in a household where both partners were Welsh-speaking.' Bellin concludes 'From Jean Lyon's survey it is clear that even in the historical Welsh heartlands, the only way of acquiring Welsh is side-by-side with English, with a strong risk of becoming an English monolingual in spite of family wishes. A special commitment is needed for language transmission and maintenance. Unless individuals and families follow a 'policy' of sustained usage, fluency cannot be maintained in adults and the language is not acquired by children.'

Bellin (1994, p. 60) carried out a small-scale (45 respondent) social network analysis by interview in Dyfed ${ }^{10}$ of caregivers of families of three-to-four-year-old children 'where the patterns of Welsh language usage was [sic] unlikely to lead to family based transmission of Welsh.' The result of his work replicated the studies of others in finding that two Welsh-speaking parents speaking mainly Welsh [to each other] almost always transmitted Welsh to their children. Where the father in a two-parent household spoke English and not Welsh, but the mother did speak Welsh, the father's language had a major influence on the language(s) the child was able to speak (Bellin 1994, p. 62). Bellin notes that in this situation 'the language was transmitted more efficiently by her [the mother] when [...] the partner had a positive attitude towards the language’ (Bellin 1994, p. 62).
2.53 In the sample, English was used with children (by over half the sample) due to confidence problems, and worries about being able to help with homework. Bellin notes that his small scale research results show a 'very striking absence' i.e. contrast to what he found in his earlier collaboration with Harrison et al, in that social mobility was not mentioned as a reason for not transmitting Welsh to children (Bellin et al. 1997, p. 12).
2.54 Since the research hitherto surveyed, further investigation has been carried out into the field of intergenerational transmission of Welsh (Bellin 1994; Bellin and Thomas 1996; Bellin et al. 1997; Kay and Hancock 2001; Jones

[^9]and Morris 2002; Edwards and Newcombe 2003, 2005; Jones and Morris 2005b, a; Gathercole et al. 2007; Jones and Morris 2007b, a; Irvine et al. 2008; Jones and Morris 2009; Roberts et al. 2010; Tranter et al. 2011; Morris 2012). Much of the work carried out has been in the form of evaluation of interventionist approaches to ensure that parents who can speak Welsh do speak Welsh with their children. This receives specific attention later in the current report. These interventions can be seen as emanating directly from the spirit of the findings of the early research (Harrison et al. 1981; Bellin 1994; Bellin and Thomas 1996; Bellin et al. 1997), i.e. the need to disabuse Welsh-speaking [prospective] parents of negative connotations of intergenerational transmission of Welsh (e.g. that their child's cognitive development will be impaired), and indeed that children will benefit from speaking more than one language (cognitively and instrumentally via more career options later in life). Professor Colin Baker has also been most active in this field (particularly in the many editions of his Parents' and Teachers' Guide to Bilingualism (Baker 2000)).
2.55 This recognition of the limitations of the education system for language revitalisation provides a suitable justification to discuss 'intergenerational language donation', where by education may be seen by some Welshspeaking caregivers as the sole vehicle for their children to become bilingual (rather than active transmission being secured at home).

## Intergenerational Language 'Donation'

2.56 Lyon (1996) reported that the clear majority of all parents she surveyed in her research on Anglesey (85\%) wished their children to be fluent in Welsh (see also 2.25). She also observed that certain parents regarded the education system as a substitute method of ensuring that their children learn the Welsh language.
2.57 Evas (1999, pp. 261-265) conducted a survey of 100 sixth-form pupils in Welsh-medium schools in south east Wales (aged 16-18). He found that $80 \%+$ of those pupils intended to send their own future children to Welshmedium education, but that $58 \%$ declared an intention to speak Welsh to their future children. Given the discrepancy between these two figures, and research demonstrating a low use of the Welsh language by Welsh-medium schoolchildren outside the school setting, he presented the concept of 'intergenerational language donation.' Such donation would take place when
a Welsh speaker ensures their children gain Welsh language skills, via the education system, but not by making Welsh the language of the home, or possibly not using it with the child at all. He also cast doubt on whether the $58 \%$ who stated they would speak Welsh to their children would do so, given that other research has shown limited opportunity to use the language outside, and after leaving school. These are themes to which we return in the analysis of our own research data.

## Welsh Language 'Socialization' Project

2.59 The research found that 'one-to-one interaction with parents [...] is crucial in the early language socialization of babies and young children up to two years of age' (Jones and Morris 2005a, p. 5). It also notes that 'most of the

Welsh-speaking parents frequently use English with the child when the non-Welsh-speaking partner is present. It is, therefore, the amount of time the child spends alone with the Welsh-speaking parent that is a significant factor in the early language socialization of the child' (Jones and Morris 2005a, p. 5). The authors also published this report as learned journal articles (Jones and Morris 2007a, b; Morris 2012).

The research of Jones and Morris (2005a, p. 14) identifies 'language values, issues of politeness and inclusion of non-Welsh-speakers, and power relations between the mother and father' as issues of salience in intergenerational language transmission in Wales.
2.61 One of the most salient observations that Jones and Morris (2005a, p. 14) make is that, 'family and individual language practices are established early and are very hard to change even when the individuals involved develop a greater understanding and fluency in the language.' They also find (Jones and Morris 2007a, p. 496) that 'mainly one partner [took] the languagerelated decisions. Within those families who appeared to be successfully socialising their child in Welsh, the Welsh-speaking partner was the 'language decision-maker' [in the majority of families] (as observed also by (Bellin 1994; Bellin et al. 1997). The language decision-maker was non-Welsh-speaking, in those cases where the researchers believed that the children would not become bilingual. They also found that '[...] mothers more often than fathers were the language decision makers in the family although it is also clear from [the] data that parental language values shape the dynamics of parental roles and responsibilities within the household' (Jones and Morris 2007a, p. 496).
2.62 Despite this, they note that it was 'possible for Welsh-speaking fathers to establish Welsh as the primary of equal language of the home. This appeared to require commitment from the father to use the language with his child(ren) at all opportunities, including in the presence of non-Welshspeakers.'

Language Transmission in Bilingual Families in Wales: Gathercole, Thomas, Deuchar, Williams

Gathercole et al. (2007) interviewed 302 parents from families in predominantly Welsh-speaking or bilingual communities. They examined the extent to which several factors were correlated with (1) the language(s)

Welsh-speaking parents will use to communicate with their child and (2) the language(s) a child will use to communicate with its parents. They found that parents' own linguistic background and their perceived ability was highly correlated with the language spoken between parents and children (Gathercole et al. 2007, p. 97). Parents from Welsh-speaking backgrounds were more likely to use Welsh with their children (with those who had a Welsh-speaking partner being most likely to do so) as were those who judged their abilities in Welsh to be high (which in turn was significantly correlated with use of Welsh with friends and close social networks).

Based on their quantitative analysis, Gathercole et al. (2007, p. 89) note that parents tended not to make a deliberate choice about language use with the child or discuss language use with their partners, but rather did what felt 'natural' to them. However, they also report that a choice was often made prior to the birth of the child which would suggest that at least some parents do consider their language practices. The extent to which language choice, especially among families where one parent does not speak Welsh, or where parents were not brought up with Welsh-speaking parents (who are therefore less likely to transmit Welsh), is a conscious decision clearly merits further analysis. The present research examines this further through qualitative analysis, which will shed light on how speakers define 'natural choice' and any conscious decisions which are taken prior to and following birth.

The social psychological literature on habits such as the work of Verplanken and Wood (2006) may elucidate this possible decision-making process. This research highlights that having a child can be a significant moment of change in which many habits become disrupted and new patterns of behaviour emerge (Thompson et al. (2011). From this perspective, one might expect new parents to reflect—perhaps for the first time—on their own language and its transmission, whereas daily language use would otherwise be strongly habitual (i.e. unconscious and non-deliberative).

Demographics, Attitudes and Personal Values
The influence of community demographics on transmission and language practices has arguably also been under-examined. The respondents in Gathercole et al. (2007) came from areas where between 40\% and 75\%+ of the population spoke Welsh. They found a weak correlation between percentage of Welsh speakers in the community and the language(s) that
both a child and her parents speak (Gathercole et al. 2007, p. 84). This correlation was, however, confounded with other variables such as the distribution of family categories (areas with a greater number of Welsh speakers contain more homes where all or one of the parents can speak Welsh; (Gathercole et al. 2007, p. 85)). The proportion of speakers of a given language in a community is considered to play an important role in the 'ethnolinguistic vitality' (Giles 1977) of that language and, in the context of Welsh, the percentage of Welsh speakers in an area has been shown to affect both daily use of the language and language practices (Jones and Morris 2007a, b; Jones 2008; Jones 2012; Beaufort Research et al. 2013). In their more qualitative study of transmission reviewed above, Jones and Morris (2007a, p. 498) claim that the availability of social networks and interactions in Welsh, is an important factor in sustaining Welsh in the family. The daily use of Welsh is inherently linked to region in the context of WelshEnglish bilingualism (Jones 2008) and interactions are more frequent in the areas where the proportion of Welsh speakers is highest. This link should be remembered throughout the current research and is discussed further in relation to the analysis of the Census data (see 3.30) and the results (see 5.47).

With regards to language transmission, quantitative analysis of the 2011 Census data shows that transmission rates also vary geographically and are highest in the county of Gwynedd (Jones 2013b). Taking this into consideration, a more thorough investigation of specific communities is needed. Factors influencing the transmission of Welsh in predominantly English-speaking areas, where the use of Welsh may be restricted to narrower social networks, have not been investigated (see also Chapter 5, Applying Behavioural Approaches to Language Transmission).

Previous studies have examined correlations between attitudes towards Welsh and English and both transmission and use (Gathercole et al. 2007; Morris 2014) and found that, similarly to wide-spread attitudinal studies, attitudes towards Welsh seem to be positive. Therefore, there appears to be little correlation between attitudes towards language and transmission. This research will examine attitudes further using techniques developed in the behavioural sciences.

Similarly, values that emphasise tradition and cultural heritage may be relevant. Schwartz (1992) Value theory identifies several clusters of values (i.e. principles or standards of behaviour) that exist across cultures, with cultures differing in the emphasis they place on different value clusters. Some cultures-and individuals within them—place more emphasis on respect for tradition (see also Smolicz (1981)). We explore values as part of our primary data analysis.

## Research into Interventions in Intergenerational Language

## Transmission in Wales

2.71 Having studied the results of Harrison et al. (1981), and received stakeholder feedback that intergenerational linguistic transmission was problematic in certain areas, during 1996-97, the Welsh Language Board (WLB) established 'a pilot project in cooperation with Mudiad Ysgolion Meithrin [...] to encourage parents to consider a Welsh-medium playgroup for their children' (Jones and Morris 2002, p. 3). In 1999, a series of field-workers began to be employed under a project which would later be branded as Twf (Growth). ${ }^{12}$
2.72 Irvine et al. (2008, pp. 8-9) note that 'The Twf scheme was established to increase the numbers of bilingual families who transmit the Welsh language to their children [...] [Its] current [2007] objectives are:

Objective 1: To collaborate with midwives and health visitors so that they convey the Twf message to the target population

[^10]Objective 2: to raise awareness among parents, prospective parents and the public in general of the value of introducing Welsh in the home, the value of bilingualism and the benefits of a Welsh education. Twf's main target in this respect are prospective parents and parents with babies under 6 months old. [...]'
2.73 The first evaluation of Twf was carried out by Kay and Hancock (2001), after three years' operation of the pilot Twf project (this pilot was operated only in Carmarthenshire). It provides a basic evaluation of the informational approach adopted by Twf in its pilot phase. The project sample was 198 mothers (or ' $20 \%$ of the live births in Carmarthenshire in the 6 months prior to field work being held' (Kay and Hancock 2001, p. 5). This sample was reduced to 137 to analyse only the responses of mothers of babies whose birthdates were after January 2000 'since the [Twf] materials encouraging bilingual upbringing had only been initiated in January 2000' (Kay and Hancock 2001, p. 6). Significantly, only $27 \%$ of these mothers had Welsh as a first language (Kay and Hancock 2001, p. 10).
2.74 The trial Twf project in Carmarthenshire used an informational approach. This was mainly undertaken using 'leaflets, setting out the advantages of early bilingualism [which were] made available by midwives or health visitors to expectant mothers. A Bounty Pack ${ }^{13}$ was provided for mothers in hospital and further contact was made by health visitors after the birth of a child' (Kay and Hancock 2001, p. 5). This report appears to be more of a process audit than an impact assessment of the Twf scheme, measuring how many leaflets had reached the mothers and how many had read them (20\% in the case of the Twf leaflet ‘Two Languages: Twice the Choice), $23.5 \%$ in the case of the Bounty Pack information (Kay and Hancock 2001, p. 6).
2.75 Eaves $(2007,2015)$ notes the importance of critical language awareness, i.e. the need to discuss, disabuse, and debate one's own preconceptions with others. He draws the conclusion that face-to-face engagement is far more fruitful in increasing language awareness (and consequently of positive behaviour towards/in a language) than mere impersonal, informational approaches (e.g. leaflets on bilingualism sent in a Bounty Pack)

[^11]The positive effects of face-to-face discussion between human beings also appear in Kay and Hancock (2001, p. 8). Almost thirty per cent and 24\% of the sample note that discussion of the benefits of bilingualism with midwives and health visitors had 'some effect' or 'significant effect.' The authors note that 'of course, the normal scenario would be for the literature to be given out and for some discussion to follow but it is worth noting that, even in the absence of discussion, the literature is able to speak for itself.'
2.77 The report appears to be based on a rational choice model and does not appear to explicitly consider exogamy/confidence of Welsh speakers in their own linguistic ability, and the influence of the extended family (unlike the research of Gathercole et al. (2007) which showed the influence of ‘constellations’ and networks on (non-)transmission of Welsh.
2.78 Indeed, the work of Kay and Hancock (2001) would appear not to deal with encouragement of intergenerational transmission of Welsh (i.e. use of Welsh between Welsh-speaking parents and Welsh-speaking children), but rather with intergenerational language donation (i.e. marketing/informational messages for non-Welsh-speaking parents).
2.79 The influence of Welsh-medium schooling is a further compounding factor here as our data collection shows evidence of intergenerational language donation, whereby certain respondents who could speak Welsh to their children but do not do so, despite displaying a strong wish for their child to be able to speak Welsh (and therefore choosing to send them to a Welshmedium educational establishment).

A distinction between intergenerational transmission and donation merits attention, and may be salient for the aims of new interventions and Government initiatives. We return to this theme in Chapter 7 (Discussion, Conclusions). In the case of both donation and transmission, the children of a given parent will be able to speak Welsh. In the case of donation, the parent will give responsibility to another agent (such as the education system) for the creation of the child's language ability and not use Welsh with the child.
2.81 We emphasise the need to make consistent and judicious use of terminology in the sphere of family language policy. Kay and Hancock (2001) use the catch-all term 'bring up' children throughout their report regardless of the language used between parents and children. Their failure to emphasise
transmission and/or donation behaviours reduces the authors' ability to make sufficiently nuanced recommendations for interventions which could target possible donators and/or transmitters of Welsh.
2.82 Kay and Hancock (2001, p. 10) recommend that literature regarding the benefits of bilingualism be made available 'even if health professionals are unwilling to make conversations with mothers about bilingualism as part of their professional duty. Turning their attention to the training of health professionals, they note: 'it would be perfectly reasonable for health professionals of this kind to include within their training an appreciation of the way that discussion [regarding bilingualism] with mothers might take place.
[...] There ought to be no problem in asking health professionals to speak about the benefits of bilingualism within the context of the advice they give to mothers about the physical care and nurture of babies' (Kay and Hancock 2001, pp. 10-11). Mainstreaming of language planning intervention into the health sector is beyond the scope of our research, and is a theme taken up by Roberts et al. (2010).

We now turn to the first in a series of reports regarding the Twf project itself. Jones and Morris (2002, p. 5) note that Twf worked in partnership with midwives and health visitors, Mentrau laith, Mudiad Ysgolion Meithrin, Sure Start, and Wales Pre-school Playgroups Association and that in 2002, its strategic aims had evolved to the following:
[To bringing [sic] the project's message into the mainstream of the work of midwives and health visitors'

To raise awareness among parents and the public about the benefits of raising children bilingually; and

To change habits of language use of the target group (i.e. those parents where a certain amount of Welsh is already spoken at home with their children.

The authors make it clear that their report does not aim to monitor the success of the third strategic aim and that their report is more of a management audit. As a result its analysis understandably concentrates more on output and activity, and does not attempt to monitor the attainment of outcomes. Jones and Morris (2002, p. 5) do however note that Twf 'needs to run for at least 10 years, using the statistics from the 2001 and 2011

Censuses as a context to measure its effect.' Their opinion tallies with much of the literature around outcomes or results-based planning. The risk of such an audit-style approach is of course that the project be evaluated on whether it is 'doing things right, rather than doing the right things' (Bennis 1989), the right thing in this case being that it ensure intergenerational transmission of Welsh in the home.
2.85 The difficulty of establishing a causal link between a given intervention such as Twf, and its outcomes (such outcomes being defined generally in the literature as a desired change in a target population) should not be underestimated.
2.86 Jones and Morris (2002) review management materials, corporate governance documents and Twf materials destined for public consumption, SWOT analyses by relevant staff, observe management meetings and conduct informal interviews with field workers, managerial staff and staff at the Welsh Language Board. No fieldworkers were observed whilst at work (Jones and Morris 2002, pp. 10-11). The authors therefore relied on fieldworkers' subjective opinions and observations. One of the concerns expressed by those field workers is that midwives, due to pressure of time, or disagreeing with the mainstreaming of linguistic concerns into their remit, were not necessarily efficient in ensuring Twf's message penetrated the family unit.

Jones and Morris (2002) present the results of 215 post Twf session questionnaires completed by parental groups and supplied and collected by Twf fieldworkers. The results of these questionnaires are positive and note the respondents' belief that the session has:
'succeeded in offering a great deal of information that will be helpful (72\% agree/strongly agree)
helped me to think about the advantages of raising my child bilingually (83\% agree/strongly agree)

After the session I'm more likely to consider raising my child bilingually (66\% agree/strongly agree).

It should be noted, however, that $83 \%$ had already decided to bring their child up bilingually. The authors note that the questionnaire used needed further refining to avoid confusion around this issue (p. 23-24). Of the 17\%
who had not already decided to bring their child up bilingually, $70 \%$ were non-Welsh-speaking and partnered with a non-Welsh-speaker. The authors note the limitations of the sample size and the risk of generalising but note a trend in parents in north west Wales to have already decided to raise their children bilingually.

The report's recommendations reflect the managerial nature of the research brief itself, and concentrate on the creation of a suitable computerised system for tracking contacts, refining of questionnaires, assistance for health professionals to raise confidence in transmitting linguistic messages, the need for an evaluation of all materials produced by the project, and the need to adopt a wider strategic and partnership approach, including collaboration with the Mentrau laith.
2.90 The next evaluation of the Twf project (Edwards and Newcombe 2003) adopts a more sophisticated analysis of the impact of Twf (i.e. a qualitative, interview-based methodology). Its findings (also published in Edwards and Newcombe (2005)) are positive about the virtues of Twf's two-pronged approach to family language planning (structural support from governmental organisations responsible for training of health staff, and at the micro level with individuals working in the health sector). The authors found substantial support for the scheme from the health professions and pre-school organisations, and whilst acknowledging that language is 'not a neutral issue (p. 31), applauds it for moving beyond a 'traditionally middle-class 'clientele' [targeting] low income families, and developing a range of promotional activities and materials which are better suited to the needs and interests of all parents with young children. [...] Twf has been careful to respond sensitively to concerns about overzealous promotion of the language and focuses instead on allowing parents to make an informed choice.'
2.91 Whilst Edwards and Newcombe (2003, p. 2) aim to evaluate 'the impact, efficiency and effectiveness of the Twf project against its three strategic aims', they note that despite having been submitted much positive anecdotal evidence regarding the success of Twf in changing language behaviour, disaggregation of the outcome pathway of Twf is difficult (see also 2.84). They reflect attempts to assess the impact of interventionist projects in many domains noting that 'it is not feasible to measure directly the extent to which the project is achieving the third strategic aim: changing the language
patterns of the target group, namely mixed language families ${ }^{14}[\ldots]$ a wide range of factors influence decisions about language choice and it is not possible to isolate the influence of Twf.'
2.92 As already noted, Twf's first two strategic aims can be measured by a reasonably simple management audit or performance review process. However, the most salient outcome of all-securing intergenerational transmission of Welsh is more difficult to measure. They note that 'Aspects of the project that can be easily measured tell us little about the effectiveness of Twf' (Edwards and Newcombe 2003, p. 5). They echo the opinion of Jones and Morris (2002) and assert that alternative, ongoing longterm tactics should be used to assess the exact impact of Twf on intergenerational language transmission, as an integral part of the project itself.
2.93 The work of Edwards and Newcombe (2003, p. 6), despite its self-admitted shortcomings in term of impact disaggregation does note 'a number of tangible outcomes' including successful organisational partnership relationships, widening the target audience beyond traditional organisations, accessing local clinics and ensuring that 'most midwives and health visitors take seriously their responsibility for discussing language choice with mothers.'
2.94 Irvine et al. (2008) is by far the most substantial piece of evaluation carried out on the Twf scheme. Carried out between 2005 and 2008, it used four avenues of data collection (face-to-face interviews with new and expectant parents, focus groups with health visitors and midwives, and an ethnographic analysis of Twf activities (Irvine et al. 2008, p. 3).
2.95 The aims of the research were to 'investigate the impact of the Twf scheme on decisions regarding language transmission in the family and offer ways of improving its effect.' The study aimed:

To track participants from Ceredigion, Carmarthenshire, Pembrokeshire and Denbighshire before, during and after the period they experience the

Twf message, to assess and trace the impact of the Twf scheme on decisions about language choice and language use in the family.

To assess the impact of the Twf scheme on participants who have experience different levels and intensity of the message about bilingualism passed on by the Twf scheme.

To observe patterns of language use within the family.
To undertake a detailed activity analysis of the Twf scheme across the counties of Carmarthenshire, Ceredigion and Pembrokeshire during April to December 2005 (Irvine et al. 2008, p. 10).

The research found that the factors influencing parents' transmission of Welsh to their children included 'high levels of parental Welsh language fluency and confidence in using Welsh, together with positive attitudes towards bilingualism [...] and a strong sense of Welsh identity has a similar affirmative influence (Irvine et al. 2008, p. 3).

The work of Irvine et al. (2008, p. 4) found that family, friends and childcare provision has a bearing on language use patterns with children (both positive and negative). It also notes that the level of Welsh in each area, and the status of Welsh in that area are 'critical indicators of language transmission in the home.'

Irvine et al. (2008, p. 5) find that health professionals were generally apathetic in terms of transmitting Twf's message, although some were committed to supplying the written resources to parents. They recommend a wide scale partnership approach between Twf, the former Welsh Language Board, and micro-level agencies such as Mentrau laith, Mudiad Ysgolion Meithrin to increase Twf's community reach, noting the reason for this as 'This would ensure that Welsh Language Transmission in the home is not solely the responsibility of individual parents but is also facilitated at the structural level.' Their findings chime with those of work summarised above, in that the authors note that 'It is difficult to measure the direct impact of a project such as Twf, and isolate it's [sic] effect from other social factors that effect [sic] language choices and the behaviour of individuals' (Irvine et al. 2008, p. 20).

Most significantly, and despite the caveat noted in the previous paragraph, Irvine et al. (2008, p. 4) conclude that 'at present, Twf can have a significant impact on parents' language related decision making. However, where plans for language transmission are already established, this generally reinforced the decision to transmit Welsh.'

On the basis of the research they carried out, Irvine et al. (2008, p. 6) supply a series of 15 recommendations. Seven of these relate to clarification of role, training or creating guidance for health professionals in terms of intergenerational transmission of Welsh. The remainder include increasing the rigour of Twf's evaluation systems, partnership working and increasing face-to-face contact with parents to increase their confidence in transmitting Welsh, and their knowledge of the benefits of so doing.
2.101 Roberts et al. (2010) were commissioned by the former Welsh Language Board to produce a further report to implement four of the recommendations of Irvine et al. (2008) regarding 'Assimilating the Twf Message into the work of Midwives and Health Visitors.' They carried out a survey of 24 midwives/health visitors between November 2009 and February 2010 regarding 'perceptions of Twf, practitioner engagement, barriers and facilitators to Twf message dissemination, pre-registration education, continuing professional development training' (Roberts et al. 2010, p. 13). As their report is chiefly concerned with the tighter integration of the Twf message into health professionals' daily routines, and not directly with parental decision-making processes regarding intergenerational transmission of Welsh, no detailed analysis of it is included in this current report.

## Conclusion

2.102 This chapter has outlined the theoretical framework for the current research. We note that Intergenerational language transmission refers to the use of a language or languages by parents with their children. We note that Intergenerational language donation is where a parent who could possibly use Welsh with their child, does not do so, but ensures the child becomes a Welsh speaker, via the education system. The locus for transmission is therefore the home rather than community learning. Approaches to the study of bilingual child language development often consider the influence of the input a child has received from parents on their language development. The
focus of the current study is the factors influencing transmission and use in the family and we use a sociolinguistic framework for this task. Although many sociolinguistic studies examine transmission as part of wider investigations of language revitalisation, maintenance, policy and shift, more recent studies have taken a micro approach to transmission and focussed solely on language use in the home. This is the approach taken in this research, though we particularly concentrate our analysis on the parental dynamics relating to language transmission and donation and the factors which affect these.

We have also shown that differing strategies are taken to transmission such as both parents speaking the minority language or using an OPOL approach (usually in situations where one parent is not bilingual). While such strategies (whether they are conscious decisions or not) may be how parents conceptualise their language use with their children, analyses have shown that the reality of parent-child interactions is much more fluid. An analysis of parent-child interactions is beyond the scope of the current research, though we do investigate the fluid nature of bilingualism (i.e. how strategies work in practice) in data provided by our face-to-face interviews in Chapter 6, (Qualitative Data Analysis).

A variety of factors influence intergenerational transmission. Firstly, the input the child receives in the home (and factors influencing it such as the language of the main caregiver) and how she responds to this input may cause changes in the strategies parents use. Secondly, positive attitudes of parents towards bilingualism and the language, as well as their attitudes towards their ability to transmit the language, appear to be all-important. Finally, the role of the parents' social networks and the wider speech community influences language transmission both by providing opportunities for language use and socialisation and by influencing parents' attitudes towards the language (Gathercole et al. 2007). These are factors which will be considered in the current research.
2.105 Applying the findings of the literature reviewed to the case of the intergenerational transmission of the Welsh language in Wales suggest that the following themes may be salient for our original research analysed below:

- Parents' confidence in their own ability in Welsh
- The perception (and reality) of how 'Welsh-speaking' a given community is
- Normative beliefs about the utility of the Welsh language and perceived benefits or disadvantages of bilingualism
- Parental belief in utility of the Welsh language
- Linguistic exogamy in two-parent families (as a structural factor and in terms of the non-Welsh-speaking parent's attitude toward transmission)
- The amount of time a child spends alone with the Welsh-speaking parent
- The influence of wider family and friends
- Extra-familial structural social support for Welsh language exposure
- $\quad$ Parents from certain social classes may display different transmission behaviour from others
- Availability of Welsh-medium childcare and education
- Intergenerational language donation of Welsh—certain parents may see the school, rather than the family as the main socialisation agent of the Welsh language for their children.


## 3. Statistical Analysis of National Census Data

3.1 The review of previous work on intergenerational language transmission, both internationally and in the Welsh context, has revealed several distinct factors which appear to influence the (non-)transmission of the minority language. Of these factors, the linguistic composition of the household (whether both parents can speak Welsh in two-parent families), the sex of the parent who can speak Welsh in linguistically exogamous relationships, the extent to which Welsh is spoken in the local area, ${ }^{15}$ and socio-economic classification of the parents can also be investigated by examining national Census results. This chapter therefore presents a statistical analysis of data from the 2011 Census of England and Wales ${ }^{16}$ which are relevant to the transmission of Welsh in the home. In doing so, the chapter aims to investigate (1) the proportion of Welsh speakers who transmit Welsh to their children and (2) the relationship between Welsh language transmission and social factors at an aggregate level (looking at household composition, county of residence, and socio-economic background of parents). The rationale for the chapter is therefore to shed light not only on the backgrounds of those who are likely to transmit Welsh to their children across Wales but also to highlight under which circumstances the language is not being transmitted.
3.2 Many of the figures included in the following sections are based on previous analyses of Census data (Jones 2013a) and are cited accordingly. New figures have, however, also been created to expand on aspects of previous analyses. A detailed written description of the Census data has not (to our knowledge) been published and we therefore also provide this (see also the appendices of the report for detailed county-level data on intergenerational transmission of Welsh to three to four year-old dependent children). It should be noted that a range of tables from both the 2001 and 2011 Censuses have been used and that, as the base populations of a number of the tables used vary slightly, the percentages derived from them can differ.
3.3 This analysis follows the methodology of previous work on the transmission of Welsh which is based on Census data (e.g. Jones (2012)). It concentrates

[^12]solely on data from households with children aged three to four where at least one adult has been reported as being able to speak Welsh. The rationale behind this is that there is no direct question on parents' linguistic behaviour with children in the national Census. Instead, the household respondent to the Census is asked about every member of the household and is asked to state whether they (a) understand spoken Welsh, (b) speak Welsh, (c) read Welsh, (d) write Welsh, or (e) have none of the aforementioned skills in Welsh. A parent is classed as Welsh-speaking for the current analysis if at least option (b) is given as the response. Transmission is said to be occurring where option (b) is selected for any child aged between three and four in the household. ${ }^{17}$ We focus on three-tofour year olds (with three year olds being the youngest cohort in Welsh language data from the Census) as they are of pre-statutory school age and so most likely to reflect language transmission in the family rather than acquisition through the education system. It should be noted, however, that the numbers of children aged four who speak Welsh are generally higher than those aged three as more four year olds have begun some form of Welsh-medium preschooling.
3.4 There are several caveats which should be noted prior to any analysis of Census data as the Census asks no questions at all about actual language use. The analysis is therefore based on the assumption that the parents who have noted the ability to speak Welsh are in fact able to do so to a level which would allow them to use Welsh with their children. We are also unable to ascertain what transmission might look like and to what extent linguistic behaviour is influenced by parents' own abilities. In instances where parents have noted that their children are also able to speak Welsh, it will not be clear how much Welsh they can speak compared to their other language(s).
3.5 Notwithstanding these caveats, the Census arguably provides the most thorough insight (since it is the only survey to be completed by nearly all households in Wales) to the demographic situation of the Welsh language and highlights key patterns regarding the transmission of Welsh at the national level as well as the influence of some factors (see 3.1) on transmission. In the remainder of this chapter we outline these key patterns to inform the methodological choices regarding data collection (outlined in

[^13]Chapter 4, Methodology). We firstly analyse the data regarding the Welsh language ability of children aged three to four in relation to household composition. We then analyse the data at local authority level before turning to the data regarding transmission as viewed through the prism of parents' socio-economic background. Finally, we present the results of a logistic regression designed to show the influence of these factors on the likelihood of transmission.

Overall rates of transmission by household composition
3.6 In 2011, there were 14,907 children aged three to four who lived in households where at least one adult could speak Welsh. Of these children, 58 per cent were reported as being able to speak the language ( $n=8,611$ ). Figure 1 shows the percentage of children aged three to four able to speak Welsh by household composition. The figure shows that 82.2 per cent of three to four-year-old children in two-parent households where both parents speak Welsh could also speak Welsh ( $n=3,707$ ). This proportion decreases to 53 per cent in lone-parent families where at least one of the adults in the household could speak Welsh $(n=1,236)^{18}$ and 45 per cent in two-parent families in households where one parent could speak Welsh ( $n=3,668$ ).

[^14]Figure 1: Percentage of children aged three to four able to speak Welsh by household composition
(Source: Census 2001, Table ST143; Census 2011, Table DC2601).

3.7 Closer inspection of the raw numbers in Table 21 (p. 163) shows that, in 2011, of the 4,508 children aged three to four in couple households where two or more adults could speak Welsh, 801 (18 per cent), could not speak Welsh. Of the 2,316 children aged three to four in lone-parent households where at least one adult could speak Welsh, 1,080 (47 per cent) could not speak Welsh. Of the 8,083 children aged three to four in two-parent families where one parent speaks Welsh, 4,415 (55 per cent) could not speak Welsh. These data refer to the situation across the whole of Wales. The following section examines the extent to which there are differences based on both household composition and the local authority in which respondents resided at the time of the Census.

## Transmission rates by household composition and local authority

3.8 Figure 2 shows the percentage of children aged three to four who are able to speak Welsh from households where both parents speak Welsh with 95 per cent confidence intervals. ${ }^{19}$

[^15]Figure 2: Percentage of children aged three to four years who are able to speak Welsh from households where both parents speak Welsh with 95 per cent confidence intervals
(Source: Census 2011, Table DC2601).

3.9 On examining Figure 2 together with the local authority level figures (see Table 20 and Table 21), it is clear that the number of children living in twoparent households where both families speak Welsh varies greatly between local authority. Blaenau Gwent, for instance, has a transmission rate of 33 per cent but there are only six couples who reported both partners as being Welsh-speaking. Gwynedd, on the other hand, contains the most children living in two-parent families ( $\mathrm{n}=1,223$ ) with 122 ( 10 per cent) of these unable to speak Welsh. Due to data protection protocols, more granular information on these 122 is unavailable. It is noteworthy that the four authorities with the highest percentages able to speak Welsh in the population aged three and over (i.e. Gwynedd, Anglesey, Ceredigion, Carmarthenshire) contained 2,450 ( 66 per cent) of the 3,707 children aged three to four able to speak Welsh in couple households with two or more Welsh-speaking adults and 400 ( 50 per cent) of the 801 children who could not speak Welsh. Figure 3 shows the percentage of children aged three to four who can speak Welsh
from households where one parent speaks Welsh with 95 per cent confidence intervals.

Flintshire is the local authority with the lowest rate of transmission in twoparent families where one parent can speak Welsh (29 per cent). Unlike Blaenau Gwent, noted in 3.9, however, the numbers in Flintshire are not much smaller than the numbers in counties where transmission is higher. Flintshire contains 494 three and 4-year-olds in households where at least one parent can speak Welsh and 352 ( 71 per cent) children in these households are unable to speak the language. In comparison, Gwynedd contains 424 three and four-year-olds in households where at least one parent can speak Welsh yet only 155 (37 per cent) are unable to speak the language. The data indicate that 2,019 (55 per cent) of the 3,668 children who can speak Welsh from two-parent households where one parent can speak Welsh come from the four authorities with the highest proportion of Welsh speakers. These authorities contain 867 (20 per cent) of the 4,415 children who are unable to speak the language.

Figure 3: Percentage of children aged three to four who can speak Welsh from households where one parent speaks Welsh with 95 per cent confidence intervals
(Source: Census 2011, Table D2601).

3.11 Figure 3 shows the percentage of children aged three to four who are able to speak Welsh from lone-parent households where the parent speaks Welsh with 95 per cent confidence intervals. The figure20 shows that transmission in lone-parent families where the parent speaks Welsh is highest in Gwynedd. Of the 396 children in this category in Gwynedd, 323 ( 82 per cent) are able to speak Welsh. Figure 3 suggests that the difference between Gwynedd and the other local authorities is greater than for the other household composition categories. The second-highest rate of transmission in lone-parent families, for instance, is in Ceredigion yet there is a difference of 19 percentage points between them. In Carmarthenshire, there are 300 children in this category yet only 169 ( 56 per cent) can speak Welsh. Overall, it can be said that 54 per cent $(n=666)$ of the 1,236 Welsh-speaking children

[^16]from lone-parent families who can speak Welsh live in the four counties with the highest proportions of Welsh speakers. Conversely, only 29 per cent ( $n=311$ ) of the 1,080 non-Welsh-speaking children with a Welsh-speaking Ione parent live in these four counties.

Figure 4: Percentage of children aged three to four who are able to speak Welsh from lone-parent households where the parent speaks Welsh with 95 per cent confidence intervals
(Source: Census 2011, Table DC2601).

3.12 Previous work on the intergenerational transmission of Welsh has shown that Welsh-speaking mothers may be more likely to speak the language with their children than Welsh-speaking fathers (in cases where the other parent does not speak Welsh, e.g. Jones and Morris (2007a)). To examine this further, Figure 5 shows the percentage of three-to-four year olds who can speak Welsh by household composition and the Welsh-speaking parent's sex ${ }^{21}$.

[^17]Figure 5: Percentage of children aged three to four who can speak Welsh by household composition and Welsh-speaking parent's sex.
(Source: 2001 Census CT0156, 2011 Census DC2112).
Wales: \% of children aged 3 to 4 who can speak Welsh, by household type and gender, with $95 \%$ confidence intervals

3.13 Focusing on the data from 2011 (in the lilac column), comparisons of the sex of Welsh-speaking parent in each household category in Figure 5 do reveal one striking difference. In couple households, there is clearly a tendency for the rate of transmission to be higher when the parent who speaks Welsh is female. This will be discussed in 3.28 .

## Socio-economic classification

3.14 The relationship between transmission and the parents' socio-economic background was examined by studying (1) the total numbers of children who live in homes where there is at least one Welsh-speaking parent in each NSSEC category and (2) the number and percentage of these children who are able to speak Welsh. The total number of children who live in homes where at least one parent speaks Welsh for each NS-SEC category is shown in Table 17. The number and percentage of these children who can speak Welsh are shown in Table 18.
3.15 For couple households with two or more adults able to speak Welsh, the lowest rate of transmission was 68 per cent-amongst 'full-time students'—but they only had 24 children of this age: 8 of these could not speak Welsh. The next lowest transmission rate was 78 per cent, found in
three groups: those in semi-routine occupations and those who had never worked or who were long-term unemployed (NS-SEC analytical classes 6 and 8) and those with 'Large employers and higher managerial and administrative occupations' ((NS-SEC analytical class 1.1).
3.16 In terms of total numbers of 3 and 4 year olds, those in semi-routine occupations had 379 such children, those who had never worked or longterm employed had 49 while those in class 1.1 had 123. Of those, the numbers who could not speak Welsh were 85,11 and 27 respectively. The transmission rate in the other NS-SEC analytical classes varied from 81 per cent (class 5. Lower supervisory and technical occupations) to 86 per cent (1.2 Higher professional occupations). The former class contained 75 children who could not speak Welsh compared to 88 children in the latter class.
3.17 The largest numbers of children aged 3 to 4 unable to speak Welsh were in '2. Lower managerial, administrative and professional occupations' households ( $n=218$ ), '4. Small employers and own account workers' households ( $n=133$ ), and '7. Routine occupations' households ( $n=95$ ). Non-Welsh-speaking children in the last three groups totalled 446 and so accounted for 56 per cent of the total number of non-Welsh-speaking children aged 3 to 4 in couple households with two or more Welsh-speaking adults.

## Predictors of transmission based on Census data

3.18 The previous sections in this chapter have analysed the results for the rates of transmission and shown that these vary most strikingly according to the household category, local authority in which the family reside and-to a lesser extent—parents' socio-economic classification. The current section uses logistic regression modelling (originally produced in Jones (2013a)) to ascertain the extent to which these factors (or independent variables) are statistically significant predictors of transmission (see Figure 6). ${ }^{22}$ Logistic regression is a standard way of modelling a binary response variable such as this, i.e. a variable where the outcome is one of only two possibilities. In this case, the outcome modelled is whether a child can or cannot speak

[^18]Welsh. The model attempts to show how the odds of a child speaking vary according to the levels of several independent variables.

The factors included in the model were 'Census' (to ascertain whether there are differences between the 2001 and 2011 Censuses), 'family type' (namely two-parent couples where both parents spoke Welsh, two-parent couples where one parent spoke Welsh, and lone-parent families where one adult in the household could speak Welsh), 'area' (Local Authority) and 'NS-SEC' (NS-SEC class as outlined above).To fit the model, the factors were introduced one at a time and retained in the model if they were statistically significant. Interaction (e.g. Area and family type) terms were subsequently introduced one by one and tested similarly for significance. The best-fitting model can be summarised thus:

Probability that a child will speak Welsh $=\operatorname{logit}^{-1}($ Census + Family type + Area + NS-SEC + Census:Family type + Area:Family type)
3.21 The full results of the statistical modelling (the coefficients) are not repeated here for brevity. Instead, Figure 6 shows the probability of transmission based on the percentages of those factors which were significant in the statistical modelling.

Figure 6: Probability of transmission based on the results of a logistic regression containing Census year, household type, local authority and socioeconomic classification (NS-SEC) as independent variables (Jones 2013a).

3.22 Taking households in Gwynedd as the base (as previously noted transmission of Welsh was less likely amongst households outside of Gwynedd but the area effect depended on the family type, i.e. there was an interaction between the area and family type factors), all lines in the Gwynedd chart are higher than the lines in the charts for the other two areas. It can, however, be seen that the lines for the lone parent family type drop most from the Gwynedd levels while the lines for the two Welsh-speaker couple families show the least change.

The effect of the family type also showed an interaction with the Census factor. Taking the 2001 Census as the base class, the probability of the transmission of Welsh in couple families where only one adult could speak Welsh was around 0.06 higher in 2011. On the other hand, the probability of transmission in lone parent families where that lone parent could speak Welsh was 0.02 lower in 2011. The probability of transmission in couple families with two Welsh-speaking adults was virtually unchanged in 2011.
3.24 With NS-SEC class 1 (Higher managerial, administrative and professional occupations) taken as the base class, estimates for NS-SEC classes 5-9
were all significantly different, indicating that transmission of Welsh to children in households where the household reference person was classified to NS-SEC classes 5-9 was less probable, if all other factors (i.e. Census, Family type and Area) were equal. Thus, all the lines in the chart show a downward trend across NS-SEC class.

## Discussion

The Census data have shown a striking difference in the rate of transmission between different 'types' of family unit. Nationally, the highest percentage of children aged three to four who can speak Welsh live in two-parent households where both parents speak the language ( 82 per cent). There is a 37 percentage point difference between this group and children in two-parent families where only one parent is able to speak Welsh (45 per cent of whom speak the language). It appears, therefore, that children aged three to four are more likely to speak Welsh when both of their parents also speak the language. This supports findings from previous work which has shown that children are more likely to speak the minority language when both parents speak it (e.g. Varro (1998)).

What is less clear from the literature, however, are the reasons for the difference between the percentages of children who speak Welsh who come from two-parent families where both parents speak Welsh and those from Ione-parent families where the parent speaks the language ( 53 per cent of whom speak the language). There seems to be a lack of work on lone-parent family transmission in minority-language contexts.
3.27 The results of the analysis of household composition raise questions both for this research and further work. Although it is clear that having two Welshspeaking parents increases the likelihood that a child aged three to four will speak Welsh (as was shown in the logistic regression in 3.22), and that the transmission of Welsh appears to be a 'natural' choice for many parents (Gathercole et al. 2007), it is not clear why 18 per cent of children in this category do not speak the language. Many more questions arise regarding the linguistic behaviour of those in lone-parent families where the parent speaks Welsh and among couples where one of the parents speaks the language. While this research attempts to investigate the main factors influencing these groups, it should be noted that separate, detailed studies
on the dynamics of transmission in different household types would be fruitful.
3.28

Turning to the relationship between the sex of the Welsh-speaking parent and rates of transmission, 49 per cent of children whose mothers spoke Welsh also spoke Welsh compared to 40 per cent among those whose fathers spoke the language (in two-parent families). In lone-parent families, the percentage of children who spoke Welsh was also higher when the mother spoke Welsh ( 54 per cent) than the percentage of those from households where the father spoke Welsh (42 per cent). We would argue that a more qualitative approach (as seen in, for example, Jones and Morris (2005b)) is fruitful to investigate this further as it allows the researcher to investigate whether it is indeed sex which influences linguistic behaviour or the extent to which both parents have main caregiving duties during the early years of childhood.
3.29 Both the initial examination of the percentages and the logistic regression indicate that there is a relationship between the proportion of the population able to speak Welsh in a given local authority and the rate of transmission. Overall, the four counties with the highest proportion of Welsh speakers contained 50 per cent ( $n=4,268$ ) of children aged three to four able to speak Welsh. Conversely, they contained only 25 per cent $(n=1,578)$ of the children who were unable to speak the language. As was shown in the logistic regression (see 3.23), there was an interaction between household type and local authority generally. In other words, transmission was more likely in Gwynedd, and then generally higher in the remaining three counties with the highest proportion of Welsh speakers, for all three household types.
3.30 The correlation between local authority and transmission poses several problems. Firstly, the sociohistorical division between higher percentage Welsh-speaking western areas of Wales and lower percentage eastern areas means that analysis of individual local authorities can be based on small numbers. ${ }^{23}$ This was arguably solved in the logistic regression analysis by grouping local authorities together. Secondly, Gathercole et al. (2007, p. 84) note that the percentage of people in an area who speak Welsh can also be confounded with other variables such as individuals' daily use (see also

[^19]Alvarez Enparantza (2001)) which might also affect transmission. Thirdly, and somewhat conversely, we have discussed the problems associated with assuming that there is a correlation between a speaker's 'community' and their geographical location.
3.31 It is noteworthy that the difference between Gwynedd and other counties was greatest in the lone-parent category. This could be due to the greater likelihood of Welsh speakers in the local community and the greater presence of extended Welsh-speaking family. As was shown above, transmission in lone-parent families is largely understudied and the reasons why it appears to be more successful in Gwynedd than in other counties cannot be adequately resolved in an analysis of Census data.
3.32 Finally, the logistic regression highlighted that transmission is less likely among NS-SEC groups 5-9 which suggests that, all being equal, transmission is higher among those with small businesses, intermediate occupations, and managerial and professional occupations. There is evidence to suggest that transmission may be both more likely in middleclass families who may be more aware of the benefits of bilingualism and more likely to perceive a relationship between language maintenance and cultural values (e.g. Nesteruk (2010)). Research on the transmission of Welsh suggests that those in lower socio-economic groups may-at least historically—be more likely to view the transmission of Welsh as detrimental to the development of English which is important for social mobility (see Harrison et al. (1981, p. 62)). It is in the remit of the current research to examine attitudes towards bilingualism (and specifically the belief that the acquisition of Welsh will be detrimental to a child's acquisition of English) as a factor which might influence transmission. As noted in Chapter 4 (Methodology), however, it was decided not to control for respondent' socioeconomic background due to the sample size. While this would have arguably been fruitful, we argue that it is more useful to keep these results in mind during the qualitative analysis to ascertain whether respondent's economic and academic background yield interesting results with regards to attitudes towards bilingualism.

## Conclusion

This chapter has presented an analysis of Census data relating to the ability to speak Welsh among children aged three to four years in Wales. By comparing these data with parents' ability to speak Welsh, we have been able to deduce rates of transmission and study the difference between the linguistic background of the parent(s) and their sex, local authority, and socio-economic classification. We then presented the results of a logistic regression which showed that transmission is more likely in Gwynedd, in families where both parents speak Welsh and, to a lesser extent, in those with higher socio-economic classifications.
3.34 The highest proportion (and number) of children unable to speak Welsh come from two-parent households where only one parent speaks the language and from areas outside of the four counties where the highest percentages of the population speak Welsh. This supports previous work which shows that transmission in situations where only one parent speaks the minority language and where there is less access to the language in the local area is more difficult. The reasons for the relatively low rates of transmission in lone-parent families are less apparent considering a dearth of research in this area.

## 4. Methodology

4.1 This chapter outlines the methodology for the study of the influence of factors on the transmission of Welsh and the extent to which language transmission is a conscious decision made prior to and/or following birth. The section comprises an outline of the sample design and respondent recruitment and the methodologies used for data collection.
4.2 The main aims of the research are to examine the factors which influence transmission of Welsh, to ascertain whether language transmission is a conscious decision, and to investigate patterns of language use between the ages of 0 and 4 years. To fulfil these aims, we took a mixed-methods approach to data collection. The primary quantitative data captures information on caregivers' backgrounds, their current use of Welsh, and their wider social values which may influence their decision to use Welsh with their children (if, indeed, a conscious decision is made). The primary qualitative data captures narratives of caregivers' experiences of language use with their children to investigate any patterns in behaviour. The questionnaire design benefits from insights from social psychology which are outlined in Chapter 5 (Applying Behavioural Approaches to Language Transmission). We believe that this is the first time such a behavioural approach has been used systematically in empirical research into the intergenerational transmission of a minority language. ${ }^{24}$

## Research Design

4.3 We adopted a mixed-methods approach (see Creswell and Clark (2011) for an overview) to the research design which included quantitative closed questions and more open questions designed to elicit qualitative data. These data were elicited via written questionnaires, presented to respondents at the start of the interview session, and were followed by a semi-structured interview with the primary caregiver. A further written questionnaire was designed for the secondary caregiver (who was absent from the interviews) to complete and return via post.
4.4 The mixed-methods used in the current research follow an embedded design approach (Bryman 2015, p. 639) which means that the quantitative and

[^20]qualitative data will be integrated to formulate our findings. The primary rationale for this approach to research design is that the qualitative and quantitative results will help us to present a more complete picture (Bryman 2015, p. 644) of not only how Welsh is transmitted but also of the influences on (non-)transmission. More specifically, the written questionnaire allowed us to integrate established measures in the field of behavioural psychology to examine correlations between aspects of human behaviour and language transmission. We detail this in Chapter 5 (Applying Behavioural Approaches to Language Transmission).

## Quantitative data

4.5 The quantitative data were elicited via both the questionnaire and the interview. ${ }^{25}$ Several closed questions were included in the interview schedule and coded by the researcher to shorten the amount of time taken to complete the written questionnaire. The questionnaire designed for the caregiver who was not present during data collection contained the quantitative questions from the original questionnaire.
4.6 The quantitative measure for language transmission was phrased as 'what language do you and your partner use with your youngest child?' This answer comprised a number of options including 'always/almost always Welsh' to ‘always/almost always English' and allowed the respondent to differentiate between her/his language use and the language use of the partner. It was decided to focus on language use with the youngest child in order to ascertain whether there were different patterns of parental language use with older/younger children. This was followed up in the interview.
4.7 Quantitative background information elicited via the questionnaire included the main caregiver's sex and age so that the final sample could be adequately described and possible correlations investigated.
4.8 We also asked respondents to indicate where they lived and whether they had lived elsewhere during their life. This was deemed to be necessary in the context of Welsh-English bilingualism, where linguistic background is correlated with area, and in the context of the sample which is stratified by area.

[^21]4.9 We did not control for educational background or socio-economic status in the sampling despite indications that this may be a predictor of the transmission of Welsh (Jones 2013b). It was felt that stratifying the sample on these lines would not be fruitful considering the number of respondents ( $n=60$ ). Data on respondents' educational levels and current employment were collected to adequately define the sample and to ascertain whether a possible relationship could be examined.
4.10 We asked respondents to define their national identity to investigate to what extent there is a relationship between a singular Welsh national identity among the respondents (rather than a plural identity) and language transmission when describing our sample.
4.11 A series of questions were designed to elicit data on the linguistic background of respondents. These questions matched language-related questions asked in the national Census and the Welsh Language Use Survey (Welsh Government and Welsh Language Commissioner 2015), the first question asked respondents to state whether they could understand, speak, read, and/or write Welsh. The second question asked for respondents to rate their ability to speak Welsh (ranging from fluency to the ability to speak a few words). The third question asked respondents to specify where they first acquired Welsh. These questions allow us to investigate the relationship between perceived ability and confidence in Welsh (also explored in the interview) and linguistic background on transmission.
4.12 The written questionnaire also featured four sets of items designed to elicit behavioural data from the respondents. These data were used to examine (1) whether language transmission was an intentional behaviour and (2) the extent to which respondents' values and beliefs may influence language transmission.
4.13 To explore the extent to which transmission is an intentional behaviour, we firstly asked whether respondents spoke to their child in whichever language was most natural to them or whether they had made a conscious decision to use a particular language. The response to this question was elaborated upon in the interview.
4.14 Work on the Theory of Planned Behaviour (TPB) suggests that, if there is no external intervention, a particular action or behaviour will depend on a
number of factors. These factors include motivation and attitudes towards the behaviour. Both are, in turn, influenced by perceived social norms towards the behaviour, perceived behavioural control over being able to complete the behaviour, and, in recent variants of the model, the extent to which the behaviour corresponds to a person's view of themselves (Ajzen 1991; Fielding et al. 2008). We incorporated elements of this model into the quantitative design to test whether these factors influence the transmission of Welsh and analyse this in Chapter 5 (Applying Behavioural Approaches to Language Transmission).
4.15 A series of items (adapted from Fielding et al. (2008)) were included in the written questionnaire to quantitatively analyse intentional behaviour. These items were presented on a seven-point scale and respondents were asked to rate the extent to which they agreed with each statement.

Attitudes towards transmission were gauged by asking the extent to which respondents felt that speaking Welsh to their child was good.
4.17 Perceived social norms were elicited by asking whether respondents thought that people close to them thought that they should speak Welsh to their children, whether it was normal for people to speak Welsh to their children where they lived, and whether there was enough Welsh-language provision in the wider community.

Perceived behavioural control was tested by asking the extent to which respondents felt they had control over whether they spoke Welsh to their child, whether speaking Welsh to their child was easy or difficult and whether speaking Welsh to their child was something they did without thinking.

Self-identity was measured by asking respondents to rate the extent to which they agreed that they were a Welsh speaker, the extent to which the ability to speak Welsh was an important part of their identity, and whether they were the type of person who would speak Welsh.
4.20 The results from these questions allow us to ascertain the extent to which higher scores on these factors correspond to the transmission of Welsh in the family.
4.21 Previous literature suggests that cultural heritage and traditional values may predict language transmission (e.g. Ager (2001)). In the social psychological literature, the importance placed on cultural heritage is a value to which
people orient to differing degrees. Schwartz (2003, p. 263) defines values as 'deeply rooted, abstract motivations that guide, justify or explain attitudes, norms, opinions and actions.' To investigate the relationship between language transmission and such values, an 11-item version of the Schwartz (2003) Portrait Values Questionnaire was used to elicit the Universal Values which are held by the respondents. This questionnaire asks respondents to rate the extent to which a series of statements describe a person similar to themselves. The items on the questionnaire correspond to basic values attributed to human beings and the goals which motivate these values. The following table shows these values and 'motivational goals' (adapted from Schwartz (2003, pp. 267-268).

Table 3: Core values and associated motivational goals (Schwartz 2003).

| Value | Goals |
| :---: | :---: |
| Power | Social power and prestige |
| Achievement | Personal success and influence |
| Hedonism | Pleasure and gratification |
| Stimulation | Excitement and novelty |
| Self-direction | Independence |
| Universalism | Concern for those close to us |
| Benevolence | Respect for and commitment to tradition |
| Tradition | Restraint of actions likely to upset or harm <br> others |
| Conformity | Safety and stability in society, community and <br> the family |
| Security |  |

4.22 The aim of these questionnaire items is to ascertain the relative importance each respondent places on the values shown in the table by generating a score. These scores can be used to calculate a correlation between the orientation towards particular values and language transmission.
4.23 To summarise, both the written questionnaire (given to respondents at the start of the data collection session to provide the researcher with background information for the interview) and the oral interview contained quantitative questions. These questions elicited information on each respondent's sex,
age, socio-economic status, and use of Welsh. Further closed questions asked respondents whether they or their partner spoke Welsh to their child. In addition, the written questionnaire contained a number of items designed to elicit data on behavioural aspects of language transmission. These data will allow us to explore correlations between a number of different sociolinguistic factors and the transmission of Welsh in the home.

## Qualitative data

The qualitative data were elicited via semi-structured interview and were designed to elicit a richer narrative of the issues surrounding the transmission of Welsh in the home. It was felt that complementing the quantitative data with narratives from semi-structured interviews would give additional insight into the conditions which promote the transmission of Welsh in families. In particular, it was felt that the qualitative data would allow us to go beyond the relationship between respondents' background and how they behave and gain an insight into how they attribute meaning to their linguistic environment (Bryman 2015, p. 393).

The questions were designed to elicit narratives surrounding a number of themes which have been shown to be relevant to family language transmission. These themes included respondents' own linguistic background, their current use of Welsh, the way in which Welsh and English are used with their child, the extent to which family language use was subject to prior discussion or planning, and the support and provision available to Welsh speakers in the community.

The role of linguistic background has been shown to be a significant predictor of transmission of Welsh (Gathercole et al. 2007), but little is known about the role of childhood attitudes and language use towards transmission. The first part of the semi-structured interview asked respondents to talk about when, where and with whom they spoke Welsh as children and how they perceived attitudes towards the language in their community.

Following this, respondents were asked about their current language use and the extent to which they used Welsh with their close and extended family, and in the local community. Further questions asked the extent to which they feel comfortable in Welsh and see it as an important of aspect of their identity. The rationale behind this questioning was to enable us to
create a profile of Welsh use for each respondent based on their use of Welsh and the importance it has for them.
4.28 Previous work on intergenerational transmission in Wales and further afield suggests that close-knit social networks, frequent contact with the extended family, and community support for the language may promote its transmission in the home. In the context of Welsh-English bilingualism, we felt that a more qualitative linguistic profile of these aspects of Welsh use would provide greater insight in light of the fact that many Welsh speakers come from families where some or all members may not speak Welsh and where there will inevitably be differences in the extent to which Welsh is used in the local community.
4.29 In the third part of the semi-structured interview, respondents were asked about their current linguistic practices (and those of their partner where appropriate) with their children. The aim of this part of the interview was to go beyond the simple question of whether Welsh was being transmitted in the family and ascertain how it is being transmitted (if applicable). In particular, this question asked who used Welsh with the child and in which contexts, and how the child responded. As in the case of the use of Welsh, this allows us to show the ways and the degree to which Welsh and English are being used amongst bilinguals in Wales.
4.30 The fourth and fifth parts of the semi-structured interview focussed on two areas which have not been fully explored in previous research on the transmission of Welsh, yet which are frequently mentioned in previous work on other linguistic contexts. Work in these contexts suggests that language transmission, particularly in families where both caregivers speak different languages, is reliant on prior consideration and strategies. We aimed to ascertain whether this is the case for the transmission of Welsh and whether transmission was discussed either prior to and/or following birth. This is also captured in the written questionnaire, where we asked whether discussions took place and used models of behaviour theory.
4.31 The role of community support and provision is also cited as being important for the intergenerational transmission of minority languages in the home.

Previous studies of Welsh transmission have examined community primarily in terms of the proportion of speakers in a given area and respondents' social networks. The aim of the final section of the semi-structured interview
was to investigate how respondents view the provision for Welsh-language activities in their area and whether they feel that there is support for Welsh speakers locally.

## Sample Design

4.32 A sample size of 60 families with at least one child aged $0-4$ years and at least one caregiver who reports being able to speak Welsh was calculated for the purposes of this research. While a representative rather than exploratory sample (Denscombe, p. 46) of Welsh speakers would have been desirable for making generalisations about the linguistic behaviour of the wider population based on the quantitative data, large samples for qualitative data are more time-consuming and can lead to data saturation whereby no new themes emerge (O'Reilly and Parker 2013). It was therefore decided that a sample size of 60 would be achievable, allow for meaningful analyses of the quantitative data and minimise the risks of saturation in the qualitative data.
4.33 It was decided to stratify the sample by region and collect data from 30 families in the counties of Gwynedd and Anglesey (north west Wales) and from 30 families in the counties of Caerphilly and Rhondda Cynon Taf (south east Wales). This decision was taken to investigate the experiences of respondents in different areas. It should be noted, however, that the main focus of the research is not to compare those two areas. Although there are demographic differences between the counties included within both regions (and indeed between the electoral wards within each county), they are similar both in terms of their Rural Urban Classification and in the proportion of the population which speaks Welsh. The following table shows the percentage of Welsh speakers in each county and the rate of transmission according to the 2011 Census:

Table 4: Percentage of Welsh speakers and percentage of households which contain one or more Welsh-speaking parents and Welsh-speaking children

|  | Rural Urban <br> Classification | Language profile: <br> \% able to speak <br> Welsh (according <br> to 2011 Census) | Language transmission <br> rates <br> (figures for 2 adult <br> couples, both Welsh- <br> speaking, 2011 <br> Census-82\% is the <br> figure for Wales) |
| :--- | :--- | :--- | :--- |
| North West: <br> (Anglesey, <br> Gwynedd) | Rural | Anglesey 57.2\%; <br> Gwynedd 65.4\% | Anglesey 80\% <br> Gwynedd-90\%; |
| South East: <br> (Rhondda <br> Cynon Taf, <br> Caerphilly) | Semi-rural | Rhondda Cynon <br> Taf 12.3\% <br> Caerphilly 11.2\% | Rhondda Cynon Taf- <br> $67 \%$ <br> Caerphilly 73\% |

4.34 The linguistic nature of individual families (for instance couples from Welshspeaking homes) as well as individuals' use of Welsh has been shown to influence the transmission of Welsh (Gathercole et al. 2007). Having defined our sampling frame on the basis of region, it was felt that further stratifications based on linguistic background would not be achievable. Instead, we recruited respondents from a variety of sources to collect data from families with a range of backgrounds. Those living in areas where over $60 \%$ of the population speak Welsh are more likely to have acquired Welsh at home and to use Welsh on a daily basis (Jones 2008)). It should therefore also be acknowledged that any differences in the experiences of families from different regions might be confounded with other factors. This is considered in the analyses which follow in Chapters 5 (Applying Behavioural Approaches to Language Transmission) and 6 (Qualitative Data Analysis).

## Research Ethics

4.35 Ethical approval was granted by the Ethics Committee at the School of Welsh, Cardiff University. This committee is responsible for ensuring that the procedures of the University Research Ethics Committee are maintained. As one member of the research team for the current research project also acts as the Ethics Officer for the School of Welsh (Morris), the application was processed by other members of the School Committee and also considered

[^22]by a Cardiff University reviewer external to the School of Welsh. The GSR Ethics Checklist was also completed and submitted as part of the application for ethical approval
4.36 The respondents interviewed for the study were all aged over 18 years at the time of data collection. Respondents were provided with an Information Sheet which outlined the aims of the research and the methods of data collection. The Information Sheet also stated that (1) participation was voluntary, (2) data provided would be stored in accordance with the Data Protection Act (1998) and would be anonymous and that (3) respondent could withdraw from the research at any time. The information given to respondent prior to obtaining consent can be found in the Appendices of this report.
4.37 The data produced during the research were anonymised at the point of data collection and held on secure servers. Only the research team had access to these data.

A request to Welsh Government was made to access the details of respondents to the National Survey of Wales who had consented to be contacted regarding future research. This request was granted on 18 January 2016 subject to conditions outlined by the Welsh Government. More information on respondent recruitment is given below.

## Respondent Recruitment \& Data Collection

Recruitment Method 1: Using the contact details of the National Survey for Wales ${ }^{27}$
4.39 The research team was provided with the contact details of those parents who had taken part in the National Survey and had consented to further contact. Specifically, the details of those who had indicated that (1) their household contains a child under five, (2) they were 'fluent in Welsh' or could 'speak a fair amount' of Welsh and (3) they were willing to be contacted for future research projects. This yielded 171 respondents in the four counties defined in the sample and an attempt was made to contact all of these individuals. This resulted in 13 interviews.

[^23]Recruitment Method 2: Access to respondents via local schools
4.40 Flyers inviting respondents to take part in the research were circulated via schools (see Appendices). A letter was sent to the head teacher of 24 primary schools (5-7 schools per local area) along with a pack of flyers, with a request for them to circulate the flyers to their nursery class caregivers. Approximately 1200 flyers were circulated this way. The schools were selected as those located in or around a central town, and where relevant, included both Welsh and English-medium schools.
4.41 Some additional respondents were recruited during interviews using the contacts of the respondents. This 'snowball' approach to data collection has obvious limitations insofar as it is not a random sample of the population and may result in a biased sample. It is, however, an effective approach to data collection in 'hidden populations', defined as those who are hard to reach (Noy 2008). In this case, the snowball approach to sampling allowed us make contact with those respondents with children under nursery school age and those who did not speak Welsh with their children. The approach therefore helped us to ensure that the sample did not only contain those who were enthusiastic about taking part in the research having received the flyer.

## Data Collection

4.42 A recruitment screener questionnaire was used prior to the data collection session to ensure that the families (a) contained at least one caregiver who spoke Welsh, (b) contained at least one child aged 0-4, and (c) lived in the four counties in the sample frame.
4.43 Interviews took place in a location of the respondent's choice (home or local centre). Each data collection session lasted around one hour.
4.44 Consent forms were given to respondents at the beginning of the data collection session. This form contained contact information for the Principal Investigator, an outline of the research and gave the respondent an opportunity to ask any questions and withdraw from the research at any time.
4.45 Each session began with the written questionnaire to provide the fieldworker with background information to use in the interviews. This was then followed by the semi-structured interview.

Notes were taken by the fieldworker so that the quantitative elements of the interview could be coded. The interview was also recorded so that the data could be analysed thematically.
4.47 The interview asked questions regarding both respondents' language use with their children, a written questionnaire was left for the caregiver who was not present in the interview to complete and return via post. This questionnaire contained all of the closed questions asked to the respondent who was present in the interview.
4.48 Respondents were paid $£ 35$ to take part in the project. Although payment has been shown to influence whether respondents take part in a project (Singer and Kulka 2001), this is not always the case (Graham et al. 2007). Ethical issues have also been raised regarding the payment of respondents. Thompson (1996), for instance, considers payment to be a way of enabling respondents from differing socio-economic backgrounds to take part in research (hence reducing bias) and as a way of valuing respondents' contributions. Head (2009, p. 343), on the other hand, notes that 'payments to respondents could be said to degrade the idea of a common good that research contributes to, and instead transform it into another marketised exchange.' Consequently, the payment of respondents raises questions over whether respondents can freely consent to participate in research projects and whether this may lead to respondents telling researchers what they want to hear. Payment was offered in this case both as compensation for respondents' time and in the hope that it would encourage respondents who would not ordinarily participate in research on the Welsh language.

Respondents to the research
4.49 A total of 60 interviews were completed between March and June 2016 with the main caregivers of children aged between 0 and 4 years. The final sample was equally stratified by region (north west and south east). Most interviews were conducted with female main caregivers ( $n=51$ ).

## Limitations of the research

4.50 There are important caveats which should be remembered when reading the results of the current research. We have already noted that the sample size is relatively small for quantitative analyses and that these data will therefore be used to describe the sample rather than make generalisations about the
wider population (see 4.32). It is important to set our research findings in a wider, Wales-level context. An analysis of national census data regarding intergenerational language transmission is therefore presented in Chapter 3 (Statistical Analysis of National Census Data).
4.51 The data presented in this research are based on respondent self-reporting rather than ethnographic or interviewer observations of their use of Welsh in the family. While the validity of self-report data is often brought into question (due to doubts that respondents may not answer objectively), we felt that this was an appropriate way of collecting data considering the research aims. This approach was adopted as the length of time needed to complete observational work is problematic in the context of a time-constrained research project such as this.
4.52 A further limitation of the current research is that as we concentrate on the data we have collected from parent respondents (rather than their children) we do not have a full, in situ picture of strategies implemented for language transmission or children's linguistic behaviour (e.g. translanguaging). It could be argued that a full analysis of this aspect of transmission is necessary for a fully rounded understanding of Welsh language use within families in Wales. As respondents' experiences of transmission are part of this work, however, we did ask respondents to comment on how they use Welsh in the home and how their child has reacted to this use.

## 5. Applying Behavioural Approaches to Language Transmission

## Introduction

5.1 Chapter 2 (Theoretical Framework) highlights that individual factors (e.g. parental beliefs, confidence, national identity) as well as contextual factors, within both the immediate family (e.g. upbringing, partner attitudes) and local area or broader society (e.g. medium of childcare, social norms), are likely to be significant factors in intergenerational transmission.
5.2 This literature on intergenerational language transmission has developed in isolation from psychological or behavioural models. The current research project offers an original attempt to bring together in a rigorous fashion, the transmission literature with theoretical insights from behavioural science. We draw on social psychological models and concepts, which help shed light on both conscious and non-conscious drivers of behaviour within a particular socio-cultural context.

## Theory of Planned Behaviour

5.3 Probably the most widely used social psychological model of behaviour is the Theory of Planned Behaviour (TPB; see Figure 7) which assumes intention to act is preceded by: (1) attitude towards the behaviour, defined as an overall evaluation of its possible consequences, (2) subjective (or social) norms, encompassing descriptive norms (what others are doing, i.e. what is considered 'normal') and injunctive norms (what is expected of us, i.e. what is considered 'appropriate'), and (3) perceived behavioural control (PBC), defined as a person's perceived ability to perform the behaviour due to availability of opportunities and resources (Ajzen 1991).
5.4 Many of the factors shown to predict language transmission (reviewed above) can be understood as falling within these broad categories of behavioural influence. For example, parental confidence in their linguistic ability and availability of Welsh-medium education may be conceived of as components of PBC; while perceptions of how 'Welsh' a community and the influence of one's partner are likely to form part of social norms. This suggests the TPB is likely to be an appropriate basis for theorising intergenerational language transmission.

Figure 7: The Theory of Planned Behaviour (Ajzen 1991)

5.5 This theory has been applied to a wide variety of behaviours, and metaanalyses show attitudes, subjective norms and perceived behavioural control are good predictors of intentions (Sheeran 2002). However, other variables, such as identity and values, have also been found to predict behaviours over and above the core TPB variables, so various extensions of the TPB have been proposed (e.g. Whitmarsh and O'Neill (2010)). These additional variables (identity and values) are likely to be relevant to language transmission, as we discuss below.
5.6 Whilst previous studies have examined correlations between attitudes towards Welsh and English and both transmission and use (Gathercole et al. 2007; Morris 2014), only Irvine et al. (2008) have hitherto identified the potential for applying the TPB model to intergenerational transmission of Welsh. ${ }^{28}$ Even where attitudes were measured, they were found to have a weak relationship with behaviour: attitudes towards Welsh were largely positive, yet transmission rates were low (Gathercole et al. 2007). Therefore, there appears to be little correlation between attitudes towards language and transmission of that language, although sample sizes in many studies have been too small to allow for a statistically robust analysis (see also 5.51 for discussion of sample size in relation to the current research and 7 (Discussion, Conclusions and Recommendations) for recommendations for further TPB research).

[^24]Figure 8: Application of the Theory of Planned Behaviour to the TWF Scheme
Source: Irvine et al. (2008, p. 70) after Ajzen (1991)

5.7 There can be various reasons for the lack of attitude-behaviour correspondence suggested by previous Welsh transmission studies reviewed above. First, the TPB posits that attitudes are only one factor which predicts behavioural intentions; social and control factors are also drivers of behaviour. Consequently, while attitudes to a particular behaviour (e.g. Welsh language transmission) may be positive, if there is little social or structural support for the behaviour (e.g. bringing up a child to speak Welsh is not considered 'normal' or 'appropriate', or there are few opportunities to speak Welsh) then the positive attitude is unlikely to manifest in consistent behaviour.
5.8 Second, research on attitudes show that they need to be made salient to influence behaviour in a given situation (Haddock and Maio 2012). It may not be enough that individuals believe-in the abstract-that Welsh language transmission is a good idea, if when speaking to their child, they do not operationalise this in that situation, i.e. they do not connect this behaviour to that attitude.

Habits versus planned behaviour
5.9 This point relates to a major limitation of the TPB, namely that it assumes behaviour is intentional, i.e. preceded by a process of rational deliberation. However, much of our behaviour is strongly habitual (i.e. unconscious, non-
deliberative and cued by context rather than attitudes). Indeed, metaanalyses of the TPB show that intentions only predict on average $25 \%$ of variance in behaviour (Sheeran 2002) and habits research suggests most of our behaviour may in fact be habitual (Verplanken and Wood 2006). Habits have been shown to be difficult to change as habits attenuate attention to information, including messages intended to encourage behaviour change (Verplanken et al. 1997). The habits literature represents a point of synergy with the sociological (e.g. social practices (Shove 2003) literature on behaviour.
5.10 On the other hand, the habit literature also highlights that having a child can be a significant 'moment of change' in which many habits become disrupted and new patterns of behaviour emerge (Thompson et al. 2011). From this perspective, one might expect new parents to reflect—perhaps for the first time-on their own language and its transmission, whereas daily language use might otherwise be more habitual. However, the degree to which language use is habitual may vary according to the linguistic composition of families. For example, for mixed language families, everyday language use may be more planned while it may be more habitual for single-language families. Understanding the decision-making modes for both language use and transmission are explored in the current project.

## Identity and values

5.11 Other work suggests identity and values may be important for language transmission. For example, Lambert (2008); Nash et al. (2012) conducted a series of focus groups around Wales to explore Welsh values, place, identity and attitudes towards sustainability issues. They found Welsh identity was strongly connected to the Welsh language, suggesting that self-identity and social identity as Welsh may be a factor in intergenerational transmission of minority languages.
5.12 Similarly, values that emphasise tradition and cultural heritage may be relevant. Schwartz (1992) Value theory identifies several clusters of values (i.e. principles or standards of behaviour) that exist across cultures, with cultures differing in the emphasis they place on different value clusters (Schwartz 2008). Some cultures—and individuals within them—place more emphasis on respect for tradition. We explore this as a determinant of transmission of Welsh in the quantitative survey analysis.

## Measurement of behavioural predictors

5.13 Theory of Planned Behaviour. There are fairly standard formulations for TPB variables, namely attitudes, social norms and perceived behavioural control (Ajzen 2013), which we adopt in the current research.
5.14 Specifically, attitude is measured with the item 'I think that speaking Welsh to your child is...' and a seven-point response scale from 'extremely bad' (1) to 'extremely good' (7).
5.15 Social norms are measured using three items: 'Most people who are important to me think that I ... speak Welsh to my child' with a seven-point response scale anchored with 'should' (7) and 'should not' (1); and two items 'Where I live, it is normal for people to speak Welsh to their children' and 'Where I live, there is enough support and provision (for example, schools) for the Welsh language' using a seven-item agreement scale (1= strongly disagree and $7=$ strongly agree). Note that despite widespread use of these three items to form a 'social norms' scale (i.e. using the mean of the three items as a composite variable), this scale was not found to be very reliable in the current study. Specifically, the correlation ( $\alpha$ ) between items was only modest (interviewee $\alpha(3)=.38$; partner $\alpha(3)=.44$ ), meaning that the three items together cannot be seen as measuring one coherent construct ('social norms'); rather each item may be measuring a different, albeit related, concept. Reliabilities ( $\alpha$ ) of over 0.8 are considered very good; while 0.6 and above are usually acceptable. Lower reliabilities, as in this case, indicate the measure is not robust in the current context, and so may not detect the effect of social norms. Additional analysis indicates that removing the first item (which is intended to measure 'prescriptive norms'-i.e. what others think you should do) increased the reliability somewhat (to .48), suggesting that the other two items (which measure 'descriptive norms'-i.e. what most other people do) are measuring something different to the first item. Due to the low reliability of the measure, we included the three items separately in the regression analysis to predict transmission.
5.16 Perceived behavioural control is measured with two items: 'For me to speak Welsh to my child is...' and a seven-point response scale from 'very difficult' (1) to 'very easy' (7); and 'How much control do you have over whether you speak Welsh to your child?' with a seven-point response scale from 'Very little' (1) to 'Great deal of control' (7). Again, because the correlation between
the two items is not high (interviewee $\alpha(2)=.46$; partner $\alpha(2)=.70$ ), the scale cannot be considered reliable (at least for interviewees). Therefore, in the regression analysis reported below, we examine the effect of these items separately on transmission.
5.17 Habits. The Self-Report Behavioural Automaticity Index (SRBAI; (Gardner et al. 2012) has recently been developed as a reliable measure of habits that can be tailored to the behaviour of interest. Here, we use one item from this scale: 'Speaking Welsh to my child is something I do without thinking' and a seven-point response scale from ‘strongly disagree’ (1) to ‘strongly agree’ (7).
5.18 Identity. Identity has been measured in various ways, but work extending TPB with identity variables has employed short identity scales (e.g. Whitmarsh and O'Neill (2010). These previous identity measures were not developed for language research and rather measure environmentallyfriendly self-identity, so were adapted for the current study to measure language identity. Specifically, our identity scale comprised the following three items: 'I think of myself as a Welsh speaker', 'To speak Welsh is an important part of who I am' and 'I am not the type of person who would speak Welsh' measured on a seven-point agreement scale (as above). The third of these items was reverse-scored (i.e. 1 became 7, 2 became 6, 3 became 5, and so on) as it was worded in the opposite direction to the other items. Including reverse-worded items tends to improve the reliability of scales, because it helps overcome acquiescence bias (i.e. the tendency to agree with statements). Reliability analysis shows that combining the three items into a single scale (i.e. using the mean of the three items together) to measure 'language identity' was appropriate as the items were highly intercorrelated ( $\alpha=.83$ ). That is, the scale is a robust measure of identity in this context.
5.19 Values. Schwartz et al. (2001) developed several versions of their value measures which have been very widely used and validated across cultures, but the most concise of these is the 11-item Portrait Value Questionnaire (PVQ-11), which we use here. This measure is formulated in the third person to provide a more concrete operationalization of the abstract value constructs. It is introduced with the following text: 'I will briefly describe some people. Would you please indicate for each description whether that person
is very much like you, like you, somewhat like you, not like you, or not at all like you?' with responses on a six-point scale from 'Very much like me' (1) to 'Not at all like me' (6). Items are tailored to the gender of the respondent. For the purposes of the survey analysis, we focus particularly on the value of 'tradition' which is worded as follows: 'Tradition is important to him/her; to follow the customs handed down by his/her religion or family.'

Language transmission. The main dependent variable used in the survey was operationalised as follows: 'What language(s) do you and your partner use with your youngest child?' with a response scale from 'Always/almost always Welsh' (1) to ‘Always/almost always English’ (5) and a further option 'Other language’ (excluded from inferential statistics; see Table 10 for descriptive results). The respondent was asked to give a separate score for their own language use with their child, and that of their partner. Other questions in the interview are analysed below.
5.21 The survey also included various demographic and background variables, which are reported in the following section.

## Statistical Analysis of Respondent and Partner Questionnaires

Sample details: region and demographics
5.22 A total of 60 interviews were completed in four regions: two regions in north west Wales (Anglesey and Gwynedd), and two in south east Wales (Caerphilly and Rhondda Cynon Taf).
5.23 Most (85\%) of the respondents were mothers. Just over half ( $n=32 ; 53 \%$ ) of partners completed and returned questionnaires, of whom all but one were male. The age of the respondent varied from 20 to 45 , and the partner's age from 27 to 55 .
5.24 Respondents were fairly well qualified, with almost half (47\%) having a degree (see Table 5), while partners tended to have more professional qualifications. There was a spread of professions, but more were in lower managerial or intermediate roles (see Table 6).

Table 5: Qualifications of respondents and partners

| Highest Qualification | Respondent <br> (\%) | Partner (\%) |
| :--- | ---: | ---: |
| 1-4 GCSEs or equivalent | 3 | 8 |
| NVQ Level 1 or equivalent | 0 | 3 |
| 5+ GCSEs grade A-C or equivalent | 3 | 0 |
| NVQ Level 2 or equivalent | 0 | 3 |
| Apprenticeship | 22 | 3 |
| 2+ A-levels or equivalent | 47 | 22 |
| Degree or equivalent | 3 | 25 |
| NVQ Level 4-5 | 0 | 7 |
| Professional qualifications | 2 | 11 |
| Other vocational qualifications | 2 | 18 |
| No qualifications |  | 0 |

Table 6: Occupations of respondents and partners

| Occupation (NS-SEC Categories) | Respondent <br> $(\%)$ | Partner <br> $(\%)$ |
| :--- | ---: | ---: |
| Higher managerial and professional <br> occupations | 9 | 7 |
| Lower managerial and professional occupations | 43 | 42 |
| Intermediate occupations (clerical, sales, service) | 31 | 14 |
| Small employers \& own account workers | 2 | 7 |
| Lower supervisory \& technical occupations | 0 | 16 |
| Semi-routine occupations | 13 | 5 |
| Routine occupations | 2 | 9 |
| Never worked or long-term unemployed | 0 | 0 |

5.25 Parents had between 1 and 4 children, with a mean $(M)$ of 1.75 . Of these, 6 also had either one or two step-children ( $\mathrm{M}=1.33$ ). The age of the youngest child varied from 2 days to 5 years old, with a mean of 2.64 years. Older children ranged in age from 2 to 22 , with a mean of 7.53 .
5.26 In terms of national identity, more respondents self-identified as Welsh (86.7\%) than English (1.7\%) or British (11.7\%). Similarly, most partners identified themselves as Welsh (78.6\%), while 7.1\% identified as English and $10.7 \%$ as British.

## Sample details: Language background and ability

5.27 As shown in Table 7, most interactions with other people when growing up and now for both respondents and partners are closest to the mid-point on the 5 -point scale ( $3=$ 'roughly equal use of Welsh and English').
Respondents appear to be somewhat less likely to use Welsh than English than their partners, however.

Table 7: Past and current use of Welsh and English
(1=Always Welsh to 5=Always English. Significant correlations between respondent and partner are shown in italics).

| Interaction | Respondent <br> Mean | SD |  | Partner <br> Mean | $\mathbf{S D}$ | Correla <br> tion | Sig. <br> Growing up:$\quad 3.13$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 1.89 |  | 2.70 | 1.95 | 0.03 | 0.90 |  |
| Mother to you | 3.13 | 1.89 |  | 2.65 | 1.93 | 0.06 | 0.82 |
| You to Mother | 3.26 | 1.90 |  | 2.35 | 1.90 | 0.08 | 0.75 |
| Father to you | 3.22 | 1.90 |  | 2.35 | 1.90 | 0.08 | 0.75 |
| You to Father | 3.14 | 1.81 |  | 2.21 | 1.84 | -0.27 | 0.27 |
| Siblings to you | 3.14 | 1.81 |  | 2.21 | 1.84 | -0.27 | 0.27 |
| You to siblings | $\mathbf{3 . 1 1}$ | $\mathbf{1 . 8 1}$ |  | $\mathbf{2 . 3 2}$ | $\mathbf{1 . 8 2}$ | $\mathbf{- 0 . 3 4}$ | $\mathbf{0 . 1 8}$ |
| Overall mean |  |  |  |  |  |  |  |
| Now: | 3.89 | 1.63 |  | 2.48 | 1.78 | 0.81 | 0.00 |
| Partner | 3.38 | 1.89 |  | 2.85 | 1.93 | -0.23 | 0.43 |
| Mother | 3.48 | 1.90 |  | 2.85 | 2.25 | 0.26 | 0.38 |
| Father | 3.63 | 1.85 |  | 2.57 | 2.04 | -0.10 | 0.75 |
| Siblings | 3.63 | 1.90 |  | 3.14 | 1.46 | -0.28 | 0.33 |
| Work with customers | 3.63 | 1.94 |  | 2.71 | 1.68 | -0.20 | 0.50 |
| Work | 3.56 | 1.36 |  | 2.38 | 1.69 | 0.23 | 0.44 |
| Friends | 3.80 | 1.38 |  | 2.67 | 1.65 | 0.90 | 0.00 |
| Neighbours | 3.85 | 1.51 |  | 2.71 | 1.59 | 0.82 | 0.00 |
| Acquaintances | 3.71 | 1.42 |  | 3.24 | 1.18 | 0.68 | 0.01 |
| Shopping |  |  |  |  |  |  |  |

5.28 Correlation analysis indicates that there is no relationship between respondent and partner experiences of using Welsh while growing up; however, they are more similar in their current use of Welsh, with significant correlation in their choice of language with partner, neighbours, acquaintances and when shopping. It is interesting to note, however, that respondents reported higher use of English with their partner than their partner did with them, potentially suggesting differing perspectives on the same interactions or some effect of the medium through which data was collected (discussed below).
5.29 Respondents were also asked to indicate their ability and fluency in Welsh. Table 8 shows that most respondents and partners could understand, speak, read and write Welsh. Welsh ability was slightly lower amongst the partners than the respondents. Consistent with this, when asked to indicate their fluency in Welsh on a 5-point scale (1=fluent in Welsh, 5=do not speak Welsh), respondents scored a mean of $1.37(S D=0.69)$ and partners a mean of 2.09 (SD=1.47).
5.30 When asked which language(s) they felt most comfortable speaking, though, more respondents chose English (65\%) than Welsh (25\%) or both (10\%); while a slightly higher proportion of partners chose Welsh (39\%) than English (35\%) or both (22\%).

Table 8: Respondent and partner parents' ability to speak Welsh

|  | Respondent <br> $(\%)^{*}$ | Partner <br> $(\%)^{*}$ |
| :--- | ---: | ---: |
| Understand spoken Welsh | 18 | 13 |
| Speak Welsh | 15 | 6 |
| Read Welsh | 12 | 3 |
| Write Welsh | 8 | 0 |
| Understand, speak, read and write | 75 | 47 |
| None of the above | 0 | 25 |

(NB: Columns total over 100\% as each ability question was asked separately)
5.31 In interpreting the differences between respondents and partners, we need to consider the different media through which data was collected for each respondent which might (at least in part) account for these differences, as well as potentially indicating gender differences. Self-completion questionnaires (i.e. partner data) may not elicit the social desirability bias (i.e. conforming to what is expected or presenting oneself in a favourable light) or priming effects (i.e. unconscious influence) of a face-to-face interview (sometimes conducted in Welsh). In other words, being interviewed about speaking Welsh (something which respondents were positive about), often in Welsh, may have led interviewees to report higher use of Welsh than their partners who completed the questionnaire without the presence of the interviewer. However, these potential biases would lead to the opposite to what we found, which was that respondents reported higher use of English with their partner than their partner did with them. Consequently, the media of data collection may not account for the differences observed. One other possibility is that the differences are due to gender (since most respondents were mothers). A further possibility is that there was greater opportunity for interviewees to reflect in depth on their language use in the interview. We explore the role of gender on intergenerational transmission by including it in the regression analysis conducted later (see Table 13).

Respondents learnt their Welsh primarily from their own parents at home, though many respondents also learnt it in school (Table 9).

Table 9: Source of parents' Welsh language education

|  | Respondent <br> $(\%)$ | Partner (\%) |
| :--- | ---: | ---: |
| At home, as a young child | 47 | 38 |
| At nursery (aged 3-4) | 32 | 0 |
| At primary school (aged 5-10) | 35 | 3 |
| At secondary school (aged 11+) | 23 | 6 |
| At college or university (full-time) | 2 | 0 |
| Somewhere else, including on a Welsh for Adults course | 3 | 3 |
| All of the above | 5 | 25 |

## Intergenerational transmission of Welsh

5.33 When it comes to speaking Welsh with their youngest child (see Table 10), the largest proportion of respondents (38\%) state they always or almost always speak Welsh with them, with only $15 \%$ stating they always (or almost always) speak English. However, these respondents report that their partners speak Welsh less often with their youngest children: $36 \%$ were reported to always speak English, compared to 29\% who always speak Welsh. Nevertheless, there is a significant, positive correlation between these ratings (Table 10). (Note that during the interview, a similar question was asked about language use with the youngest child and here a majority (53\%) indicated mixed language use, compared to 18\% English and 28\% Welsh. This latter measure is a less precise one (i.e. fewer response categories) than the former one, so the former (shown in Table 10) is the measure used in the inferential statistics in above.)
5.34 Analysis of this question (i.e. frequency of speaking English/Welsh with youngest child; Table 10) by region shows significant differences between north west and south east study regions (see Figure 9). Whilst it should be borne in mind that this study's results cannot be extrapolated to Specifically, English is more commonly transmitted in Rhondda Cynon Taf and Caerphilly (south east), while Welsh is more common in Anglesey and Gwynedd.
Analysis of Variance (ANOVA), which analyses the differences between several means, shows these regional differences are significant for both the respondent $(F(1,3)=6.53, p=.001)$ and their partner $(F(1,3)=13.11, p<.001)$. Post-hoc analysis, which identifies where the differences in means lie, shows there are no significant differences between Rhondda Cynon Taf and

Caerphilly or between Anglesey and Gwynedd; while the two northern regions differ significantly from the two southern regions.

Table 10: Use of Welsh with youngest child (as reported by Respondent)

|  | Respondent (\%) | Partner (\%) | Correlation (sig.) |
| :--- | ---: | ---: | ---: |
| Always/almost always Welsh [1] | 38 | 29 |  |
| Mainly Welsh [2] | 3 | 3 |  |
| Roughly equal use of Welsh and English [3] | 23 | 7 |  |
| Mainly English [4] | 20 | 21 |  |
| Always/almost always English [5] | 15 | 36 |  |
| Other language [6] | 0 | 1 |  |
| Mean | $\mathbf{2 . 7}$ | $\mathbf{3 . 3 8}$ | $\mathbf{. 6 1 ~ ( . 0 0 1 ) ~}$ |

Figure 9 Use of English vs. Welsh with youngest child, by region

5.35 Correlation analysis also shows a significant and strong relationship of language background (i.e. use of Welsh growing up; Table 7) and current use of Welsh with youngest child (Table 10). Specifically, the correlation between language background and current transmission for respondents is 0.70 ( $p<.001$ ) and .76 ( $p<.001$ ) for partners. Given that a correlation of 1 would mean absolute correspondence (i.e. everyone speaking Welsh growing up transmits Welsh to their child), a correlation of at least 0.7 is a strong relationship highlighting this as an important predictor of transmission.
5.36 Consistent with the predominance of intergenerational Welsh language transmission, all but three of the respondents (i.e. 95\%) reported they plan to send their youngest child to a Welsh-medium school. The three who stated
they plan to send their child to English-medium school all live in the same area of Rhondda Cynon Taf.
5.37 When asked how conscious the decision to speak Welsh to their youngest child is, $68.3 \%$ of respondents reported 'I just naturally use whichever language feels more appropriate at the time', compared to $23.3 \%$ who stated, 'I have consciously chosen to use a particular language with my child and try to stick to that.' In the case of partners, responses to this question were more equally split with $41 \%$ selecting each option.

Psychological variables
5.38 Table 11 shows the respondent and partner responses to the attitudinal, identity, norm, control, habit and value questions ('psychological' variables). This shows broadly positive views about speaking Welsh to their child. There is also close correspondence in respondent and partner parent responses on this issue and in their broader value set. Specifically, the responses from respondents and partners for measures of social norms, control, identity, habits and self-oriented values (e.g. hedonism) are significantly correlated.

Table 11: Respondent and partner responses to psychological variables
This question used 7-point response scales. Unless otherwise shown, $1=$ strongly disagree and 7=strongly agree.

|  | Respond nt mean | SD | Partner <br> Mean | SD | Correlati on | Sig. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Attitude: I think that speaking Welsh to your child is extremely bad <br> (1)/extremely good (7) | 6.78 | 0.64 | 6.78 | 0.58 | . 07 | . 73 |
| Norm1: Most people who are important to me think that I should (7)/should not <br> (1) speak Welsh to my child | 6.50 | 0.79 | 6.37 | 1.21 | . 01 | . 97 |
| Norm2: Where I live, it is normal for people to speak Welsh to their children | 4.78 | 2.20 | 5.63 | 1.96 | . 54 | . 00 |
| Norm3: Where I live, there is enough support and provision (for example, schools) for the Welsh language | 5.69 | 1.64 | 6.08 | 1.23 | . 46 | . 02 |
| PBC1: How much control do you have over whether you speak Welsh to your child? Very little=1/Great deal of control=7 | 6.33 | 1.32 | 6.08 | 2.04 | -. 09 | . 67 |
| PBC2: For me to speak Welsh to my child is very difficult (1)/very easy (7) | 5.98 | 1.48 | 5.33 | 2.32 | . 45 | . 03 |
| Identity1: I think of myself as a Welsh speaker | 5.93 | 1.79 | 4.96 | 2.60 | . 08 | . 70 |
| Identity2: To speak Welsh is an important part of who I am | 5.83 | 1.66 | 5.29 | 2.39 | . 50 | . 01 |
| Identity3: I am not the type of person who would speak Welsh | 1.57 | 1.08 | 2.04 | 1.83 | . 31 | . 14 |
| Habit1: Speaking Welsh to my child is something I do without thinking | 5.52 | 1.95 | 5.21 | 2.52 | . 49 | . 01 |
| Values (1= very much like me; 6=not at all like me): |  |  |  |  |  |  |
| V-SD: Creativity | 2.17 | 0.99 | 2.22 | 1.22 | . 13 | . 53 |
| V-PO: Wealth | 4.87 | 0.85 | 4.19 | 1.47 | . 35 | . 07 |
| V-SE: Security | 1.92 | 1.03 | 2.48 | 1.22 | . 14 | . 49 |
| V-H: Hedonism | 3.70 | 1.09 | 3.89 | 1.55 | . 58 | . 00 |
| V-B: Benevolence (society) | 2.32 | 0.97 | 2.67 | 1.14 | . 17 | . 40 |
| V-B: Benevolence (local) | 2.05 | 0.89 | 2.48 | 1.09 | . 17 | . 40 |
| V-A: Achievement | 3.40 | 1.32 | 3.19 | 1.50 | . 38 | . 05 |
| V-ST: Stimulation/risks | 3.56 | 1.59 | 3.44 | 1.48 | -. 05 | . 81 |
| V-CO: Conformity | 2.53 | 1.31 | 2.74 | 1.66 | . 10 | . 62 |
| V-UN: Nature | 2.15 | 1.08 | 2.41 | 1.25 | . 19 | . 35 |
| V-TR: Tradition | 2.73 | 1.40 | 3.15 | 1.22 | -. 04 | . 86 |

## Predictors of Intergenerational Transmission

5.39 Using the variables of intergenerational transmission shown earlier in Table 10, we can explore the influence of the background and psychological variables reported above on intergenerational language transmission. Note that the sample is very small $(n=60)$ for respondents and even smaller
( $n=32$ ) for partners. This restricts the analysis that can be done to explore relationships in this dataset since larger sample sizes are required to detect smaller effects. With a larger sample size (of several hundred respondents), we would have more confidence in our findings and be able to detect the full range of effects of our variables. Nevertheless, it is not unprecedented to conduct regression analysis on sample sizes of less than 100 respondents, but doing so may not reveal all significant relationships. Our analysis therefore should be seen as indicative of the utility of psychological and social variables in predicting transmission, and on which further research with a larger sample might build.
5.40 Based on our literature review, we expected that Theory of Planned Behaviour (TPB) variables (attitude, social norm and perceived behavioural control) along with identity and habit relating to the Welsh language will predict transmission. We also predicted that valuing tradition would positively predict transmission, and that certain background and contextual factors would be important, such as national identity, Welsh language ability, feeling comfortable with speaking Welsh, language background, region and education. Regression analysis, which allows us to explore the effects of several predictor variables at once on the 'dependent variable' we are interested in predicting (here, transmission), was therefore conducted to explore these predictors for the respondent, where the sample size was sufficient to at least detect larger effects.
5.41 First, we conducted a regression analysis to explore the effects of the psychological variables alone in predicting intergenerational transmission using frequency of Welsh spoken with youngest children (Table 10) by the respondent as the dependent variable. The results are shown in Table 11. The results indicate that none of the psychological variables-that is, attitude, social norms, perceived behavioural control, identity, habit and tradition values-significantly influence intergenerational language transmission taking the standard $p$ value of 0.05 (i.e. the likelihood of $95 \%$ that this is a 'true' effect versus random sampling error). However, taking the less cautious $0.1 p$ value, we see Welsh language habit and identity are significant predictors of transmission. That is, respondents who say that speaking Welsh to their child is something they do without thinking and for whom speaking Welsh is part of who they are, are more likely to speak Welsh to their children. However, attitude, social norm, perceived
behavioural control and values had no effect on transmission. In total, 58\% of variance in transmission is explained by this model (i.e. 42\% of language transmission is not explained by these psychological factors).
5.42 Additional analysis confirms that attitude towards speaking Welsh to their children and behaviour (i.e. intergenerational transmission) is not significantly correlated ( $\mathrm{r}=.13, p=.32$ ), which is consistent with previous research suggesting little relationship between attitude and behaviour in this context.

## Table 12: Psychological predictors of Welsh language transmission to youngest child by respondent

Step-wise regression; note that the Dependent Variable (DV) is coded as 1=Always speak Welsh to 5=Always speak English. Statistically significant variables are shown in bold. Refer to Table 12 for wording of independent variables.

|  | B | Std. Error | Beta | t | Sig. |
| :--- | ---: | ---: | ---: | ---: | ---: |
| (Constant) | 10.31 | 2.26 |  | 4.57 |  |
| Attitude | -0.05 | 0.25 | -0.02 | -0.20 | 0.84 |
| Social norm 1 (prescriptive) | -0.29 | 0.19 | -0.15 | -1.51 | 0.14 |
| Social norm 2 (descriptive1) | -0.11 | 0.07 | -0.16 | -1.48 | 0.15 |
| Social norm 3 (descriptive2) | -0.08 | 0.10 | -0.09 | -0.83 | 0.41 |
| PBC1 (control) | -0.10 | 0.13 | -0.09 | -0.82 | 0.42 |
| PBC2 (difficulty) | 0.01 | 0.14 | 0.01 | 0.05 | 0.96 |
| Welsh language identity | $\mathbf{- 0 . 3 1}$ | $\mathbf{0 . 1 8}$ | $\mathbf{- 0 . 2 7}$ | $\mathbf{- 1 . 7 4}$ | $\mathbf{0 . 0 9}$ |
| Welsh language habit | $\mathbf{- 0 . 2 8}$ | $\mathbf{0 . 1 4}$ | $\mathbf{- 0 . 3 6}$ | $\mathbf{- 1 . 9 7}$ | $\mathbf{0 . 0 6}$ |
| Tradition values | $\mathbf{- 0 . 1 4}$ | 0.12 | -0.12 | $\mathbf{- 1 . 1 2}$ | 0.27 |

5.43 We then conducted further regression analysis to explore the effect of background variables on intergenerational language transmission. Table 13 shows the results from a step-wise regression analysis (which allows us to add groups of variables in the analysis one step [or 'model'] at a time, to see how much influence they have). The first model includes demographic factors and explains $22 \%$ of variance in transmission. This shows that the only demographic variable to predict transmission is the gender of the respondent: mothers are more likely than fathers to speak Welsh to their youngest (consistent with the earlier analysis). Age, education, social class (SEC) and national identity are not significant predictors of transmission.
5.44 The second model included demographic factors, language background and region, and explained $63 \%$ of variance in transmission (i.e. adding in language background and region explained $41 \%$ variance more than demographics alone). Language background and region were found to be
strong, significant predictors: respondents who spoke more Welsh growing up and those living in north west Wales are more likely to speak Welsh to their own child. We then added in Welsh language ability and feeling most comfortable speaking Welsh—neither of which were significant predictors of transmission.
5.45 The fourth and final model included the psychological variables along with the variables included in all the previous models. This 'full model' explained 88\% of variance in transmission, suggesting most of the key drivers of transmission have been considered. However, no variables are significant predictors at the 0.05 probability (p) level. Region, education and age are marginally significant (i.e. significant at the 0.1 p level), indicating that those living in north west Wales, with higher education and older, are more likely to transmit Welsh to their child. Overall, the factor with the strongest influence (i.e. 'Beta' value) on the dependent variable (transmission) is region.

Table 13: Predictors of Welsh language transmission to youngest child by respondent
Step-wise regression; note that the Dependent Variable (DV) is coded as 1=Always speak Welsh to 5=Always speak English. Statistically significant variables are shown in bold. See Table 11 for wording of psychological variables.

| Model ( $\mathrm{R}^{2}$ change) |  | B | Std. Error | Beta | t | Sig. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | (Constant) | 5.67 | 2.46 |  | 2.30 | 0.03 |
| 0.22 | Gender | -1.84 | 0.88 | -0.37 | -2.08 | 0.05 |
|  | Age | -0.02 | 0.05 | -0.07 | -0.40 | 0.70 |
|  | Education | -0.07 | 0.16 | -0.08 | -0.42 | 0.68 |
|  | Social grade | 0.13 | 0.15 | 0.15 | 0.88 | 0.39 |
|  | National identity (Welsh) | -1.01 | 0.87 | -0.20 | -1.16 | 0.26 |
| 2 | (Constant) | 4.22 | 2.34 |  | 1.80 | 0.08 |
| 0.63*** | Gender | -0.29 | 0.70 | -0.06 | -0.42 | 0.68 |
|  | Age | -0.06 | 0.04 | -0.19 | -1.31 | 0.20 |
|  | Education | 0.03 | 0.12 | 0.03 | 0.27 | 0.79 |
|  | Social grade | 0.08 | 0.11 | 0.10 | 0.77 | 0.45 |
|  | National identity (Welsh) | -0.21 | 0.68 | -0.04 | -0.31 | 0.76 |
|  | Language background | 0.38 | 0.14 | 0.42 | 2.79 | 0.01 |
|  | Region (NW=1) | -1.82 | 0.47 | -0.57 | -3.90 | 0.00 |
| 3 | (Constant) | 4.50 | 2.50 |  | 1.80 | 0.08 |
| 0.66 | Gender | -0.36 | 0.71 | -0.07 | -0.51 | 0.62 |
|  | Age | -0.05 | 0.05 | -0.15 | -1.01 | 0.32 |
|  | Education | -0.01 | 0.12 | -0.01 | -0.05 | 0.96 |
|  | Social grade | 0.05 | 0.11 | 0.06 | 0.47 | 0.64 |
|  | National identity (Welsh) | -0.44 | 0.70 | -0.09 | -0.63 | 0.54 |
|  | Language background | 0.17 | 0.20 | 0.19 | 0.82 | 0.42 |
|  | Region (NW=1) | -1.42 | 0.54 | -0.44 | -2.61 | 0.02 |
|  | Most comfortable speaking Welsh | -0.77 | 0.70 | -0.23 | -1.10 | 0.28 |
|  | Welsh language ability | 0.44 | 0.41 | 0.16 | 1.07 | 0.30 |
| 4 | (Constant) | 12.56 | 5.88 |  | 2.14 | 0.05 |
| 0.88* | Gender | -0.59 | 1.04 | -0.12 | -0.57 | 0.58 |
|  | Age | -0.08 | 0.05 | -0.27 | -1.79 | 0.09 |
|  | Education | -0.22 | 0.12 | -0.24 | -1.86 | 0.08 |
|  | Social grade | 0.04 | 0.13 | 0.04 | 0.29 | 0.78 |
|  | National identity (Welsh) | -0.79 | 0.60 | -0.16 | -1.31 | 0.21 |
|  | Language background | 0.03 | 0.18 | 0.03 | 0.15 | 0.89 |
|  | Region (NW=1) | -1.94 | 0.98 | -0.61 | -1.98 | 0.07 |
|  | Most comfortable speaking Welsh | -0.10 | 0.63 | -0.03 | -0.16 | 0.88 |
|  | Welsh language ability | -0.14 | 0.46 | -0.05 | -0.30 | 0.77 |
|  | Attitude | -0.03 | 0.57 | -0.01 | -0.05 | 0.97 |
|  | Social norm 1 (prescriptive norm) | 0.01 | 0.32 | 0.00 | 0.03 | 0.98 |
|  | Social norm 2 (descriptive1) | 0.19 | 0.13 | 0.28 | 1.55 | 0.14 |
|  | Social norm 3 (descriptive2) | 0.02 | 0.18 | 0.02 | 0.10 | 0.93 |
|  | PBC1 (control) | -0.22 | 0.26 | -0.20 | -0.85 | 0.41 |
|  | PBC2 (difficulty) | -0.38 | 0.28 | -0.32 | -1.37 | 0.19 |
|  | Welsh language identity | 0.30 | 0.45 | 0.23 | 0.67 | 0.51 |
|  | Welsh language habit | -0.40 | 0.50 | -0.49 | -0.81 | 0.43 |
|  | Tradition values | -0.25 | 0.16 | -0.19 | -1.58 | 0.13 |

Exploratory analysis was conducted to examine whether other values relate to Welsh transmission to the youngest child. Table 10 shows that there is no statistically significant relationship between transmission and any value measured in the survey (which includes all fundamental human values, according to Schwartz' (1992) theory).

Table 14: Correlation between respondent speaking Welsh with youngest child and their values

|  | Correlation | Sig. |
| :--- | ---: | :---: |
| V-SD: Creativity | -0.08 | 0.55 |
| V-PO: Wealth | -0.16 | 0.22 |
| V-SE: Security | -0.19 | 0.15 |
| V-H: Hedonism | -0.15 | 0.26 |
| V-B: Benevolence <br> (society) | -0.02 | 0.91 |
| V-B: Benevolence (local) | 0.02 | 0.86 |
| V-A: Achievement | -0.15 | 0.25 |
| V-ST: Stimulation/risks | 0.05 | 0.74 |
| V-CO: Conformity | -0.11 | 0.42 |
| V-UN: Nature | -0.05 | 0.68 |

## Discussion

5.47 Our findings indicate that among Welsh-speakers: mothers, those living in the north-west Wales study area, and those with Welsh language upbringing, are more likely to transmit Welsh to their children than other respondents. Our analysis confirms that there are significant differences in transmission behaviour in the two study areas. Geographical comparison was not one of our research questions, because there are other demographic differences between areas which may also affect transmission (see also 2.66 and 3.30). Similarly, the nature of the sample is that all the mothers were also main caregivers which may independently influence transmission (see also 2.25 and 7.22). We found age and education also to be marginally significant predictors of transmission: older and more educated respondents may be more likely to transmit Welsh (although there is a greater probability that these relationships are due to the nature of our sample than is the case for the effects of region, language background and gender).

Overall, we found psychological variables to be less predictive of transmission than geographical and biographical factors: attitude towards speaking Welsh, social norms, perceived control, and values were not predictors, although Welsh language habit and Welsh language identity were marginally significant predictors. In other words, feeling that Welsh language is a part of one's sense of self and habitually speaking Welsh to one's child may have some influence on language transmission. The latter of these relationships is unsurprising, given the similar wording of the predictor (habitually speaking Welsh to one's child) and dependent (frequency of using Welsh with youngest child) variables. However, it is more noteworthy that one's identification with the Welsh language has some influence on transmitting the language to the next generation. Previous research (Nash et al., 2012) suggested a relationship between Welsh identity and Welsh language, and this current research extends this to suggest language identification may influence behaviour (specifically, language transmission).

We also found the TPB measures we adapted from standard formulations were not as reliable (i.e. the items in the measures were not as highly correlated), as others have found, perhaps indicating new measures specific to the language transmission context should be developed.
5.50 Although we found broadly positive attitudes towards Welsh, these were not a significant predictor of language transmission. This is consistent with previous research (e.g. Gathercole et al. (2007)) and suggests campaigns to promote language transmission are unlikely (at least by themselves) to be effective. Indeed, we found that the decision to speak Welsh to one's child is often automatic, rather than deliberate, and that habitual Welsh language use significantly predicted transmission. This is the first theoretically informed research to explore the non-conscious dimensions of language transmission and confirms the limits of intention-based (i.e. reasoned) models of behaviour, such as the Theory of Planned Behaviour, noted in other contexts (e.g. Verplanken and Wood (2006)).
5.51 Certain factors suggested in previous research to be important, such as social grade and normative beliefs, were not found here to be significant predictors of language transmission—although our sample was perhaps too small to show significant effects of all potentially relevant variables.

We are confident that the main factors suggested both in the transmission literature review and the behavioural science review were examined here. We included Theory of Planned Behaviour (TPB) variables (attitudes, norms, perceived control), along with habit, identity and values, and background variables (demographic factors, language background, region, language ability and comfort), all of which we hypothesised would be related to language transmission. Indeed, our full regression model predicted $88 \%$ of variance (much higher than that obtained in most social psychological research using TPB or similar behavioural models) in intergenerational transmission, confirming most predictors were included. In other words, only $12 \%$ of intergenerational language transmission was not explained by our predictors. However, we found relatively few significant relationships, which may be due to the small sample size $(n=60)$ that makes it difficult to detect all but the strongest effects on transmission. Further work should build on these indicative findings and examine whether these predictors are significant within a larger survey sample size (of several hundred respondents).
5.53 Overall, we conclude that psychological variables are likely to provide some explanation of why people transmit Welsh to their children; but region and upbringing appear to be more significant explanatory factors.

Having analysed the quantitative data collected from respondents, the next chapter proceeds to analyse the qualitative material we collected from face-to-face interviews.

## 6. Qualitative Data Analysis

6.1 The previous chapter presented a quantitative analysis of the correlations between individual respondents' transmission of Welsh with their children and several social and psychological factors. The results of this analysis suggested that confidence, comfort speaking Welsh, and automaticity of language behaviour, along with gender, language background and region of upbringing, are likely to predict intergenerational Welsh language transmission. The current chapter provides a qualitative analysis of the semistructured interview data we collected from respondents regarding (non-) transmission of Welsh to their children. Firstly, we outline the general patterns of use of Welsh found in the qualitative data. Secondly, we examine the influences on transmission and on whether a conscious decision was made regarding language use in the home.
6.2 The nature of the sample has been described elsewhere in this report (see Chapter 4, Methodology). It bears repeating, however, that the data collected in the fieldwork is not intended to be representative of the wider Welsh population but instead provides an insight into how respondents in the survey areas describe their language use with their children and how they frame the experiences which may have affected these patterns of use.
6.3 The remainder of the chapter is structured as follows: firstly, we describe the methods of qualitative data coding and analysis. Secondly, we outline the main themes regarding language transmission and use of Welsh in the home. The final sections in this chapter discuss the results of the qualitative data regarding the research questions and give conclusions to be discussed further in Chapter 7 (Discussion, Conclusions).

## Qualitative Data Coding \& Analysis

6.4 The qualitative data elicited during the interview with the main caregiver were analysed thematically (Silverman 2015, p. 226). Thematic analysis also provides a theory-independent and flexible approach to data analysis (Braun and Clarke 2006, p. 81). As Braun and Clarke (2006, p. 86) note, 'thematic analysis involves the searching across a dataset [...] to find repeated patterns of meaning' (italics in original). In our thematic analysis, we aimed to find patterns of transmission and factors which might influence these patterns.
6.5 Notes were taken during the recorded interview by the fieldworkers (Arad Research) which summarised the answers given by respondents. Full verbatim transcription was not possible due to the timescale of the project. Instead, recordings for interviews were subsequently listened to by other members of the research team (Evas and Morris) and verbatim quotations and supplementary notes were made where necessary. We do not feel that this has limited the reliability of the results in this project, as a full verbatim transcription would be more essential for work within a discourse analytic framework.
6.6 The responses of the respondents were then labelled using 'codes' based on the question asked (Rubin and Rubin 2005, p. 209). Table 15 gives the labels used to code the data and the relevant set of questions in the interview schedule (see Appendices).

## Table 15: Codes used to label the qualitative data

| Relevant section in the <br> interview schedule | Code |
| :--- | :--- |
| Transmission (which <br> languages respondents <br> and extended family use <br> with their children and <br> how children respond) | Strategies (language use in the family) <br> Welsh (use of Welsh) <br> English (use of English) <br> Behaviour (linguistic behaviour of the child) <br> Expectation (to use Welsh by other people) <br> Role of family and social networks (in transmission) |
| Respondent's linguistic <br> background | Family's use of Welsh in childhood <br> School (use of Welsh outside of the classroom) <br> Leisure time (social activities in Welsh) <br> Attitudes (respondent's attitudes) <br> Community (perceived attitudes towards Welsh in the <br> community) |
| Respondent's current <br> use of Welsh and <br> orientation towards the <br> language | Family current use of Welsh <br> Confidence (respondent's perceived confidence in Welsh and <br> English) <br> Identity (importance of speaking Welsh to self-image). |
| Welsh in the community | Provision (in the local community) <br> Schools (perceived view of schools in the area) <br> Expectation (to use Welsh in the local area) <br> Attitudes (towards Welsh in the local area) |
| Family Language <br> Planning | Intent (the extent to which transmission was an intentional <br> decision) <br> Discussions (both prior to and after birth) <br> Change (any change in decision following birth) <br> Confidence (in ability to transmit Welsh) |

6.7 The coded data were then analysed for themes. For respondents' responses to be counted as a theme, they contributed to answering the research questions and were mirrored in the responses of other respondents. There is no definitive threshold for the number of times a response must be given by multiple respondents in order to constitute a theme (Braun and Clarke 2006, p. 82). Note that themes were not discernible for each code in Table 15. For instance, the extent to which Welsh was spoken in the community yielded little direct influence on the decision to transmit Welsh (though it was an explanatory factor when considering how comfortable respondents felt speaking Welsh). As was found in Chapter 5 (Applying Behavioural Approaches to Language Transmission), speaker identity did not appear to be a main theme as most respondents felt that the language was an important part of their identity even if they were not comfortable speaking it with their children. To improve reliability, the thematic analysis was undertaken by the first and second authors independently before being discussed and agreed upon between them.
6.8 As already stated, these data are based on self-reports and therefore may not be reliable as analyses based on long-term observation. In addition, the focus is primarily on the respondents' language use rather than the linguistic behaviour of the child. Although this should be kept in mind in the results which follow, we stress that the aims of this research are to examine patterns of language use and the factors which may affect respondents' use of Welsh with the children. We hope that future work will take a more ethnographic and observational approach to the way in which the use of Welsh patterns in the day-to-day lives of respondents and the role which children play in family language policy (Smith-Christmas 2014).
6.9 Having outlined the methods of qualitative data coding and analysis, we now turn to the main themes which arise in the data.

## Results of the thematic analysis

6.10 There were several main themes which arose regarding the use of Welsh in the home and the factors which influence transmission. This section outlines these themes and shows the main characteristics of the respondents in whose data each theme arose. We have included examples of individual respondents' stories in Appendix 2 and a summary of each respondent's background and language use with their children in Appendix 3.

The Transmission of Welsh to Children as an Unconscious Behaviour by Respondents
6.11 For many respondents in the research, Welsh was the main language which they used with their children at all times and there had been no discussion regarding this language use with the children. These respondents tended to come from Gwynedd and Anglesey but, more importantly, they were overwhelmingly from Welsh-speaking families and had themselves been socialised primarily in Welsh outside of school. As one respondent explained:
'Mae bob dim yn fy mywyd i wedi bod drwy'r Gymraeg—mae fy addysg i wedi bod trwy'r Gymraeg, ac wedyn mae fy ngwaith i wedi bod trwy'r Gymraeg, ac mae fy ngŵr i'n Gymraeg, mae fy mhlant i'n Gymraeg felly dydi hi ddim yn rhywbeth dwi wedi gwneud yn 'conscious' er mwyn cael gwaith... mae jyst wastad wedi bod yna' ('Everything in my life has been through Welsh—my education has been through Welsh, and then my work has been through Welsh and my husband is Welsh-speaking so it isn't something l've done consciously in order to get work...it's just always been there')-Mother, Gwynedd.
6.12 Many of these respondents had extended family members who did not speak Welsh, and friends with whom they spoke English. It cannot be assumed, therefore, that active use of English was not a part of their childhood experience. In most cases, however, it was the availability of Welsh-speaking social networks in the local community in childhood, the use of Welsh within the immediate family, and Welsh-medium education which were common to all respondents.
6.13 These respondents, whether they had Welsh-speaking partners or not, tended to report a high level of confidence when speaking Welsh, and used Welsh in more formal or professional contexts as well as in their personal social networks and families. In the case of some of the respondents, exemplified by the extract below, confidence in Welsh was greater than in English:
'Achos fy mod i wedi magu yn Gymraeg, dwi'n arafu pan dwi'n siarad Saesneg a rhoi geiriau Cymraeg mewn bob hyn a hyn. Dwi'n gorfod meddwl mwy am siarad Saesneg' ('Because l've been raised in Welsh, I
slow down when I speak English and put Welsh words in every so often. I have to think more about speaking English')—Mother, Gwynedd.
6.14 There were respondents from English-speaking homes who used Welsh with their partners and children. These respondents had acquired Welsh either through education or social contact with Welsh-speaking children during childhood or (in the case of one respondent) had learned Welsh in adulthood. These respondents were now in relationships with people who had acquired Welsh at home. There was little in the data which suggested that these respondents had contemplated using English over Welsh with their children, and their current social networks were predominantly Welshspeaking:
'O'n i jyst yn gwybod bysen nhw'n cael Cymraeg anyway’ ('I just knew they'd get Welsh anyway')—Mother, Rhondda Cynon Taf.

Perhaps more importantly, in these cases Welsh was already established as the language of the respondents prior to the birth of the child.
6.15 Respondents in relationships with partners who did not speak Welsh reported that they had discussed speaking Welsh to their child with their partner prior to birth (see 0 ). Some respondents noted that no discussions about language use in the home had taken place and it was 'taken for granted' by the non-Welsh-speaking partner that the Welsh-speaker would speak Welsh to the child:
'Oedd o'n gwybod mai dyna oedd y sefyllfa yn mynd i fod felly...dwi'n reit stubborn yn y ffordd yna...basa dim byd wedi gwneud i fi siarad Saesneg efo hi' ('He knew that was how the situation was going to be so...I'm really stubborn in that way, nothing was going to make me speak English to her')—Mother, Gwynedd.
6.16 The interview questions focussed on respondents' decisions regarding transmission rather than on processes of bilingual speech (such as codeswitching or translanguaging). These were mentioned by some respondents, however. One respondent explained that her non-deliberative use of both English and Welsh means that she does not really pay attention to which language she is speaking:
[DDwi'n gyfforddus] yn y ddwy iaith ...oherwydd y ffordd dwi 'di cael fy magu....Mae'n dibynnu ar y sefyllfa, pa iaith bynnag sy'n dod allan yn gyntaf, it just comes out' ('[l'm comfortable] in both languages...because of the way l've been raised. It depends on the situation, whichever language comes out first, it just comes out')—Mother, Gwynedd.

Increasing the use of English in a Welsh-speaking family
6.17 Three respondents from Anglesey, who almost always spoke Welsh with their children, reported consciously using a certain amount of English with them as they felt that solely using Welsh would hamper their attaining a sufficient level of English. An example of the rationale for this decision is shown in the extract below, where the respondent commented that she wanted to speak more English with her child as she felt that coming from a home where only Welsh was used negatively affected her own confidence in English.
'Dwi'n meddwl fod o'n bwysig bo' nhw'n siarad Saesneg hefyd achos mae'r gymdeithas fel mae hi yn ddwyieithog so yr unig anfantais dwi'n teimlo bo' fi di gael ydi bo fi ddim yn confident yn siarad Saesneg' (I think it's important that they also speak English because society as it is bilingual so the only disadvantage I feel that I've had is that I don't feel confident speaking English)—Mother, Anglesey.
6.18 The three respondents who talked about consciously introducing more English into the home did not elaborate on how this was achieved (for instance, whether they allocate specific functions to English) and it might be that their language use is in fact similar to that of other respondents. However, it is noteworthy that some respondents explicitly stated that they felt speaking only Welsh at home negatively affected their confidence in English and that this was something they wished to avoid for their children. It is also noteworthy that many respondents who did not speak Welsh expressed the same concerns to their Welsh-speaking partner but this tended to occur in conversations regarding Welsh-medium education in households where mainly English was used (see 6.32).

## Discussions regarding family language transmission

6.19 Family language transmission was discussed prior to birth in most cases in two-parent families where only one parent spoke Welsh. Of these Welsh speakers, all came from predominantly Welsh-speaking home backgrounds rather than having acquired the language through the school system alone. In many cases, these respondents noted that their partners had been supportive of the transmission of Welsh:
'[My husband] could see the advantage it gave me at work and the opportunities it gave me while I was in school and...I told him about all the Eisteddfod activities that I did and how that fed into my social activities at University and...he was totally supportive'-Mother, Rhondda Cynon Taf. Language approach was agreed upon early in the child's life, attitudes towards this approach changed over time:
'Since we met [respondent switches to Welsh], nes i gweud bo fi eisiau plant, a ma nhw mynd i siarad Cymraeg, ac oedd beth fi eisiau mor gymaint oedd siarad Cymraeg. A fi'n credu bod 'na rywbeth mewn fi, oedd fi eisiau siarad Cymraeg gyda rhywun a cael opportunity i siarad Cymraeg gyda fe. Oedd [fy mhartner] sort of OK 'da fe oherwydd it wasn't the real thing yet, "yeah yeah, sounds good"...So, wishful thinking beforehand" ('Since we met, I said that I wanted children and they're going to speak

Welsh and what I wanted so much was to speak Welsh. And I think that there was something in me, I wanted to speak Welsh with someone and have the opportunity to speak Welsh with him. [My partner] was kind of ok with it because it wasn't the real thing yet "yeah yeah, sounds good"...So, wishful thinking beforehand')-Father, Rhondda Cynon Taf.
6.22 The problems encountered by some respondents who had instigated a OneParent One-Language policy in the home centred on their partner feeling left out. This sometimes led to the non-Welsh-speaking partner expressing their concerns and a limitation in the amount of Welsh spoken in the home.
'I gychwyn roedd o'n meddwl ei fod o'n syniad bendigedig bod yn siarad Cymraeg ac wedyn...doedd o ddim yn hoffi'r syniad bod ei [blentyn] o a fi a'i [sibling] yn mynd i fod yn siarad mewn iaith na fasa fo ddim yn deall ac oedd hynna er bo fi wedi bod yn helpu ac yn rhoi links i bethau Cymraeg a trio cael o i wersi Cymraeg a bob dim felly oedd o'n hoffi'r syniad ond fel oedd y gwirionedd yn dod yn agosach doedd o ddim yn hoff iawn o'r syniad o gwbl' ('To start with he thought it was a great idea speaking Welsh and then...he wasn't keen on the idea that his [child] and me and his [sibling] are going to be speaking in a language he didn't understand and that was with me helping and giving links to Welsh things and trying to get him to Welsh lessons and everything so he liked the idea but when it came to it he didn't like the idea at all')-Mother, Gwynedd.
'Dydi o ddim isio [i'r plentyn] golli allan fatha fo.... Efallai fod o'n teimlo tipyn yn left out efo ni'n dwy. Mae o wedi deud wrtha i actually ei fod o'n poeni byddan ni'n dwy yn siarad Cymraeg a fydd o ddim yn dallt' (He didn't want [the child] to miss out like him.... Maybe he feels a bit left out with us two. He has told me actually that he's worried that us two will speak Welsh and he won't understand'-Mother, Anglesey.
6.23 In most cases, any discussions regarding transmission took place between the two parents only. Fewer respondents noted discussing transmission with others. One respondent noted that they had discussed transmission with Twf but could not recall the details. Two respondents noted that they had discussed transmission with extended family. In the following extract, the respondent recalls the reaction of an extended family member when transmission of Welsh was discussed:
'Oedd na sbel [cyn] i'r [aelod o'r teulu] dwymo i'r Gymraeg. Dwi'n cofio sgyrsiau; [respondent switches to English] "her English is going to be way below average if she's just doing Welsh all the time" ('It was a while [before] my [extended family member] warmed to Welsh. I remember conversations; her English is going to be way below average if she's just doing Welsh all the time")—Mother, Rhondda Cynon Taf.
6.24 There were instances where respondents who had acquired Welsh through Welsh-medium education made a conscious decision to use Welsh with their child. These respondents were from Gwynedd and Anglesey, one of whom justified her position thus:
'Nes i ddim siarad Cymraeg nes diwedd cynradd, dechrau ysgol uwchradd ond dwi isio [i'r plentyn] ddysgu Cymraeg o'r cychwyn. Dwi'n siarad mwy o Gymraeg efo fo na Saesneg ond mae gŵr fi'n siarad mwy o Saesneg' (I didn't speak Welsh until the end of primary, start of secondary school but I want [the child] to speak Welsh from the start. I speak more Welsh with him than English but my husband speaks more English')—Mother,

## Anglesey.

These results largely suggest that discussions between a Welsh-speaking respondent and their non-Welsh-speaking partner resulted in the Welshspeaking respondent speaking Welsh to the child. As was seen in some of the extracts, however, some respondents reported that the non-Welshspeaking partner raised concerns about not being able to understand parentchild interactions. A related theme was the accommodation to English of Welsh-speaking respondents in day-to-day life.

Accommodation to English
6.26 Accommodation to English among Welsh-speaking respondents was a common theme in the data. For many speakers, this was noted as a pattern of behaviour which they had acquired during childhood when mixing with those from English-speaking homes in Welsh-medium education:
'Oedd 'na chwech yn y grîp, ac oedd pedair Cymraeg a dwy Saesnegond yn aml iawn, oedd y grîp i gyd wedyn yn troi i'r Saesneg' ('There were six of us in the group and there were four Welsh and two Englishbut often all the group turned to English')—Mother, Gwynedd.

There was no indication that accommodation from Welsh to English to those outside of the immediate family influenced transmission of Welsh. Several respondents, however, mentioned that they had been instructed by their own parents, and that they instructed their own children not to use Welsh in the presence of those who do not speak it. Such respondents had either non-Welsh-speaking partners and/or non-Welsh-speaking extended family. This suggests that many respondents accommodate non-Welsh-speaking family members or friends by restricting the use of Welsh to one-to-one interactions with the child:
'[Oedd Mam] yn stoppo fi ganol brawddeg a deud fod o'n rude siarad Cymraeg o flaen [pobl eraill]. Efallai wna i wneud 'run peth gyda [enw'r plentyn] o flaen pobl dwi'n gwybod sy' ddim yn siarad o o gwbl' ('[Mum used to] stop me mid-sentence and say that it was rude to speak Welsh in front of [other people]. Maybe l'll do the same thing with [name of child] in front of people I know don't speak Welsh at all')—Mother, Gwynedd.

In cases where Welsh-speaking respondents had non-Welsh-speaking partners, it was often the case that the use of Welsh was restricted to instances when the respondent was alone with the child. This was often due to the non-Welsh-speaking partner feeling uncomfortable with a strict OneParent One-Language strategy (see 6.22), rather than to Welsh-speaking respondent's lack of confidence in Welsh or negative attitudes towards it.

The Transmission of English to children as an Unconscious Behaviour in the home

A common pattern among respondents from non-Welsh-speaking homes in south east Wales who had acquired Welsh through Welsh-medium education was to use English only with their children. Instead, such respondents tended to discuss Welsh-medium education with their partners (see 6.32) and reported that their children attended, or would be attending, Welsh-medium schools. Like many of those from Welsh-speaking backgrounds, the use of language was not something which was discussed prior to birth or during early childhood. In other words, it was considered 'automatic' for these respondents to use English only:
'If you don't speak Welsh at home, which we didn't, when you have a child, it tends to be that you don't even think about the language.... When
they start school, then you make a decision. If you're not used to speaking [Welsh], English is the default setting'—Father, Rhondda Cynon Taf.
'Dyw'r Gymraeg ddim yn dod yn naturiol [imi] mewn sefyllfa cartrefol' ('Welsh doesn't come naturally to me in a home environment')-Mother, Caerphilly.
6.30 This automaticity of transmission of English was more common in south east Wales (where most respondents had acquired Welsh as a second language through the Welsh-medium education system). It was noted by one respondent as being a common occurrence in Anglesey, but this was not found in our research data:
'Mae 'na lot [o bobl] ffordd hyn sydd yn gallu siarad [Cymraeg], ond yn dewis, bydd well gyda nhw siarad Saesneg, a dwi just yn mynd 'efo beth maen nhw eisiau. Mae lot o hwnna ffordd hyn, lle mae lot o bobl yn gallu siarad Cymraeg, efallai wedi cael addysg Cymraeg, ond bod eu rhieni nhw ddim a bod nhw tu allan i'r ysgol heb siarad Cymraeg gymaint' ('There's a lot of people round here who can speak [Welsh] but choose, they prefer to speak English and I just go with what they want. There's a lot of that around here, where there are a lot of people who can speak Welsh, maybe have had Welsh-medium education but that their parents haven't and they don't speak so much Welsh outside of school')-Mother, Anglesey.

For these respondents from south east Wales, the data suggested that the transmission of English was an automatic behaviour which was not discussed prior to the birth of the child. For the same respondents, however, discussions regarding language use came to the fore when discussing educational options for their child. In no cases, however, did these discussions lead to Welsh becoming the main language of interaction between the Welsh-speaking respondent and the child. We explore the subthemes to this situation in the following sections.

## Discussions about Welsh-medium education

6.32 The use of English by respondents from English-speaking homes in Caerphilly and Rhondda Cynon Taf was often described as the default behaviour prior to birth. However, the respondents in the sample were certain that they wanted their children to attend Welsh-medium school. In
other words, parents often discussed language donation rather than language transmission. This was a very strong theme among respodents from south east Wales. Discussions of schools were often reported prior to birth and in many cases respondents answered questions regarding transmission by referring not to language use in the home but to Welshmedium education:
'Even before I was pregnant I've always said that I wanted my children to go to a Welsh school and my partner has always known that'-Mother, Caerphilly.
'My ex-partner did not want the children to go to a Welsh school whatsoever. Completely and utterly against it. So obviously, that's a massive barrier to begin with. Because he thinks people who go to Welsh school are stupid...they don't get taught properly in Welsh school and that it didn't offer the same opportunities as English schools. So, he didn't care where they went, as long as it wasn't a Welsh school'-Mother, Rhondda Cynon Taf.

The desire for language donation (the desire to send their children to Welshmedium school) was inherently linked with seeing value in Welsh both as a cultural asset and a skill (though no respondents referred to the cognitive benefits of bilingualism which are often referred to in promotional literature).
Respondents referred for a wish to 'pass Welsh on' even though they meant through education rather than family language use:
'I am proud that I can speak Welsh...I'm glad I got educated through Welsh and it made me more passionate to want to pass it down to my own children, to carry it on, not for it to die out'-Mother, Caerphilly. II think I'm very proud that I can speak Welsh, and when I speak to colleagues, a lot are reluctant to send their children to Welsh school and I try to encourage that and say, you know my parents didn't speak Welsh and I didn't find it difficult at all'-Mother, Caerphilly.

It should be noted that most respondents wished for their own children to receive Welsh-medium education (see also Chapter 5-Applying Behavioural Approaches to Language Transmission) despite having neutral or negative experiences of the Welsh language in childhood:
'I didn't have any problem myself with speaking Welsh, my grandfather spoke Welsh, quite happy with it, not a problem, but I realised that other people didn't like it, the kids in your town who went to the English school, I realised quite quickly that l'm in a minority here, a visible minority and they used to think things of us, kick us, throw things at us. And so quickly, within a fairly short time, you were aware that there was a 'thing' attached to [the Welsh language] and this led to ambivalent feelings as time went on as you wondered "why am I marked out like this"?'—Father, Rhondda Cynon Taf.

These observations suggest that, for these respondents, there is a desire to see their children become Welsh speakers and that they reflect positively on their experiences of Welsh-medium education. The results also suggest, however that they see education and not family language use as the vehicle of transmission. This was the main theme from the data in south east Wales, but it was also found that once children enter Welsh-medium education the subject of language use in the home comes to the fore.

Making space for Welsh in an English-speaking family
Almost all the respondents from south east Wales had not considered speaking Welsh to their children at birth. However, they had subsequently started using some Welsh in the home once the child entered Welshmedium education. The use of Welsh in the home was largely restricted to incidental Welsh (the use of formulaic phrases) or discussions regarding school work even by those who had acquired the language from the Welshmedium education system.
'[Language use] is probably 90\% English. l'll ask her of a morning if she wants dîr (water) or Ilaeth (milk)'—Mother, Caerphilly.

In all cases, using incidental Welsh was seen as a way of preparing their children for Welsh-medium education:
'My husband probably expects me to speak Welsh to them as we are planning on sending them to Welsh school. He thinks I should use it more to prepare them for that. He tries to encourage me to use more Welsh with the children'-Mother, Caerphilly.

These respondents were making a conscious effort to use some Welsh with their children. In some cases, this led respondents to change their own
language behaviour with Welsh-speaking ex-schoolmates and to increase their use of Welsh in the home:
'Mae wedi bod yn newid yn ddiweddar achos mae plant ni gyd yn dechrau mynd i'r ysgol ac yn ysgolion Cymraeg. Ni'n dechrau siarad Cymraeg mwy na pryd o'n ni yn mynd mas cynt' ('It's been a recent change because all of our children go to school at are in Welsh schools. We start to speak Welsh more than when we used to go out before')-Mother,

## Caerphilly.

6.39 This suggests that in families where transmission of Welsh may not be considered at birth, the point where the child begins Welsh-medium education may be a trigger for language-related discussions. As was shown above, these respondents also had positive attitudes towards the language and Welsh-medium education despite having neutral or negative experiences. None of these respondents began using Welsh as their main language of interaction with their children once the child had started Welshmedium school. There were three main sub-themes in the data which we analysed as explanatory factors (though there are undoubtedly other factors, including the unconscious use of English analysed above). These were: respondents' lack of confidence in Welsh, negative evaluations or expectancy effect of other Welsh speakers, and lack of provision for language socialisation in the local area.

Confidence in Welsh
6.40 Respondents in Caerphilly and Rhondda Cynon Taf who used little or no Welsh with their children, yet who had sent their child to a Welsh-medium nursery or school, reported being out of practice in Welsh, and that this lack of practice led to a lack of confidence in Welsh. Rather than report having being under confident at school, these respondents tended to frame their ability as 'rusty' and state that they were 'out of practice' since leaving school:
> 'Mae'n anodd [ymarfer Cymraeg] achos ers i fi adael yr ysgol dwi braidd wedi defnyddio'r Gymraeg. Pryd oedd fi'n gweithio yn [Gogledd Cymru] oedd fi'n defnyddio fe'n ddyddiol ond yn am/wg yn [De Cymru] dwi ddim yn siarad lot fawr o Gymraeg' ('It's hard [to practise Welsh] because since I left school I've hardly used Welsh. When I was working in [North Wales] I
was using it daily but obviously in [South Wales] I don't speak an awful lot of Welsh')—Mother, Caerphilly.
'[Welsh] would feel like speaking a different language now, it just came naturally when I was young'-Mother, Caerphilly.
'Rydw i'n trio siarad Cymraeg ond rydw i'n stryglo. Dydw i ddim eisiau colli'r iaith, mae'n bwysig i fi ond I hardly get a chance to use it' ('I try to speak Welsh but I struggle. I don't want to lose the language but [respondent switches to English] I hardly get a chance to use it')—Father, Caerphilly.
'I probably get a bit flustered, I think if I used it a lot more it would come more natural again but I think [daughter] tests me when she's asking me constantly 'what's this in Welsh?' and for the life of me, l'm thinking, eh? ...I should speak a lot more. When I had a parents' evening, even though she knew I could speak Welsh I said to her, can we do it through English, because I could understand her but it's probably me getting more flustered trying to get my words out really'-Mother, Caerphilly.
6.41 Some respondents did note that their use of Welsh with their children was increasing, along with their confidence:
'[My] confidence in Welsh is building. I really enjoy it, it's all still in there. I use more Welsh with them'-Father, Anglesey.

Lack of confidence was a prominent theme among these respondents who used minimal Welsh with their children but had reflected on their language use when the child started school. A less prevalent theme is reported negative experiences with other Welsh speakers.

## Experiences with other Welsh speakers

6.43 Some of those with low confidence in Welsh and who used mainly English with their children, also reported experiences with other Welsh speakers which they reported had negatively affected their confidence in the language. For some respondents, these were experiences which they had remembered from their own schooldays which respondents felt created barriers between them and a wider Welsh-speaking community:
'My experience of the school was that there was a tendency for children from certain backgrounds to be favoured, from Welsh-speaking families. Again, that's my impression. They were given more attention by the
teachers, the teachers tended to know their families, it was almost as if there was a community'-Father, Caerphilly.
6.44 Negative experiences or perceptions of other Welsh speakers were not confined to the past and some respondents felt that they were judged for using Welsh by non Welsh-speakers, and occasionally criticised for using poor quality Welsh by other Welsh-speakers. This was a barrier to an increased use of Welsh among these respondents:
'When you speak to them they look at you as if to say, you're not even speaking proper Welsh'—Father, Rhondda Cynon Taf.
6.45 These negative perceptions manifest themselves in low confidence and selfefficacy in the use of Welsh by respondents. In other cases, respondents did not note negative experiences with other Welsh speakers but did feel intimidated using Welsh with other parents who are perceived as being more fluent.

Provision to use the Welsh language in the community
Most respondents in Caerphilly and Rhondda Cynon Taf believed that there was a lack of opportunity in the area for them to use their Welsh. Two respondents said that by joining a Welsh-speaking chapel they had been able to increase their use of Welsh. The extracts below are representative of the other respondents:
'I wish there were more things going on [in Welsh] to get more comfortable [using Welsh]'-Mother, Caerphilly.
'This area here, this is where the working middle class live, so it's very promoting, they're actively seeking Welsh, but when you sort of start to move away from working professional areas, it's [different]'-Mother,

## Rhondda Cynon Taf.

6.47 Respondents noted that there were some activities for older children, organised by the Urdd or associated with the school, but that they were not aware of activities for younger children. They expressed a wish for more activities with some respondents noting that this would aid their child's socialisation in Welsh:
'Jyst so mae [enw'r plentyn] yn cael y siawns i weld Cymraeg mewn action... iddo cael sbri, dwi eisiau iddo fe weld e fel rhywbeth positif;

Just so [child's name] gets the chance to see Welsh in action...for him to have fun, I want him to see it as something positive-Father, Rhondda

## Cynon Taf

6.48 The focus of the questions was on the respondents' experiences rather than the reaction of the child. However, respondents did report the general linguistic behaviour of the child.

## Children's Language Use

Respondents in families where both parents (or lone parents) spoke Welsh tended to report children's language with them as Welsh only. Some respondents indicated that the use of English by any family member would not be something which they would expect and that it would be out of the ordinary for this to happen.
6.50 Examples of use of two languages were reported in cases where respondents used Welsh but were aware that their children played with children who spoke English and who also reported a more relaxed attitude to their own language use:
‘Os mae hi'n dechrau [siarad Saesneg] wnai ddim newid o, faswn i ddim yn specifically neud o ar bwrpas ond fatha, dwi'n meddwl am bod nhw'n watchad programmes Saeseng yna os ma nhw'n chwarae efo 'My Little Pony' ma o'n dod yn naturiol iddyn nhw siarad Saesneg...ac hefyd dwi'n meddwl bod 'na blant Saesneg ac ar yr iard mae yna Saesneg yn mynd mlaen' ('If she starts [speaking English] I won't change it. I wouldn't specifically do it on purpose but like, I think that because they watch English programmes then if they play with 'My Little Pony' it comes naturally to them to speak English...and also I think that there are English children and on the yard English goes on')—Mother, Anglesey.
6.51 Frequent code-switching among children was reported as was contextspecific use of Welsh (e.g. at school): 'weithiau neith o jest dod allan 'lly’ ('Sometimes it'll just come out, like')-Mother, Anglesey.
'I tend to be led by her. If she says a word in Welsh then I'll start talking Welsh back to her and we'll go on for a few minutes'-Mother, Rhondda Cynon Taf.
""Sws, Mam?" [yn yr ysgol] ac yn y tŷ byddai hi ddim yn gweud sws byddai hi yn gweud, "kiss mam?"' ("Sws Mam?" [at school] and in the house she won't say ‘sws’ she'll say "kiss Mam?"')—Mother, Caerphilly.

Some respondents from mixed-language families noted that their children spoke English with each other. In such cases, Welsh was reserved for one-to-one interactions between the Welsh-speaking respondent and the children whereas English had been established as the main language when both parents were present. In other word, an OPOL strategy was not strictly followed.

In another case, a respondent noted that her child frequently code-switched and used English when playing with dolls. The respondent noted that she was not surprised by this because the child attended a bilingual nursery where she had friends who could not speak Welsh.
6.54 In situations where respondents used incidental Welsh with their children, the children tended to initiate conversations in English though they were reported to often include Welsh words they had acquired at school or formulaic phrases.

## Discussion

We found several instances where both parents (or lone parents) spoke Welsh and used it almost always with their children. These respondents were shown to come from predominantly Welsh-speaking communities and Welsh-speaking families. Although the influence of the extended family did not arise as a pertinent theme in the thematic analysis, we can say that the use of Welsh rather than English was automatic for most of these respondents in childhood. In most cases, Welsh had been their main language since childhood and continued to be the main language of interaction for them in adulthood. It is perhaps not surprising that respondents from largely Welsh-speaking backgrounds who continued to use mostly Welsh in their daily lives reported that the transmission of the language was an unconscious action, strengthened by the fact that most of these respondents had Welsh-speaking partners. These results most clearly support the results of the quantitative analysis which showed that respondents were more likely to use Welsh with their children if it was the language in which they felt most comfortable in. For all but two such respondents, Welsh was their first language. The results also support the
findings of previous work on transmission in predominantly Welsh-speaking areas where transmission has been found to be reported as an automatic behaviour (Gathercole et al. 2007).
6.56 The references to bilingual speech processes such as code-switching highlight the dynamic nature of bilingualism which has been the topic of much previous research, as shown in Chapter 2 (Theoretical Framework). The respondents who noted frequent code-switching in the Welsh speech of their children tended to come from mixed-language backgrounds and noted that they themselves code-switched between Welsh and English without much thought. Linguistic research on code-switching has shown that it is often a sign of proficiency in a speaker's two languages rather than a sign of the inability to speak one of her languages and may be influenced by community norms (Deuchar et al. 2016, p. 211). Such observations expose the need for more observational studies of language use in the home which will undoubtedly shed light on other aspects of bilingual linguistic behaviour such as translanguaging.
6.57 It is noteworthy that some respondents from Welsh-speaking backgrounds emphasised the need to introduce more English into the home. This did not appear to be linked to English as a prestige language or directly to their children having better prospects in the future as found by Harrison et al. (1981). Instead, it appeared to be a simple effort to increase the acquisition of both languages. It may be that for some speakers the English of bilinguals in north west Wales carries negative social meaning which some parents attribute to the influence of Welsh on their English (Morris 2013). In terms of acquisition, however, previous research on young Welsh-English bilinguals' Welsh and English tends to suggest that while home language use influences the acquisition of Welsh, this is not the case (at least to the same extent) in English (Thomas and Mayr 2010) ${ }^{29}$.

In cases where only one parent in a two-parent family could speak Welsh, the One-Parent One-Language approach tended to be used only when the Welsh-speaking parent had acquired the language via parental transmission themselves. Most of these respondents suggested, however, that this was not strictly followed. It is well known that the One-Parent One-Language

[^25]strategy is more of an ideal than a reality (see Chapter 2, Theoretical Framework) but a scenario occasionally elicited from the fieldwork was that the non-Welsh-speaking parent in a two-parent family felt uncomfortable with the use of Welsh in their presence. This meant that the use of Welsh was often restricted to times when the Welsh-speaking respondent was alone with the child. This supports the findings of Jones and Morris (2005a) who found variability in the extent to which partners supported bilingualism in the home.
6.59 For many respondents from English-speaking homes in Caerphilly and Rhondda Cynon Taf, English was the default language of the home and Welsh transmission was not considered. The fact that many respondents who have been educated through the medium of Welsh did not consider speaking Welsh to their children from birth is interesting because they overwhelmingly supported Welsh-medium education for their children. Among this group, any discussions regarding the child's acquisition of Welsh centred on Welsh-medium education when the child reached school age. The fact that several respondents from south east Wales reported attempting to increase the amount of Welsh they used with their children is an interesting finding and appears to be an attempt to reinforce both a Welshspeaking identity and educational achievement at Welsh-medium schools.
6.60 The thematic analysis of the data from those from English-speaking homes in Caerphilly and Rhondda Cynon Taf highlighted an interesting and hitherto unreported aspect of Welsh-language transmission. On the one hand, the use of English with the child was presented as a unconscious action which was not really discussed. On the other hand, a concerted effort to use more Welsh was often reported when the child reached school age but was restricted to formulaic language or certain contexts. This corresponds to the notion of 'linguistic mudes' which Pujolar and Gonzàlez (2013, p. 139) describe as 'the specific biographical junctures where individuals enact changes in their linguistic repertoire.'
6.61 The fact that English is the language in which these respondents are more comfortable might explain why these changes resulted in more incidental Welsh use rather than more sustained use of the language by the Welshspeaking parent. Many respondents also did not feel sufficiently confident in their Welsh language skills to use it with their children. In fewer instances,
respondents noted that they had felt, or continued to feel judged by other Welsh speakers. This may be the result of perceived negative experiences or feelings of not belonging to a Welsh-speaking community which has led to an attempt to distance themselves from the group to which they do not feel they belong (cf. Social Identity Theory, e.g. Gough and McFadden (2001, p. 132)).

Previous studies have noted a pattern of low Welsh use among those from English-speaking homes who have acquired their Welsh from the Welshmedium school system (Aitchison and Carter 1988; Musk 2006; Morris 2014). We would argue, however, that research on Welsh-English bilingualism has merely scratched the surface of the complex interaction between motivation, attitudes, and linguistic confidence among those from English-speaking homes. As Clément et al. (2003, p. 192) state: ‘L2 confidence, composed of perceptions of communicative competence and low levels of L2 anxiety, is, in turn, associated with increased communication competence in the L2, increased identification with the L2 group, and increased psychological adaptation.' Although many respondents felt unconfident in their Welsh-language ability, most did express a desire to be able to use Welsh more. It was noted that respondents in Caerphilly and Rhondda Cynon Taf felt that more activities in Welsh in their local area would provide an opportunity for the use of Welsh to become more normalised for respondents and children.

Finally, respondents commented on children's language use. In families where Welsh was the predominant language, children were reported as largely responding in Welsh though respondents also noted that the children sometimes used English during playtimes among those children who were attending nurseries or schools where the language of peer-group interaction was mostly English. In households where English is the primary or sole language, the use of Welsh among children who were in Welsh-medium education tended to be infrequent or linked to specific contexts such as discussing homework. Respondents tended to respond in Welsh in such examples, though the use of Welsh was not sustained.

## Conclusions

6.64 This chapter presented a qualitative analysis of the semi-structured data and outlined the main patterns of intergenerational transmission behaviour in the home and the themes which appear to influence their behaviour. For many respondents, the use of Welsh has been automatic since childhood and therefore the use of Welsh with children is an unconscious action which is not given much thought. The dataset also contained examples of those who had acquired Welsh at school and now used it with their children. Most of these respondents were now in relationships with people who had acquired Welsh via parental transmission. Their self-reported language use with children is either predominantly Welsh or a mixture of Welsh and English due to code-switching. This, we argue, highlights the dynamic nature of bilingualism and further observational studies would be able to quantify language use further.

It has been shown that language use in the home is a more conscious action when one parent in a two-parent family speaks Welsh and one does not. Our research has shown that accommodation to English by the Welsh speakers in the families surveyed was a prevalent theme; this restricts parent-child use of Welsh to one-to-one interactions with the child.

For many respondents who had acquired Welsh through Welsh-medium education in south east Wales, a conscious reflection of their language use and an effort to use more Welsh with their children came not at the birth of the child but at the time that the child began Welsh-medium education. For these parents, discussions centred on language donation (sending their children to Welsh-medium schools) rather than on language transmission. Some of these respondents did, however, start to use formulaic phrases with their children. We found that where these parents did consider their language use with their children when they began Welsh-medium education, a lack of confidence in their Welsh language skills and, to a lesser extent, a feeling that they did not belong to a Welsh-speaking community were prevalent themes which contributed to the continued use of English or the use of English with incidental Welsh.

## 7. Discussion, Conclusions and Recommendations

7.1 As noted in 1.13, the research we have presented above aimed to answer the following research questions:

- What are the conditions that facilitate Welsh language transmission within families, and the conditions that make Welsh language transmission less likely?
- What are the conditions that influence patterns of Welsh language use within families with children in the 0-4 age group?
7.2 We addressed these questions using a mixed-methods approach. Firstly, we conducted a review of literature relating to intergenerational transmission. This was supplemented by an analysis of research and evaluations of the intervention work undertaken in intergenerational language transmission of the Welsh language, and by a newly-commissioned statistical analysis of census data. We then presented an analysis of qualitative and quantitative data we collected via face-to-face interviews and questionnaires from main caregivers of children and those caregivers' partners in the target age group in four counties: Rhondda Cynon Taf, Caerphilly, Gwynedd and Anglesey. The appendices to this report contain a series of these respondents' personal narratives surrounding intergenerational transmission of Welsh. They also contain a table detailing respondents' language background, geographical location and intergenerational transmission behaviour.
7.3 The data we collected relate to respondents' current and past Welsh language use, their linguistic background and their language use with their children. An original facet of the current project is our mixed-methods approach, in that we have taken concepts from social psychology-in particular behavioural automaticity and the Theory of Planned Behaviour (TPB) (Ajzen 1991)—and applied them to intergenerational language transmission for the first time.
7.4 The significance and originality of the research is further enhanced by the fact that we collected data from respondents who live in areas where low percentages of residents are Welsh speakers. Many of these respondents are ex-pupils of Welsh-medium schools in the area and did not themselves speak Welsh at home when children. Numbers of such pupils are likely to increase in the future given the Welsh Government's strategic target of 1
million Welsh speakers by 2050. It is therefore imperative that we understand their orientations towards Welsh language use in general and how this is-and may in the future be-influenced by social and structural factors.
7.5 In this concluding chapter of the research report, we go beyond the discussions included at the end of each results chapter and discuss them in the context of the research questions. We then make recommendations which may facilitate future intergeneration transmission of Welsh.
7.6 It should be noted at the outset that our research has shown that language use and transmission are very layered, personal and complex issues. In this research, we do not claim to have considered all relevant factors (we note the factors that are outside the scope of the project in 1.17). Similarly, one of our findings is that speakers' orientation towards such use of a language may change over time. It is therefore logical to conclude based on the research presented above that no one single policy lever is likely to lead to an increase in the transmission of Welsh in the family without due consideration being given to other relevant factors. Specifically, we suggest that both further research and language planning in relation to the use of Welsh in the home should also consider the full range of experiences of pupils (particularly those from non-Welsh-speaking homes) in Welshmedium schools and the extent to which pupils have the opportunity to use the language after the school day and after permanently leaving school.


## Factors influencing language transmission

7.7 The research found that it was the demographic factors, rather than the psychological factors, which influenced the transmission of Welsh in the home. Specifically, region, Welsh-language upbringing, and the habit of speaking Welsh were the main factors which were found to be significant. Transmission also tended not to be a conscious decision except in cases where a respondent who had acquired Welsh in the home was in a relationship with someone who did not speak Welsh. In the case of those from non-Welsh-speaking families in south east Wales, transmitting Welsh was rarely considered at birth.
7.8 The fact that the variables taken from previous research in social psychology did not turn out to be significant can, in part, be attributed to the nature of the sample. Overall, the respondents recruited for this study largely had positive
attitudes towards the language. In addition, the standard TPB measures used in this study were not as reliable as has been shown in previous work. The fact that the psychological variables were not predictive of transmission in the final statistical model (where region and habit of speaking Welsh were added) does not, however, mean that they should be ignored. As stated above, feeling that one is able to speak Welsh was also significant in earlier models and seems to be a function of habitually speaking the language (which then influences transmission). This was also clear from the data analysed in Chapter 6 (Qualitative Data Analysis) and suggests that efforts to increase the transmission of Welsh in the home need to deal with issues of speaker confidence and provide opportunities for the use of Welsh to become more habitual in adulthood. In terms of future research, we would argue that using these techniques on a larger sample might show interesting interactions between the social and psychological variables. Further research might also consider how standard TPB measures might best be adapted for both research on language transmission and attitudes towards the Welsh language.

Region
7.9 Welsh is more likely to be transmitted and used in the family in Gwynedd and Anglesey than in Caerphilly and Rhondda Cynon Taf (see Chapter 5 (Applying Behavioural Approaches to Language Transmission)). This is supported by the national census data which showed that transmission was highest in north west Wales in general and in Gwynedd in particular (see Chapter 3 (Statistical Analysis of National Census Data)). This is undoubtedly related to the fact that these areas contain the highest proportions of the population who have acquired the language via parental transmission and for whom early socialisation in Welsh outside of the classroom has taken place. In the case of those from non-Welsh-speaking homes in north west Wales who decided to use Welsh with their children, we would argue that the regular use of Welsh in the wider community may be an explanatory factor (Nesteruk 2010). The results of both the qualitative and quantitative analysis revealed that it was respondents' own upbringing which influenced the extent to which speaking Welsh was habitual and which, ultimately, influenced whether they spoke Welsh almost always with their child/ren. It is to the automaticity and habitual nature of transmission which we now turn.

## Respondents' upbringing and language habit

7.10 The results of both the quantitative and qualitative analysis suggest that, for most respondents, language use with their children is automatic and determined by their own experiences. In the case of Welsh, respondents who have acquired the language from their own parents and who had Welsh-speaking social networks when they themselves were growing up were largely found to report speaking Welsh with their children without much thought. This was also found to be the case in Gathercole et al. (2007) and supports previous work in other bilingual contexts which suggests that FLP may not be the result of an explicit decision (Tannenbaum 2012, p. 57).
7.11 The national census data showed that the rates of transmission are lower when only one parent (in two-parent and lone-parent families) can speak Welsh. Our focus in the quantitative analysis was on individual parents. The qualitative data did indicate that respondents in mixed-language families tended to use Welsh with their children if they had acquired the language from their own parents. This tended to be something which was discussed with the non-Welsh-speaking partner prior to birth. We found instances where this was both encouraged and instances where this became more complicated following the birth of the child.
7.12 Our research, however, also found that the use of English tended to be automatic for respondents who attended Welsh-medium education but who had parents who spoke English (unless they were partnered with a first language Welsh speaker). This was more often the case in south east Wales than in north west Wales where some respondents from non-Welshspeaking families did report using Welsh with their children.

## Intergenerational language donation

7.13 Those in the sample from English-speaking homes in Caerphilly and Rhondda Cynon Taf, who tended not to speak much Welsh with their children, reported that the Welsh language was an important part of their identity. To a degree, this result contradicts the claim that those who see the minority language as a core value of their cultural identity will be more likely to transmit the language (Remennick 2003). Most respondents were also intent on ensuring a Welsh-medium education for their children (sometimes moving back to Wales to ensure this). It was thus as the language of
education rather than the language of the home which Welsh tended to be discussed prior to the child entering the education system.
7.14 The desire among such respondents to send their children to Welsh-medium schools but not speak Welsh in the home corresponds to the notion of intergenerational language donation rather than transmission (see 2.552.57). It also shows that while the non-transmission of Welsh is generally an unconscious behaviour, these respondents do tend to discuss whether their children will attend Welsh-medium schools. The fact that these respondents were eager for their children to speak Welsh is undoubtedly positive for those engaged in language policy and planning in the Welsh context. Indeed, it is because of Welsh-medium education that these respondents can speak Welsh at all. It could reasonably be argued that it is unrealistic for the education system alone to ensure a full societal language revival in the home.
7.15 For some of these respondents from English-speaking homes, the stage at which the child began Welsh-medium schooling did lead to considerations regarding the use of Welsh in the home. In no cases, however, did the Welsh-speaking parent begin to mostly use Welsh with the child. In the following section, we examine the factors influencing patterns of use in the home.

## Factors influencing patterns of use

7.16 As stated above, those who came from predominantly Welsh-speaking family backgrounds tended to speak Welsh to their children almost always. Within this group, the qualitative data found a distinction between those who (1) reported strict use of Welsh, (2) tended to acknowledge the dynamic nature of bilingualism and (3) had consciously decided to use some English as they believed that it was beneficial to the child. Within mixed-language couple households, many Welsh-speaking parents tended to accommodate to English in the presence of their non-Welsh-speaking partners. The use of Welsh was therefore often found to be restricted to one-to-one interactions between the Welsh-speaking respondent and the child.
7.17 Among respondents from English-speaking backgrounds, the clear majority of whom had not considered speaking Welsh to their children at birth, instances of incidental Welsh use were observed when the child began Welsh-medium education. In such cases, respondents' self-reported ability
and lack of confidence in their ability (due to not having themselves used Welsh since they were in school) as well as a perceived lack of opportunity to use Welsh in their local areas, were cited as reasons for not using more Welsh.

## Type of family

7.18 Unsurprisingly, Welsh tended to be the main language of the home when both respondents spoke Welsh and came from Welsh-speaking families. Within this group, respondents either reported that Welsh was used almost always by both the respondents and children. Some respondents did, however, note that they have quite a flexible approach to language use in the home and that both languages are used by both respondents and children without much thought. This has been shown to be the case in other bilingual contexts, where it is assumed that language use is not compartmentalised or strictly defined in situ (García 2009).
7.19 A minor theme in the qualitative data was the conscious use of English by respondents who both spoke Welsh almost always with the child. Such respondents did not perceive the use of Welsh as a barrier to their children's educational attainment or their future success as seen in the work of Harrison et al. (1981) but they did state that it was important for their children to acquire both languages from an early age. This mirrors the results of work on Irish where some respondents feared that the acquisition of Irish would hamper children's acquisition of English (Ó hlfearnáin 2013). It would be interesting to discover the origins of this perception given that previous academic work on minority language transmission (and Welsh in particular) which suggests that it is the acquisition of the minority language which is affected by exposure in the home rather than the acquisition of the majority language.

Further observational research could shed light on how families which report using Welsh as the main language perform bilingualism on a day-to-day basis. For instance, it is not clear from the current research how language mixing, translanguaging, and dilingual conversations may be features of the speech of Welsh-speaking families. It is also not clear how parents view their own role in their child's linguistic development (cf. 'impact beliefs'-see De Houwer (2009, pp. 95-96)).
7.21 Respondents in mixed language households in the sample who used Welsh with their children had generally acquired Welsh as children themselves, via their own families. In such mixed-language families, we found that the OPOL strategy may not be strictly enforced on a day-to-day basis as was found by Goodz (1994). The qualitative analysis suggested that a decision by the Welsh-speaking respondent to use Welsh with the child sometimes caused concern for the non-Welsh-speaking partner once the child had been born. We did not find that this normally resulted in the non-transmission of Welsh. Rather, Welsh became restricted to one-to-one interactions with the child when the non-Welsh-speaking partner was not present. The results of this on the child's language use are not clear from the current research and the effects of accommodation to English could be examined in a longitudinal work. The results do indicate, however, that the 'input frequency' of Welsh may be minimised in the home which may influence subsequent acquisition and use (De Houwer 2009, p. 119).

Parents' sex
7.22 The quantitative analysis showed that there was a correlation between respondents' sex and their use of Welsh with their children. The fact that mothers were more likely to use Welsh with their children mirrors the findings of previous work (Lyon 1991), though we would advise interpreting this result with caution due to the nature of our sample. Eighty five percent of the respondents were mothers and only half of their partners (of whom all were male) returned the questionnaire. All of the mothers were also the main caregivers which may explain differences in language use more accurately than sex (Jones and Morris 2009). Similarly, other work suggests that parents may have different interactional styles but that this does not necessarily affect transmission (Lanza 1997; De Houwer 2007).

Respondents from English-speaking backgrounds in south east Wales
7.23 As shown above, there was a relationship between region and the way in which respondents had acquired Welsh. In relation to patterns of language use within the home, the qualitative analysis showed that there was a tendency for respondents from non-Welsh-speaking families in south east Wales not to consider the use of Welsh with their children from birth. As has been found in several previous studies on other language communities (e.g. Arnberg (1987)), the point at which the child began school caused many of
these respondents to re-evaluate their own language use with their children. In many cases, this led to the introduction of formulaic Welsh in the home and use in specific contexts such as the school run, and with their children's teachers. The children's use of Welsh in these cases tended to mirror that of the respondents, with some formulaic Welsh being used or the use of Welsh when talking about school work.

In no cases, however, did such behaviour lead to Welsh becoming the main language of communication between the Welsh-speaking respondent and the child. This is perhaps because English had already been established as the vehicular language of the home. Having said this, respondents in south east Wales overwhelmingly asserted that they were not confident enough to use Welsh as the main language in the home. These respondents reported that, over time, this lack of opportunity had led to a low self-efficacy in their own Welsh-language skills. Consequently, they now felt under-confident in the language (see Beykont (2010) for similar results for Turkish-English bilinguals) and rued the fact that there was little provision available which would allow them to use Welsh again. It is salient to note that only one respondent mentioned attending any activity organised by a 'Menter laith', the Wales-wide network of micro-level language planning organisations (laith Cyf 2001; Evas et al. 2014).

We have alluded to the fact that more observational and longitudinal studies will shed light on the use of Welsh in the home on a day-to-day basis, the significance of a particular FLP on language use, and the language use of children. Having said this, the results from respondents from south east Wales (the majority of whom had acquired Welsh from the Welsh-medium education system) indicated that the use of Welsh as a main language was not considered. Further research on this demographic could build on the results presented here to ascertain the extent to which these respondents use Welsh after leaving the school system and whether their orientations towards the language change over time.
7.26 The main themes to arise from both the quantitative and qualitative data are the automaticity of language use with children (whether English or Welsh) and the influence that habitually using Welsh has on that automaticity. This habitual use appears to influence transmission in the first instance and the extent to which Welsh is used in the home thereafter. In the case of those
parents from English-speaking homes, the stage at which the child enters Welsh-medium education may cause them to reflect on their language use but a switch to mostly using Welsh with the child does not occur (in this sample) because they do not use Welsh habitually. Both the quantitative and qualitative analyses show that this may be due to feeling that they are not able to speak Welsh and few opportunities (whether real or perceived) to use the language. We have also shown that the Welsh-speaking parents in linguistically exogamous relationships may also be influenced by negative attitudes held by the non-Welsh-speaking partner. In the following sections, we make recommendations based on our results for both further research and the Welsh Government and its stakeholders.

## Recommendations

Recommendations for further research for Welsh Government and partners
7.27 The findings of this research show that the amount of input a child may receive in Welsh (according to parental self-report) varies between families (see Chapter 6: Qualitative Data Analysis). It was beyond the scope of this work to undertake a systematic study of the acquisition of Welsh and/or English—and/or other languages—by children (see 1.16-1.18 for an outline of the restrictions to the scope of this research). Some work on Bilingual First Language Acquisition (the simultaneous acquisition of two languages by babies) in the context of Welsh-English bilingualism does exist; this has mostly focussed on the acquisition of grammar or morphosyntactic features (see 2.4). Further research is required to deepen our understanding of language development in the context of Welsh-English bilingualism (and/or multilingualism). This would shed light on the possible correlation between the nature and extent of the input an individual child receives in the home and their acquisition of Welsh and/or English (or other languages).

- We recommend research be carried out into language development in the context of Welsh-English bilingualism (and/or multilingualism) in the home. This should target features such as the acquisition of grammar, vocabulary, how sentences are constructed, lexical items, and the acquisition of phonology among children.
7.28 The findings of the qualitative analysis (see Chapter 6: Qualitative Data Analysis) suggested that both the extent to which intergenerational transmission of Welsh is discussed, and the extent to which Welsh is used in the home, may differ according to parents' linguistic background. A number
of distinct groups emerged from this research (e.g. Welsh-speaking parents from non-Welsh-speaking backgrounds, Welsh-speaking parents from Welsh-speaking backgrounds, mixed language couples). However, further in-depth research in this area may serve to deepen our understanding of the different characteristics of such groups and potentially identify other groups.
- We recommend that further research on intergenerational language transmission should include a more detailed exploration of the influence of household linguistic composition on families' experiences of language transmission. The purpose of this research should be to refine our understanding of the relationship between language transmission practices and the linguistic characteristics of different groups or typologies of families.

The findings reported in this research are based on data and information about language behaviour provided by parents. The experiences of children from the perspective of the children themselves were not captured (see 1.16). Further qualitative research could focus on collecting data from both adults and children in order to provide a more in-depth analysis and a more complete picture of the role of the whole family in language behaviour.

- We recommend that further research on intergenerational transmission should collect data from children as well as adults in order to provide a more in-depth understanding of language transmission and family language behaviour.
7.30 This research noted some discrepancies between the main caregivers' and their partners' reported language use data (see 5.31). The project scope did not allow the observation of linguistic behaviour in the home, and it was not therefore possible to assess the accuracy of their reporting against other methods of recording their behaviour. Also, whilst participants provided some information about their language practices and their strategies in using Welsh and English in the home, the research did not include a detailed analysis of bilingual discourse strategies (for example codeswitching, translanguaging). Exploring these strategies through observation methods could provide more evidence of language practices and strategies, and a more complete picture of the dynamics of family language behaviour.
- We recommend that further research on intergenerational language transmission should include observation methods to supplement other data collection methods such as self-reporting. This would allow the triangulation of data and a fuller investigation of the language use and bilingual discourse strategies used by parents and children in the home.
7.31 This research offers an original attempt to bring together in a rigorous fashion the language transmission literature with theoretical insights from behavioural science, using a Theory of Planned Behaviour (TPB) model. This approach was undertaken to explore possible correlations between aspects of human behaviour and language transmission. In applying this model, we found that many respondents reported that the intergenerational transmission of Welsh is an unconscious rather than deliberate behaviour. It also found that attitudinal factors were not significant-for example, broadly positive attitudes towards Welsh were not a significant predictor of language transmission. This research project suggests that, whilst intention-based models of behaviour may be usefully applied to the investigation of intergenerational transmission, the size of the sample and other factors (see Chapter 5: Applying Behavioural Approaches to Language Transmission) limited the application of the TPB model in this instance. It would appear that there is scope to explore further how this approach could be usefully applied in future research into intergenerational transmission, with adaptations to the study design. The findings of such research could then inform policy interventions in this field. The Welsh Government (2014a, pp. 21-23) has already made a strategic commitment to 'maximise its use of expertise, research and science in the area of behavioural change to drive forward [its] Welsh language policy agenda.' Extending the use of behaviour-based models to future research and practice would contribute to this.
- We recommend that Welsh Government initiatives in intergenerational transmission of Welsh be grounded in an understanding of research and practice in the field of behavioural science and change. In particular, this understanding should be informed by research which has applied intention-based models, such as a Theory of Planned Behaviour (TPB) to the intergenerational transmission of Welsh. Such research should seek to address the limitations in design that this project revealed by using larger sample sizes and revised TPB measures.
7.32 This research suggests that an individual's use of Welsh may vary across their lifespan. Specifically, the research found that many respondents from non-Welsh-speaking backgrounds had not often used Welsh, or reflected on their language use, since leaving Welsh-medium education; this changed when their child began Welsh-medium education (see 6.36-6.39). The notion of 'linguistic mudes' (Pujolar and Gonzàlez 2013; Pujolar and Puigdevall 2015) describes the different events during a speaker's life which might influence or change patterns of language use. Longitudinal studies of Welsh
speakers, particularly those which begin collecting data from respondents in Welsh-medium education and revisit them regularly, could help build a picture of the experiences of Welsh speakers across their lifespan.
- We recommend that longitudinal research be undertaken to examine whether and how individuals' use of Welsh changes over their lifespan, and the extent to which this use is affected by societal factors.


## Policy recommendations for Welsh Government and partners

7.33 The following recommendations for the Welsh Government and its partners are based on the findings of our research. It should be emphasised, however, that our sample size ( $n=60$ ) and the fact that the research was undertaken in two areas in Wales, mean that caution must be exercised when making any generalisations about the wider population of Wales (see 1.16).
7.34 The findings of this research suggest that there may be groups of Welsh speakers who do not use their Welsh, but report that they would like to do so. Such groups may be 'hard to reach' in that it is difficult to engage them with current Welsh language initiatives designed to enable people to use their language skills. In identifying such groups, we recognise the need to better understand their characteristics and needs. Background demographic and linguistic data regarding Welsh speakers should be collected, mined and used as an essential component of policy, research and interventions including and beyond the intergenerational transmission of Welsh.

- We recommend that the Welsh Government and its partners (including Welsh Government-sponsored community-level initiatives) should systematically collect linguistic and demographic background data on parents and prospective parents in Wales. This information should be used for demographic research and for distributing targeted and relevant information on language promotion activities to specific groups of Welsh speakers.
7.35 In our sample, we found two parent groups where transmission is less likely or where children's exposure to Welsh in the home may be minimal: (1) children of couples where one parent is English-speaking and the other Welsh-speaking, and (2) children of respondents from English-speaking homes who acquired Welsh through the Welsh-medium education system. The research shows that the factors influencing transmission were different for each of the groups described above. It would appear that homogenous,
national, 'one size fits all' interventions in the field of intergenerational transmission of Welsh may not be appropriate. Interventions should take into account differences that may exist in target groups such as family type in order to understand how best to engage different groups.
- We recommend that any interventions relating to the intergenerational transmission of Welsh adopt approaches which are based on a detailed understanding of the different family types that may exist. These interventions should seek to directly address the challenges which these groups report.
The research indicated that the use of Welsh between a Welsh-speaking parent and his/her child might cause concern to the non-Welsh-speaking partner following the birth of the child, and that this sometimes changed language use in the home. Most of the Welsh-speaking respondents from non-Welsh-speaking backgrounds had not considered speaking Welsh with their child either prior to or following their birth, despite often wanting him/her to attend a Welsh-medium school and displaying largely positive attitudes towards the Welsh language. We suggest that consideration be given to ways of reaching Welsh speakers prior to the child's birth and/or during the child's early years to encourage and support the transmission of Welsh in the home.
- We recommend that Welsh Government consider how interventions relating to the transmission of Welsh can effectively target Welsh speakers prior to the child's birth and/or during the child's early years, and review the most appropriate way of reaching Welsh speakers during this period.
7.37 Some respondents from non-Welsh-speaking homes noted that negative experiences in school or little use of Welsh outside the classroom whilst in school meant that they had rarely used Welsh in informal or social contexts. They believed that this affected their confidence in their ability to use Welsh with their children. The self-reported low use of Welsh outside the classroom and subjective negative experiences in Welsh-medium education, particularly among those from non-Welsh-speaking homes, has been identified in other studies (Aitchison and Carter 1988; Evas 1999; Musk 2006; Selleck 2012; Morris 2014). Some respondents noted that they were expected to speak Welsh by teachers, especially in secondary school, but that they rarely did so outside of the classroom. We suggest the need for discussions on encouraging the use of Welsh to occur in schools, and that these should be open and non-judgemental. Previous work on critical
language awareness (Eaves 2015) could provide insights into how such discussions can be achieved.
- We recommend that initial teacher education and professional learning provision include opportunities for trainees and staff to develop a social psychological approach to positively encourage the use of the Welsh language amongst people who can, but do not use Welsh.
7.38 Respondents from non-Welsh-speaking family backgrounds in the south east Wales research area reported not using Welsh with their children—or indeed at all—because of perceived limited opportunities to use the language in their local area. A mapping exercise would support an understanding of current levels of provision of opportunities for adults who have attended Welsh-medium schools to use the language across Wales. This could be used to provide suitable and accessible provision where gaps are identified. We suggest that local schools could provide a hub for the Welsh in the local community, especially for Welsh-speaking parents who do not feel confident in the language and/or perceive a lack of opportunity to use the language in everyday life. Such an initiative would be an example of community outreach and would aim to increase the confidence of some Welsh-speaking parents by providing exposure to the language through nonthreatening, informal activities. A scoping exercise could be undertaken to ascertain what models of community outreach exist in non-language-related fields. These could potentially be adapted to provide opportunities for Welshspeaking parents who do not routinely use the language to be reintroduced to active language use. There is also scope to examine the potential effectiveness of parent-to-parent mentoring schemes such as the Voluntaris per a la llengua (Casas and Danés 2004) system ${ }^{30}$ and 'linguistic assertiveness' work to ascertain how such schemes could help less confident, or 'rusty' speakers of Welsh use their language skills (Suay and Sanginés 2012).
- We recommend that (1) a mapping exercise be undertaken to better understand current levels of provision of opportunities for adults who since leaving Welsh-medium schools have had limited opportunities to use the Welsh language (2) a scoping exercise be undertaken to ascertain what models of school-community outreach exist in non-language-related fields. The suitability of adapting these models to provide opportunities for Welsh-speaking parents who do not routinely

[^26]use the language to be reintroduced to active language use should be explored.

- We also recommend that (3) potential mentoring initiatives between parents of differing Welsh language ability at Welsh-medium schools are explored and (4) further consideration be given to how work on linguistic assertiveness' could help less confident speakers of Welsh use their language skills. The findings of this work should feed directly into new initiatives to encourage the use of Welsh among adults who may wish to use the language more regularly.


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## Appendices

## Appendix 1: Statistical Tables

## Table 16: Welsh household composition by ability to speak Welsh by age of dependent three-to-four-year-old children

(Households with at least one Welsh-speaking adult only). Source: Census 2011, DC2112WAla).

| Household Categories | Can speak <br> Welsh | Cannot <br> speak Welsh | Total <br> \% able to <br> speak Welsh |  |
| :--- | ---: | ---: | ---: | ---: |
| Couple household: One adult can speak <br> Welsh - Male | 1,241 | 1,879 | 3,120 | 39.8 |
| Couple household: One adult can speak <br> Welsh - Female | 2,427 | 2,536 | 4,963 | 48.9 |
| Couple household: Two adults can speak <br> Welsh - One male, one female | 3,602 | 763 | 4,365 | 82.5 |
| Couple household: Two adults can speak <br> Welsh - Other combination | 32 | 21 | 53 | 60.4 |
| Couple household: Three or more adults can <br> speak Welsh | 73 | 17 | 90 | 81.1 |
| Lone parent household: One adult can speak <br> Welsh - Male | 62 | 85 | 147 | 42.2 |
| Lone parent household: One adult can speak <br> Welsh - Female | 1,158 | 985 | 2,143 | 54.0 |
| Lone parent household: Two or more adults <br> can speak Welsh | 16 | 10 | 26 | 61.5 |

Table 17: Total number of three-to-four-year-old dependent children in a family where at least one adult can speak Welsh by NS-SeC of Household Reference Person
( $n=14,907$ ). Source: Census 2011, Table DC2601WA.

| NS-SeC | Couple household: Two or more adults can speak Welsh ( $n$ ) | Couple household: One adult can speak Welsh ( $n$ ) | Lone parent household: One adult or more can speak Welsh ( $n$ ) |
| :---: | :---: | :---: | :---: |
| All categories: NS-SeC of Household Reference Person | 4,508 | 8,083 | 2,316 |
| 1. Higher managerial, administrative and professional occupations | 642 | 1,221 | 80 |
| 1.1 Large employers and higher managerial and administrative occupations | 123 | 226 | 20 |
| 1.2 Higher professional occupations | 519 | 995 | 60 |
| 2. Lower managerial, administrative and professional occupations | 1,293 | 2,249 | 379 |
| 3. Intermediate occupations | 283 | 749 | 366 |
| 4. Small employers and own account workers | 909 | 1,136 | 80 |
| 5. Lower supervisory and technical occupations | 463 | 847 | 127 |
| 6. Semi-routine occupations | 379 | 810 | 565 |
| 7. Routine occupations | 466 | 812 | 288 |
| 8. Never worked and longterm unemployed | 49 | 202 | 305 |
| L14.1 Never worked | 17 | 59 | 191 |
| L14.2 Long-term unemployed | 32 | 143 | 114 |
| Not classified | 24 | 57 | 126 |
| L15 Full-time students | 24 | 57 | 126 |
| L17 Not classifiable for other reasons | 0 | 0 | 0 |

Table 18: Percentage and number of three-to-four-year-old dependent children in a family where at least one adult can speak Welsh who can also speak Welsh by NS-SeC of Household Reference Person
( $n=8,611$ ). Source: Census 2011, Table DC2601WA.

| NS-SeC | Couple households: Two or more adults can speak Welsh |  | Couple households: One adult can speak Welsh |  | Lone-parent households: One or more adults can speak Welsh |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \% | $n$ | \% | $n$ | \% | $n$ |
| All categories: NS-SeC of Household Reference Person | 82.2 | 3,707 | 45.4 | 3,668 | 53.3 | 1,236 |
| 1. Higher managerial, administrative and professional occupations | 84.1 | 540 | 47.8 | 584 | 61.3 | 49 |
| 1.1 Large employers and higher managerial and administrative occupations | 78.0 | 96 | 46.0 | 104 | 80.0 | 16 |
| 1.2 Higher professional occupations | 85.5 | 444 | 48.2 | 480 | 55.0 | 33 |
| 2. Lower managerial, administrative and professional occupations | 83.1 | 1,075 | 46.0 | 1,035 | 58.5 | 221 |
| 3. Intermediate occupations | 78.4 | 222 | 45.4 | 340 | 54.5 | 198 |
| 4. Small employers and own account workers | 85.4 | 776 | 48.1 | 546 | 58.2 | 47 |
| 5. Lower supervisory and technical occupations | 81.0 | 375 | 43.2 | 366 | 48.0 | 62 |
| 6. Semi-routine occupations | 77.6 | 294 | 43.0 | 348 | 53.1 | 303 |
| 7. Routine occupations | 79.6 | 371 | 42.4 | 344 | 51.7 | 149 |
| 8. Never worked and long-term unemployed | 77.6 | 38 | 40.1 | 81 | 45.7 | 139 |
| L14.1 Never worked | 82.4 | 14 | 33.9 | 20 | 47.9 | 91 |
| L14.2 Long-term unemployed | 75.0 | 24 | 42.7 | 61 | 42.1 | 48 |
| Not classified | 66.7 | 16 | 42.1 | 24 | 54.0 | 68 |
| L15 Full-time students | 66.7 | 16 | 42.1 | 24 | 54.0 | 68 |
| L17 Not classifiable for other reasons | - | 0 | - | 0 | - | 0 |

Table 19: Transmission rates and numbers: Wales summary
Source: Census table CT0271

|  |  | Percentage able to speak Welsh |  |
| :--- | :--- | ---: | ---: |
| Household type | Household composition | Age of child |  |
| All categories | Total | Age 4 |  |
| Couple household | No adults can speak Welsh | 18.9 | 28.4 |
|  | One adult can speak Welsh |  |  |
|  | Two or more adults can speak Welsh | 3.8 | 17.6 |
|  | Total | 78.8 | 53.3 |
|  |  | 20.0 | 86.6 |
| Lone parent household | No adults can speak Welsh | 29.9 |  |
|  | One adult can speak Welsh | 11.0 | 45.1 |
|  | Two or more adults can speak Welsh | 54.5 | 17.9 |
|  | Total | 15.7 | 61.1 |
|  |  |  | 24.2 |


|  |  | Numbers, by age and ability in Welsh |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Household types | Household composition | Age 3 |  | Age 4 |  |
|  |  | Can <br> speak <br> Welsh | Cannot speak Welsh | Can speak Welsh | Cannot speak Welsh |
| All categories |  | 6,236 | 26,726 | 9,162 | 23,052 |
| Couple household |  |  |  |  |  |
|  | No adults can speak Welsh | 1,615 | 16,764 | 3,160 | 14,764 |
|  | One adult can speak Welsh | 1,553 | 2,560 | 2,115 | 1,855 |
|  | Two or more adults can speak Welsh | 1,779 | 503 | 1,928 | 298 |
|  | Total | 4,947 | 19,827 | 7,203 | 16,917 |
| Lone parent household |  |  |  |  |  |
|  | No adults can speak Welsh | 776 | 6,277 | 1,236 | 5,677 |
|  | One adult can speak Welsh | 507 | 617 | 713 | 453 |
|  | Two or more adults can speak | 6 | 5 | 10 | 5 |
|  | Welsh |  |  |  |  |
|  | Total | 1,289 | 6,899 | 1,959 | 6,135 |

Table 20: Transmission rates by Unitary Authority
Census table CT0271
$\left.\begin{array}{lllcc}\hline & & & \text { Percentage able to speak } \\ \text { Welsh }\end{array}\right\}$

| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  | Lone parent | No adults can speak Welsh | 16.3 | 26.3 |
|  |  | One adult can speak Welsh | 34.5 | 56.3 |
|  |  | Two or more adults can speak Welsh | 100 | .. |
|  |  | Total | 21.1 | 33.9 |
| Denbighshire | All categories |  | 21.5 | 34.8 |
|  | Couple | No adults can speak Welsh | 5.7 | 22.5 |
|  |  | One adult can speak Welsh | 34.6 | 47.8 |
|  |  | Two or more adults can speak Welsh | 76.7 | 88.4 |
|  |  | Total | 21.5 | 37.4 |
|  | Lone parent | No adults can speak Welsh | 14.6 | 24.3 |
|  |  | One adult can speak Welsh | 51.4 | 45.2 |
|  |  | Two or more adults can speak Welsh | .. | . |
|  |  | Total | 21.4 | 27.7 |
| Flintshire | All categories |  | 10 | 19.5 |
|  | Couple | No adults can speak Welsh | 6.9 | 14.7 |
|  |  | One adult can speak Welsh | 20.5 | 37.1 |
|  |  | Two or more adults can speak Welsh | 47.7 | 70.5 |
|  |  |  | 10.5 | 20.7 |
|  | Lone parent | No adults can speak Welsh | 6.8 | 14 |
|  |  | One adult can speak Welsh | 24.2 | 25.9 |
|  |  | Two or more adults can speak Welsh | . | .. |
|  |  |  | 8.3 | 14.9 |
| Wrexham | All categories |  | 11.8 | 19.5 |
|  | Couple | No adults can | 7.2 | 13.1 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  |  | speak Welsh |  |  |
|  |  | One adult can speak Welsh | 30.7 | 50.6 |
|  |  | Two or more adults can speak Welsh | 80 | 80 |
|  |  | Total | 12.5 | 20.2 |
|  | Lone parent | No adults can speak Welsh | 6.4 | 12.5 |
|  |  | One adult can speak Welsh | 36.6 | 50 |
|  |  | Two or more adults can speak Welsh | 0 | .. |
|  |  | Total | 9.6 | 17.1 |
| Powys | All categories |  | 17.1 | 33.4 |
|  | Couple | No adults can speak Welsh | 7.7 | 24.8 |
|  |  | One adult can speak Welsh | 37.6 | 52 |
|  |  | Two or more adults can speak Welsh | 76.7 | 80.6 |
|  |  | Total | 16.8 | 34 |
|  | Lone parent | No adults can speak Welsh | 15.3 | 25.7 |
|  |  | One adult can speak Welsh | 31.3 | 53.3 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  | Total | 18.4 | 29.9 |
| Ceredigion | All categories |  | 51.5 | 66.8 |
|  | Couple | No adults can speak Welsh | 22.8 | 34.7 |
|  |  | One adult can speak Welsh | 46.9 | 70.2 |
|  |  | Two or more adults can speak Welsh | 78.7 | 87.7 |
|  |  | Total | 52 | 67.3 |
|  | Lone parent | No adults can speak Welsh | 42.6 | 57.9 |
|  |  | One adult can speak Welsh | 54.5 | 71.7 |
|  |  | Two or more adults | .. | 0 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  |  | can speak Welsh |  |  |
|  |  | Total | 49 | 64.4 |
| Pembrokeshire | All categories |  | 16.6 | 27.6 |
|  | Couple | No adults can speak Welsh | 8.6 | 19.3 |
|  |  | One adult can speak Welsh | 27.6 | 52.3 |
|  |  | Two or more adults can speak Welsh | 70 | 83.3 |
|  |  | Total | 16.1 | 28.4 |
|  | Lone parent | No adults can speak Welsh | 14.7 | 21.1 |
|  |  | One adult can speak Welsh | 42.5 | 55.3 |
|  |  | Two or more adults can speak Welsh | . | 0 |
|  |  | Total | 18.2 | 25.2 |
| Carmarthenshire | All categories |  | 38.8 | 52.8 |
|  | Couple | No adults can speak Welsh | 15.7 | 35.4 |
|  |  | One adult can speak Welsh | 48.2 | 66.1 |
|  |  | Two or more adults can speak Welsh | 79.4 | 90.7 |
|  |  | Total | 41.5 | 58.6 |
|  | Lone parent | No adults can speak Welsh | 20.1 | 27.5 |
|  |  | One adult can speak Welsh | 48.2 | 62.9 |
|  |  | Two or more adults can speak Welsh | 100 | 66.7 |
|  |  | Total | 29.3 | 38 |
| Swansea | All categories |  | 11.8 | 18.5 |
|  | Couple | No adults can speak Welsh | 6.9 | 13.4 |
|  |  | One adult can speak Welsh | 42.4 | 53.6 |
|  |  | Two or more adults can speak Welsh | 79.1 | 72.5 |
|  |  |  | 12.9 | 19.8 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  | Lone parent | No adults can speak Welsh | 7.3 | 11.3 |
|  |  | One adult can speak Welsh | 28.2 | 59 |
|  |  | Two or more adults can speak Welsh | 0 | .. |
|  |  | Total | 8.5 | 14.5 |
| Neath Port Talbot | All categories |  | 14 | 21.7 |
|  | Couple | No adults can speak Welsh | 7.5 | 15.9 |
|  |  | One adult can speak Welsh | 34.9 | 50.3 |
|  |  | Two or more adults can speak Welsh | 60 | 87.9 |
|  |  | Total | 14.2 | 23.5 |
|  | Lone parent | No adults can speak Welsh | 10.1 | 11.3 |
|  |  | One adult can speak Welsh | 45.7 | 58.6 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  | Total | 13.6 | 15.7 |
| Bridgend | All categories |  | 12.9 | 18.3 |
|  | Couple | No adults can speak Welsh | 7.9 | 12.4 |
|  |  | One adult can speak Welsh | 32.1 | 40.6 |
|  |  | Two or more adults can speak Welsh | 66.7 | 80 |
|  |  | Total | 12.5 | 17.1 |
|  | Lone parent | No adults can speak Welsh | 11.1 | 19 |
|  |  | One adult can speak Welsh | 39 | 78.9 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  |  | 14.3 | 22.4 |
| The Vale of Glamorgan | All categories |  | 12.2 | 21.3 |
|  | Couple | No adults can | 6 | 14.2 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  |  | speak Welsh |  |  |
|  |  | One adult can speak Welsh | 34.9 | 53.5 |
|  |  | Two or more adults can speak Welsh | 89.3 | 85.2 |
|  |  | Total | 12 | 21 |
|  | Lone parent | No adults can speak Welsh | 11.1 | 20.2 |
|  |  | One adult can speak Welsh | 29 | 55.6 |
|  |  | Two or more adults can speak Welsh | . | . |
|  |  |  | 12.8 | 22.4 |
| Cardiff | All categories |  | 13.3 | 18.3 |
|  | Couple | No adults can speak Welsh | 6.4 | 11.3 |
|  |  | One adult can speak Welsh | 43.8 | 55.2 |
|  |  | Two or more adults can speak Welsh | 81.7 | 87.1 |
|  |  | Total | 14.1 | 19.2 |
|  | Lone parent | No adults can speak Welsh | 9.6 | 13.9 |
|  |  | One adult can speak Welsh | 35.4 | 41 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  | Total | 11.1 | 15.6 |
| Rhondda Cynon Taf | All categories |  | 16 | 24.9 |
|  | Couple | No adults can speak Welsh | 10.7 | 16.8 |
|  |  | One adult can speak Welsh | 38.9 | 52.1 |
|  |  | Two or more adults can speak Welsh | 52.9 | 83.3 |
|  |  | Total | 17 | 25.5 |
|  | Lone parent | No adults can speak Welsh | 10.5 | 17.5 |
|  |  | One adult can speak Welsh | 34 | 61.2 |
|  |  | Two or more adults | .. | 66.7 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  |  | can speak Welsh |  |  |
|  |  | Total | 13.5 | 23.5 |
| Merthyr Tydfil | All categories |  | 10.2 | 17.7 |
|  | Couple | No adults can speak Welsh | 5.8 | 14.6 |
|  |  | One adult can speak Welsh | 27.8 | 51.1 |
|  |  | Two or more adults can speak Welsh | 66.7 | 80 |
|  |  | Total | 11.1 | 19.5 |
|  | Lone parent | No adults can speak Welsh | 7.3 | 13.1 |
|  |  | One adult can speak Welsh | 20 | 20 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  | Total | 8.2 | 13.4 |
| Caerphilly | All categories |  | 15 | 26.6 |
|  | Couple | No adults can speak Welsh | 11.9 | 22.6 |
|  |  | One adult can speak Welsh | 34.8 | 55.1 |
|  |  | Two or more adults can speak Welsh | 63 | 79.1 |
|  |  | Total | 16.3 | 28.9 |
|  | Lone parent | No adults can speak Welsh | 10 | 18.3 |
|  |  | One adult can speak Welsh | 25 | 43.9 |
|  |  | Two or more adults can speak Welsh | 0 | . |
|  |  | Total | 11.4 | 21.1 |
| Blaenau Gwent | All categories |  | 8.8 | 18.8 |
|  | Couple | No adults can speak Welsh | 8.3 | 18.3 |
|  |  | One adult can speak Welsh | 23.8 | 38.2 |
|  |  | Two or more adults can speak Welsh | 33.3 | 33.3 |
|  |  |  | 9.7 | 19.9 |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  | Lone parent | No adults can speak Welsh | 6.3 | $15$ |
|  |  | One adult can speak Welsh | 11.1 | 62.5 |
|  |  | Two or more adults can speak Welsh | .. |  |
|  |  | Total | 6.5 | 16.7 |
| Torfaen | All categories |  | 14 | 21.3 |
|  | Couple | No adults can speak Welsh | 12.8 | 19.8 |
|  |  | One adult can speak Welsh | 33.3 | 34.8 |
|  |  | Two or more adults can speak Welsh | 75 | 50 |
|  |  | Total | 14.9 | 21.4 |
|  | Lone parent | No adults can speak Welsh | 9.7 | 19.3 |
|  |  | One adult can speak Welsh | 35.3 | 53.8 |
|  |  | Two or more adults can speak Welsh | . | . |
|  |  | Total | 11.5 | 21 |
| Monmouthshire | All categories |  | 14.2 | 21.8 |
|  | Couple | No adults can speak Welsh | 10.8 | 20.5 |
|  |  | One adult can speak Welsh | 45.8 | 42.4 |
|  |  | Two or more adults can speak Welsh | 42.9 | 50 |
|  |  | Total | 14.1 | 22.5 |
|  | Lone parent | No adults can speak Welsh | 13.6 | 15.4 |
|  |  | One adult can speak Welsh | 42.9 | 71.4 |
|  |  | Two or more adults can speak Welsh | .. | .. |
|  |  |  | 14.8 | 17.9 |
| Newport | All categories |  | 9.9 | 19.3 |
|  | Couple | No adults can | 7.3 | 18.3 |
|  |  | 161 |  |  |


| Unitary authority | Household type | Household composition | Percentage able to speak |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 | Welsh Age 4 |
|  |  | speak Welsh |  |  |
|  |  | One adult can speak Welsh | 31.5 | 44.4 |
|  |  | Two or more adults can speak Welsh | 85.7 | 66.7 |
|  |  | Total | 9.2 | 20.2 |
|  | Lone parent | No adults can speak Welsh | 10.6 | 16.3 |
|  |  | One adult can speak Welsh | 30.4 | 39.1 |
|  |  | Two or more adults can speak Welsh | .. | .. |

Table 21: Numbers of three-to-four year old children, by age and ability to speak Welsh by unitary authority
Census table CT0271

| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
| Isle of Anglesey | All categories |  | 357 | 378 | 406 | 277 |
|  | Couple household | No adults can speak Welsh | 24 | 125 | 33 | 95 |
|  |  | One adult can speak Welsh | 67 | 109 | 93 | 68 |
|  |  | Two or more adults can speak Welsh | 217 | 66 | 197 | 37 |
|  |  | Total | 308 | 300 | 323 | 200 |
|  | Lone parent household | No adults can speak Welsh | 11 | 46 | 20 | 45 |
|  |  | One adult can speak Welsh | 36 | 31 | 60 | 31 |
|  |  | Two or more adults can speak Welsh | 2 | 1 | 3 | 1 |
|  |  | Total | 49 | 78 | 83 | 77 |
| Gwynedd | All categories |  | 853 | 357 | 1003 | 301 |
|  | Couple household | No adults can speak Welsh | 35 | 114 | 73 | 103 |
|  |  | One adult can speak Welsh | 115 | 90 | 154 | 65 |
|  |  | Two or more adults can speak Welsh | 537 | 75 | 564 | 47 |
|  |  | Total | 687 | 279 | 791 | 215 |
|  |  | 163 |  |  |  |  |


| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |  | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  | Lone parent household | No adults can speak Welsh | 24 | 40 | 31 | 51 |
|  |  | One adult can speak | 140 | 37 | 178 | 35 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 2 | 1 | 3 | 0 |
|  |  | Welsh |  |  |  |  |
|  |  |  | 166 | 78 | 212 | 86 |
| Conwy | All categories |  | 264 | 766 | 433 | 682 |
|  | Couple household | No adults can speak Welsh | 54 | 384 | 114 | 349 |
|  |  | One adult can speak Welsh | 66 | 154 | 99 | 132 |
|  |  | Two or more adults can speak Welsh | 96 | 48 | 134 | 33 |
|  |  | Total | 216 | 586 | 347 | 514 |
|  | Lone parent household | No adults can speak Welsh | 28 | 144 | 50 | 140 |
|  |  | One adult <br> can speak <br> Welsh | 19 | 36 | 36 | 28 |
|  |  | Two or more adults can speak Welsh | 1 | 0 | 0 | 0 |
|  |  | Total | 48 | 180 | 86 | 168 |
| Denbighshire | All categories |  | 211 | 772 | 332 | 622 |
|  | Couple household | No adults can speak Welsh | 28 | 459 | 96 | 330 |
|  |  | One adult | 71 | 134 | 89 | 97 |


| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  |  | Cannot speak Welsh |  | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 69 | 21 | 76 | 10 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 168 | 614 | 261 | 437 |
|  | Lone parent household | No adults | 24 | 140 | 52 | 162 |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | One adult | 19 | 18 | 19 | 23 |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 0 | 0 | 0 | 0 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 43 | 158 | 71 | 185 |
| Flintshire | All categories |  | 182 | 1633 | 329 | 1360 |
|  | Couple household | No adults can speak | 77 | 1045 | 154 | 891 |
|  |  | Welsh |  |  |  |  |
|  |  | One adult can speak | 51 | 198 | 91 | 154 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 21 | 23 | 31 | 13 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 149 | 1266 | 276 | 1058 |
|  | Lone parent household | No adults can speak | 25 | 342 | 46 | 282 |
|  |  | Welsh |  |  |  |  |
|  |  | One adult | 8 | 25 | 7 | 20 |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 0 | 0 | 0 | 0 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 33 | 367 | 53 | 302 |

Numbers, by age and ability in

| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | Cannot speak <br> Welsh | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | Cannot speak Welsh |
| Wrexham | All categories |  | 188 | 1407 | 303 | 1254 |
|  | Couple household | No adults can speak Welsh | 72 | 928 | 129 | 854 |
|  |  | One adult can speak Welsh | 55 | 124 | 86 | 84 |
|  |  | Two or more adults can speak Welsh | 24 | 6 | 24 | 6 |
|  |  | Total | 151 | 1058 | 239 | 944 |
|  | Lone parent household | No adults can speak Welsh | 22 | 322 | 41 | 287 |
|  |  | One adult can speak Welsh | 15 | 26 | 23 | 23 |
|  |  | Two or more adults can speak Welsh | 0 | 1 | 0 | 0 |
|  |  | Total | 37 | 349 | 64 | 310 |
| Powys | All categories |  | 221 | 1070 | 403 | 805 |
|  | Couple household | No adults can speak Welsh | 62 | 744 | 184 | 559 |
|  |  | One adult can speak Welsh | 68 | 113 | 102 | 94 |
|  |  | Two or more adults can speak Welsh | 46 | 14 | 58 | 14 |
|  |  | Total | 176 | 871 | 344 | 667 |
|  | Lone parent household | No adults can speak Welsh | 30 | 166 | 43 | 124 |
|  |  | One adult | 15 | 33 | 16 | 14 |



| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 146 | 763 | 277 | 699 |
|  | Lone parent household | No adults can speak Welsh | 41 | 238 | 57 | 213 |
|  |  | One adult can speak | 17 | 23 | 21 | 17 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 0 | 0 | 0 | 1 |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 58 | 261 | 78 | 231 |
| Carmarthenshire | All categories |  | 741 | 1170 | 1022 | 914 |
|  | Couple household | No adults can speak Welsh | 102 | 549 | 213 | 389 |
|  |  | One adult can speak | 228 | 245 | 300 | 154 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 286 | 74 | 301 | 31 |
|  |  | Welsh |  |  |  |  |
|  |  |  | 616 | 868 | 814 | 574 |
|  | Lone parent household | No adults can speak Welsh | 58 | 231 | 106 | 280 |
|  |  | One adult can speak | 66 | 71 | 100 | 59 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 1 | 0 | 2 | 1 |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 125 | 302 | 208 | 340 |
| Swansea | All categories |  | 297 | 2228 | 436 | 1923 |
|  | Couple household | No adults can speak | 109 | 1474 | 203 | 1311 |



| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | Cannot speak <br> Welsh | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  |  | can speak Welsh Total | 48 | 305 | 49 | 264 |
| Bridgend | All categories |  | 187 | 1259 | 260 | 1157 |
|  | Couple household | No adults can speak Welsh | 72 | 840 | 113 | 799 |
|  |  | One adult can speak Welsh | 50 | 106 | 63 | 92 |
|  |  | Two or more adults can speak Welsh | 14 | 7 | 8 | 2 |
|  |  | Total | 136 | 953 | 184 | 893 |
|  | Lone parent household | No adults can speak Welsh | 35 | 281 | 61 | 260 |
|  |  | One adult can speak Welsh | 16 | 25 | 15 | 4 |
|  |  | Two or more adults can speak Welsh | 0 | 0 | 0 | 0 |
|  |  | Total | 51 | 306 | 76 | 264 |
| The Vale of Glamorgan | All categories |  | 176 | 1270 | 293 | 1082 |
|  | Couple household | No adults can speak Welsh | 56 | 877 | 131 | 794 |
|  |  | One adult can speak Welsh | 52 | 97 | 76 | 66 |
|  |  | Two or more adults can speak Welsh | 25 | 3 | 23 | 4 |
|  |  |  | 133 | 977 | 230 | 864 |

Numbers, by age and ability in
Welsh

| Unitary authority | Household type | Household composition | Age 3 |  | Welsh Age 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | Cannot speak <br> Welsh | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  | Lone parent household | No adults can speak Welsh | 34 | 271 | 53 | 210 |
|  |  | One adult can speak Welsh | 9 | 22 | 10 | 8 |
|  |  | Two or more adults can speak Welsh | 0 | 0 | 0 | 0 |
|  |  | Total | 43 | 293 | 63 | 218 |
| Cardiff | All categories |  | 534 | 3489 | 687 | 3076 |


|  | Couple household | No adults can speak Welsh | 158 | 2294 | 267 | 2106 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | One adult can speak Welsh | 151 | 194 | 160 | 130 |
|  |  | Two or more adults can speak Welsh | 103 | 23 | 108 | 16 |
|  |  | Total | 412 | 2511 | 535 | 2252 |
|  | Lone parent household | No adults can speak Welsh | 99 | 936 | 127 | 788 |
|  |  | One adult can speak Welsh | 23 | 42 | 25 | 36 |
|  |  | Two or more adults can speak Welsh | 0 | 0 | 0 | 0 |
|  |  |  | 122 | 978 | 152 | 824 |
| Rhondda Cynon | All categories |  | 420 | 2210 | 641 | 1933 |
| Taf |  |  |  |  |  |  |
|  | Couple household | No adults can speak Welsh | 156 | 1304 | 237 | 1175 |


| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  |  |  |  |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | Cannot speak Welsh | $\begin{array}{r} \text { Can } \\ \text { speak } \end{array}$ Welsh | Cannot speak Welsh |
|  |  | One adult | 122 | 192 | 173 | 159 |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 36 | 32 | 50 | 10 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 314 | 1528 | 460 | 1344 |
|  | Lone parent household | No adults can speak | 72 | 616 | 116 | 548 |
|  |  | Welsh |  |  |  |  |
|  |  | One adult can speak | 34 | 66 | 63 | 40 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 0 | 0 | 2 | 1 |
|  |  | more adults |  |  |  |  |
|  |  | can speak |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 106 | 682 | 181 | 589 |
| Merthyr Tydfil | All categories |  | 64 | 561 | 119 | 555 |
|  | Couple household | No adults can speak | 20 | 323 | 61 | 357 |
|  |  | Welsh |  |  |  |  |
|  |  | One adult can speak | 22 | 57 | 23 | 22 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or | 6 | 3 | 8 | 2 |
|  |  | more adults |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 48 | 383 | 92 | 381 |
|  | Lone parent household | No adults can speak | 13 | 166 | 25 | 166 |
|  |  | Welsh |  |  |  |  |
|  |  | One adult can speak | 3 | 12 | 2 | 8 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 0 | 0 | 0 | 0 |
|  |  | Welsh |  |  |  |  |


| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \text { Can } \\ \text { speak } \\ \text { Welsh } \end{array}$ | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  |  | Total | 16 | 178 | 27 | 174 |
| Caerphilly | All categories |  | 312 | 1770 | 560 | 1543 |
|  | Couple household | No adults can speak Welsh | 152 | 1120 | 280 | 958 |
|  |  | One adult can speak Welsh | 80 | 150 | 118 | 96 |
|  |  | Two or more adults can speak Welsh | 17 | 10 | 34 | 9 |
|  |  | Total | 249 | 1280 | 432 | 1063 |
|  | Lone parent household | No adults can speak Welsh | 50 | 450 | 99 | 443 |
|  |  | One adult can speak Welsh | 13 | 39 | 29 | 37 |
|  |  | Two or more adults can speak Welsh | 0 | 1 | 0 | 0 |
|  |  |  | 63 | 490 | 128 | 480 |
| Blaenau Gwent | All categories |  | 64 | 662 | 131 | 565 |
|  | Couple household | No adults can speak Welsh | 40 | 442 | 79 | 352 |
|  |  | One adult can speak Welsh | 10 | 32 | 13 | 21 |
|  |  | Two or more adults can speak Welsh | 1 | 2 | 1 | 2 |
|  |  | Total | 51 | 476 | 93 | 375 |
|  | Lone parent household | No adults can speak | 12 | 178 | 33 | 187 |



| Unitary authority | Household type | Household composition | Numbers, by age and ability in |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Age 3 |  | Welsh Age 4 |  |
|  |  |  |  | $\begin{gathered} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{gathered}$ |  | $\begin{array}{r} \hline \text { Cannot } \\ \text { speak } \\ \text { Welsh } \end{array}$ |
|  |  | Total | 99 | 604 | 172 | 591 |
|  | Lone parent household | No adults can speak Welsh | 23 | 146 | 23 | 126 |
|  |  | One adult can speak | 3 | 4 | 5 | 2 |
|  |  | Welsh |  |  |  |  |
|  |  | Two or more adults can speak | 0 | 0 | 0 | 0 |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 26 | 150 | 28 | 128 |
| Newport | All categories |  | 171 | 1556 | 310 | 1295 |
|  | Couple household | No adults can speak Welsh | 81 | 1035 | 187 | 837 |
|  |  | One adult can speak Welsh | 23 | 50 | 32 | 40 |
|  |  | Two or more adults can speak Welsh | 6 | 1 | 4 | 2 |
|  |  | Total | 110 | 1086 | 223 | 879 |
|  | Lone parent household | No adults can speak Welsh | 54 | 454 | 78 | 402 |
|  |  | One adult can speak Welsh | 7 | 16 | 9 | 14 |
|  |  | Two or more adults can speak | 0 | 0 | 0 | 0 |
|  |  | Welsh |  |  |  |  |
|  |  | Total | 61 | 470 | 87 | 416 |

## Appendix 2: Respondent Stories

This section contains a selection of case studies from the field work. A table detailing all interviews carried out is available below. These individuals (details have been changed to preserve anonymity) have been selected to illustrate and personalise stories we collected regarding the distinct types of family language background and use.

## 'Alan', RCT

Alan has three children aged ten, seven and four and lives in Rhondda Cynon Taf. Both English and Welsh are used in the home with Alan speaking Welsh with the children while his wife, originally from England, speaks English. The children attend Welsh-medium education.
7.40 Alan was brought up in an English-speaking home and was the first from his family to attend Welsh-medium education. He spoke only English at home and his friendship groups were English-speaking and had "quite a complex relationship with Welsh at school." Since leaving school he 'hadn't really spoken Welsh for ten years' with only occasional use in work. Having worked through his complex relationship with the language in adulthood, Alan has spoken Welsh with the children since the arrival of the eldest child. It was a conscious decision, but not one that he can explain in detail. It required effort at first:
'fi yn trio yn galed ar y dechrau. Odd e ddim yn teimlo'n naturiol achos oedd e ddim yn rhywbeth oedd fi'n gwneud bob dydd ond oedd hi dim ond yn blentyn. Oedd e'n rhywbeth oedd fi wedi penderfynu bo fi am trio gwneud ac nawr mae'n rili neis.'
[I tried hard at the beginning. It didn't feel natural because it wasn't something I did every day but she was just a child. It was something I had decided I would try out and now it's really nice]
7.41 Alan was determined that his children would attend Welsh-medium education, because they would have no other opportunity to speak Welsh. He did have some concerns about the decision, as did his wife, and read up on to make sure he was doing the right thing. There was 'quite a debate' between the parents but Alan was very keen and the mother was eventually persuaded by the good reviews of the local school.
7.42 Alan speaks more Welsh socially now and noted that there is a group of parents in the primary school with whom he has been friendly since they
attended secondary school together. They always spoke English together in school and as adults, but have switched to Welsh as their children started school together. He is proud that he is raising his children to speak Welsh, 'o'n ni wedi mynd allan ar y beics ac oedd fi yn galw nhw [y plant] yn Gymraeg ac oedd fi yn gweld rhywun yn cerdded tuag ato fi, fi heb gweld am blynyddoedd ac oedd e yn siarad Cymraeg gyda plant e, ac oedd e'n mynd, 'na neis, braf clywed ti'n siarad Cymraeg', felly on i jyst yn siarad Cymraeg gyda fe wedyn; so odd fi'n meddwl bod e'n tipyn bach o sioc i ni'n dau oherwydd, os bydde dim ond fi a fe blynyddoedd nôl byddai'r ddau ohonom ni dim ond yn siarad Saesneg. Felly tipyn bach o falchder 'fyd dwi'n credu.'
[we'd gone out cycling and I called out to my children and I saw someone walking towards me, whom I hadn't seen in years. He was speaking Welsh with his children and said 'that's nice—lovely to hear you speaking Welsh', so I just spoke Welsh with him thereafter; I thought it was a bit of a shock to us both because, if it had been just him and me years ago, both of us would just have spoken English [with each other]. So I think there was a bit of pride about it all, too']

## 'Hannah’, RCT

7.43 Hannah was brought up in north Wales within a partly Welsh-speaking family. She spoke Welsh fluently and regularly with her mother's side of the family and English with her father's side of the family. She attended a Welshmedium primary school, but following the death of her mother when she was seven years old and some negative experiences in Welsh-medium education, moved to an English-medium school. The school strongly encouraged the Welsh language amongst its pupils.
7.44 Hannah has now moved to south Wales. Before her child was born, she and her partner (who was also partly educated through the medium of Welsh) discussed which language they would use with their children. Both parents felt strongly that an English-medium education offered the best academic and career prospects for their children; the mother felt this way due to her own perceived negative experiences in a Welsh-medium school and a belief that children can struggle with attending University and developing a career in English after being educated in Welsh. Neither did the mother wish to speak Welsh regularly with her daughter, as she felt it would hinder the
development of her English—despite noting a strong emotional attachment to the language since it was her own mother's language.

Hannah now only chooses to use occasional words of Welsh with her daughter, to introduce her to the language, but Welsh-speaking members of the family and Welsh-speaking family friends do communicate with her daughter in Welsh.

## ‘Ellen', Gwynedd

7.47 Ellen was raised in a Welsh-speaking family although her younger brother speaks English only. The family lived for a few years in England before returning to Gwynedd when Ellen was eight years old. She started off in Welsh-medium education on her return but then attended an Englishmedium school. She did not speak Welsh in school and did not mix with Welsh-speaking children in her own village as she travelled some distance to school. Although she spoke Welsh at home, she thinks her upbringing wasn't "culturally Welsh", possibly because her own mother was trying to escape from an unhappy Welsh upbringing and that her parents had both spent time living in England.
"Odd upbringing fi culturally reit Saesneg.... So natho ni ddim tyfu fyny yn clywed 'Cymraeg Cymraeg Cymraeg'; natho ni ddim clywed caneuon Cymraeg, doedd na ddim patriotism as such".
[my upbringing was culturally quite English (language)...So we didn't grow up hearing 'Welsh Welsh Welsh'; we didn't hear songs in Welsh. There was no patriotism as such]

These days most of her friends are Welsh-speaking and she is equally comfortable in English and Welsh. There are pockets of Welsh speakers in her town whom she describes as 'Welsh Welsh' and 'media types', with whom she doesn't feel she has anything in common. She uses roughly equal use of Welsh and English with her ex-husband, switching back and forth between both.
7.49 Ellen speaks the two languages at home with the children. She's no longer with her husband (a Welsh-speaker). Ellen and her former husband tended to speak with each other in both English and Welsh. The children spend half their time with their dad and he also uses a mix of English and Welsh.
7.50 With her five-year old, Ellen speaks both languages but slightly more English. She doesn't remember any conversations pre-birth about language use. When pressed, she thinks that they may have spoken a mix of both languages because the father also didn't have a 'Welsh culture' and was 'quite English' in his ways. She thinks that using both languages was an unspoken process, and not a decision as such. The desire for her daughter to have a good standard of English seems to be a key driver in the use of more English in the home. She also listed a few other factors-Ellen thinks that English comes more naturally because as a child she used to have pets with whom she spoke English; also around the time of her birth they were living in another town and the baby groups she attended were English ones. She makes the point that grandparents and school speak Welsh with her but she wants the child to have a good standard of English, unlike some Welsh speakers in the local area:
"ma mam a dad yn siarad Cymraeg efo [plentyn], mae'r ysgol yn siarad Cymraeg a pan oedd [plentyn] yn fach on i isio gwneud yn siwr bo Saesneg hi o safon cystel; achos yn yr ardal yma mae'n gallu bod bo lot o pobl yn siarad Cymraeg on da nhw ddim yn siarad Saesneg yn dda iawn, a gan bo fi wedi dod o culture kind of Seisngaidd o ran early years fi li dwi weithiau'n teimlo bo culture fi yn split hanner hanner, a bo fi wedi cael addysg fi yn Saesneg i gyd".
[Mam and dad speak Welsh with [child], the school speaks Welsh. And when [child] was little I wanted to make sure that her English was of an equivalent standard; because in this area there may be a lot of Welsh speakers but some of them don't speak English well, and as I come from an Englishy type of culture in terms of my own early years, I sometimes thing that my culture is split down the middle, and I was also educated completely in English]
7.51 Her daughter attends the local Welsh-medium primary, it is the local school with a good reputation, and it was automatic that she would go there.

She has a younger child (two years old) who has a developmental delay and is not yet speaking. She uses mostly Welsh with that child, to not "confuse [child] with two languages." Although health professionals have been involved in the child's care, the decision to use more Welsh has been hers alone, not one suggested by professionals; she just thought that the child hears more Welsh in the crèche and has 1:1 support in Welsh so she'll concentrate on that.

She is aware that her views don't align with most in her community, and that some people wouldn't agree with her choices. Since the children were born she often feels that she needs to explain her decisions to friends, wanting them to understand that she was brought up differently and that her upbringing means that she is less inclined to speak Welsh with her children. She makes a point of speaking Welsh with her daughter on the school run and in advance of meeting Welsh friends.

## Siân, Caerphilly

7.54 This mother has lived in the area her whole life, was raised in a fluent Welshspeaking family and was educated through the medium of Welsh. She always strongly felt that her children must be able to speak Welsh, otherwise a part of her culture would be taken away from her. Her husband, however, doesn't speak any Welsh and was raised in an English-speaking family. As such, the parents held a discussion before their children were born about language use in the family; the mother was adamant that her children must speak Welsh, but the father was concerned that he wouldn't be able to support their language and education development. The result of these discussions was a bilingual household, where the mother herself uses Welsh most of the time with the children and the father uses English. However, the mother also makes a conscious effort to turn to English for family conversations, to ensure that her husband is not excluded from the conversation. Similarly, the husband actively encourages the mother and children to converse in Welsh as well. The parents also ensure that the children have equal access to both Welsh and English books, to ensure that the children develop equal fluency in both languages.

## Appendix 3: Table of all Respondents' Language Background, County of Residence and Intergenerational Transmission Behaviour

This table contains anonymised details of all respondents to the survey and the county in which they resided at the time the research fieldwork was carried out. It is included to give background details on the respondents' own self-reported Welsh language ability, where they acquired their Welsh language skills, and what language/s they use to communicate with their child/ren. To preserve anonymity, further background details (including the number of children a respondent may have) are not provided here hence our use of the convention 'child/ren.'

| County of <br> Residence | Language use with child/ren | Notes |
| :--- | :--- | :--- |
| Caerphilly | Both parents speak mostly English to child/ren but <br> increasingly use Welsh | Mother and father learnt Welsh through the Welsh-medium school system |
| Caerphilly | Mother speaks Welsh to child/ren | Mother learnt Welsh through the Welsh-medium school system. Father is non- <br> Welsh-speaking. Mother is determined for child/ren to receive Welsh-medium <br> education |
| Caerphilly | Father speaks some words of Welsh to child/ren who <br> attend English-medium education | Father learnt Welsh through the Welsh-medium school system. Mother is non- <br> Welsh-speaking. Child/ren attend English-medium education at insistence of <br> mother. |
| Caerphilly | Mother speaks "90\% English" to child/ren | Mother learnt Welsh through the Welsh-medium school system. Father is non- <br> Welsh-speaking. Mother is determined for child/ren to receive Welsh-medium <br> education |
| Caerphilly | Mother speaks mostly English to child/ren | Mother learnt Welsh through the Welsh-medium school system. Father is non- <br> Welsh-speaking. Father determined for child/ren to receive Welsh-medium <br> education |
| Caerphilly | Mother speaks Welsh to child/ren | Mother comes from a Welsh-speaking family. Father is non-Welsh-speaking |
| Caerphilly | Mother speaks Welsh to child/ren | Mother comes from a Welsh-speaking family. Father is non-Welsh-speaking |
| Caerphilly | Father speaks English to child/ren although is committed to <br> using his Welsh more with them. Mother speaks her native <br> non-UK language to child/ren. | Father learnt Welsh via the Welsh-medium education system. Child/ren attend <br> Welsh-medium education system |
| Caerphilly | Mother works in Welsh-medium school; has established a <br> pattern of speaking English to her child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non- <br> Welsh-speaking. |
| Caerphilly | Mother speaks mostly English to younger child/ren who <br> receive/s Welsh-medium education, and more Welsh with <br> older child/ren who also receive Welsh-medium education. | Mother learnt Welsh via the Welsh-medium education system. Her language <br> patterns with her different child/ren have been influenced by different partners. |
| Caerphilly | Mother speaks English to child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non- |


| County of Residence | Language use with child/ren | Notes |
| :---: | :---: | :---: |
|  |  | Welsh-speaking. Mother is determined for child/ren to receive Welsh-medium education. |
| Caerphilly | Mother speaks English to child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non-Welsh-speaking. Mother is determined for child/ren to receive Welsh-medium education. |
| Caerphilly | Both parents speak English to child/ren, having previously spoken Welsh to them while living in a high percentage Welsh-speaking area. | Both parents learnt Welsh from the Welsh-medium school system. Child/ren receive Welsh-medium education. |
| Caerphilly | Mother speaks English to child/ren. | Mother learnt Welsh at home in a high percentage Welsh-speaking area. She speaks English with her child/ren and is eager for them to attend Welshmedium schools. She was discouraged from speaking Welsh when younger. |
| Caerphilly | Mother speaks some words of Welsh to child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non-Welsh-speaking. Mother is determined for child/ren to receive Welsh-medium education. |
| Gwynedd | Both parents speak Welsh to their child/ren (whilst using some English to assist with words they believe their child/ren has/have difficulty pronouncing). | Couple are both Welsh-speaking. All members of the couple's family spoke Welsh to them during childhood apart from the Father's Mother, who is not Welsh-speaking. |
| Gwynedd | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Gwynedd | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Gwynedd | Mother speaks Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Her partner's mother was non-Welsh-speaking, his father was Welsh-speaking but used English with his son. |
| Gwynedd | Both parents speak Welsh to child/ren. | Both respondents are from English-speaking homes, and speak Welsh with their child/ren. |
| Gwynedd | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Gwynedd | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Gwynedd | Both parents speak Welsh to child/ren. | As a child, Father spoke English with his Mother and Welsh with his Father and siblings; Mother comes from an entirely Welsh-speaking family. |
| Gwynedd | Mother speaks Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father non-Welshspeaking and now has limited contact with mother and child/ren. |
| Gwynedd | Mother speaks both English and Welsh to child/ren. | Mother comes from English-speaking home but spoke Welsh to her Father's family. |
| Gwynedd | Both parents speak half Welsh and English to child/ren. | Mother spoke Welsh to everyone but doesn't "feel part of Welsh culture." |
| Gwynedd | Father speaks Welsh to child/ren. | Father's family Welsh-speaking, Mother non-Welsh-speaking. |


| County of Residence | Language use with child/ren | Notes |
| :---: | :---: | :---: |
| Gwynedd | Father speaks Welsh to child/ren but accommodates to English when Mother is present. | Father comes from entirely Welsh-speaking family. Mother is non-Welshspeaking. |
| Gwynedd | Father speaks Welsh to child/ren; Mother speaks 20\% Welsh to child/ren as she has learnt Welsh as an adult. | Father comes from entirely Welsh-speaking family. Mother is non-Welshspeaking. |
| Anglesey | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Anglesey | Both parents speak Welsh to child/ren. | Both parents come from entirely Welsh-speaking families. |
| Anglesey | Both parents speak Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father comes from mixedEnglish/Welsh background. |
| Anglesey | Both parents speak Welsh to child/ren apart from occasional roleplay activities. | Both parents come from entirely Welsh-speaking families. |
| Anglesey | Both parents speak Welsh to child/ren (Mother emphasises her lack of confidence in using Welsh). | Father spoke Welsh with all family; Mother spoke English at home in a high percentage Welsh-speaking location. |
| Anglesey | Mother speaks English to child/ren. Father now speaks more Welsh to them than when they were born. | Father spoke Welsh and English in childhood. Mother is non-Welsh-speaking. |
| Anglesey | Mother speaks mostly Welsh to child/ren. | Mother's ex-partner and many of his family are non-Welsh-speaking. As a child, mother spoke Welsh to her own mother but English to others. |
| Anglesey | Mother speaks Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father is non-Welshspeaking. |
| Anglesey | Mother speaks Welsh to child/ren. | Father is non-Welsh-speaking. |
| Anglesey | Mother speaks Welsh to child/ren. | As a child, Mother spoke English at home. Her Mother was Welsh-speaking and her father non-Welsh-speaking. |
| Anglesey | Father speaks Welsh to child/ren. | Mother is non-Welsh-speaking. |
| Anglesey | Mother speaks Welsh to child/ren. | Mother learnt Welsh through school system. Father is non-Welsh-speaking. |
| Anglesey | Mother speaks Welsh to child/ren. | Mother comes from an entirely Welsh-speaking family. Father is non-Welshspeaking. |
| Anglesey | Mother speaks Welsh to child/ren, accommodates to English in presence of Father. | Mother comes from an entirely Welsh-speaking family. Father is non-Welshspeaking. |
| Anglesey | Both parents speak English to child/ren. | Mother is non-Welsh-speaking. Father learnt Welsh through school system. |
| Anglesey | Mother speaks Welsh to child/ren. | Father spoke English with his family but learnt Welsh through school system. Mother comes from entirely Welsh-speaking family. |
| Rhondda Cynon Taf | Both parents speak Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father learnt Welsh through Welsh-medium education system. |
| Rhondda Cynon Taf | Parents speak English to each other but Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father learnt Welsh as adult. |


| County of Residence | Language use with child/ren | Notes |
| :---: | :---: | :---: |
| Rhondda Cynon Taf | Mother speaks both English and Welsh to child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non-Welsh-speaking (and separated from mother). |
| Rhondda Cynon Taf | Mother increased use of Welsh to child/ren as they began attending Welsh-medium education. | Mother learnt Welsh through Welsh-medium education system. Father is non-Welsh-speaking. |
| Rhondda Cynon Taf | Both parents speak Welsh to child/ren but this pattern has evolved from using English only at the beginning of the child/ren's lives. | Father learnt Welsh through Welsh-medium education system; Mother was non-Welsh-speaking in childhood but is now learning Welsh. |
| Rhondda Cynon Taf | Mother uses "more Welsh than expected" with child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non-Welsh-speaking. |
| Rhondda Cynon Taf | Mother uses "increasingly more Welsh" with child/ren. | Mother learnt Welsh via the Welsh-medium education system. Father is non-Welsh-speaking. Mother adamant in her desire for Welsh-medium education for her child/ren despite lacking practice and confidence in her own Welsh language skills. |
| Rhondda Cynon Taf | Father increasingly speaks Welsh to child/ren. | Father learnt Welsh through Welsh-medium education system; Mother is non-Welsh-speaking. |
| Rhondda Cynon Taf | Father speaks some Welsh to child/ren. | Father learnt Welsh through Welsh-medium education system; mother is non-Welsh-speaking. |
| Rhondda Cynon Taf | Mother increasingly speaks Welsh to child/ren. | Mother comes from entirely Welsh-speaking family, Father is non-Welshspeaking. |
| Rhondda Cynon Taf | Mother speaks Welsh to child/ren. | Mother comes from entirely Welsh-speaking family. Father (separated from mother) is non-Welsh-speaking and disapproves of Welsh-medium education which his child/ren receive. |
| Rhondda Cynon Taf | Mother speaks 'a few words' of Welsh to child/ren. | Father learnt Welsh via the Welsh-medium education system; Mother is non-Welsh-speaking. Child/ren receive English-medium education, to Father's regret. |
| Rhondda Cynon Taf | Conscious decision by Welsh-speaking mother to speak English only to child/ren and to ensure English-medium education for them. | Mother used Welsh and English with family in her childhood. Father is non-Welsh-speaking. |
| Rhondda Cynon Taf | Father uses words of Welsh with child/ren. | Father learnt Welsh from Welsh-medium education system. Partner is non-Welsh-speaking. Child/ren receive English medium education to the regret of father. |
| Rhondda Cynon Taf | Parents use words of Welsh with child/ren. | Parents are both adult Welsh learners and received English-medium education. They have sent child/ren to Welsh-medium education. |

## Appendix 4: Briefing Document for Prospective Participants

## Briefing Document: Research into Conditions influencing Welsh Language Transmission and use in Families

We are inviting you to take part in a project looking at Welsh language use in families. Before you decide to participate, it's important that you understand why the project is being conducted and what it will mean. Please take your time to read the information below and do not hesitate to ask any questions.

## What is the purpose of the study?

The aim of the research is to examine how parents who speak Welsh and English decide which language(s) to use with their children. We are also interested in language use in families where at least one of the parents or carers speak Welsh.

## Do I have to participate?

Contribution to this study is entirely voluntary. You will be free to withdraw at any time without giving a reason to the researcher.

## What will happen if I decide to participate?

We will arrange a time for a researcher to visit you, either at home or somewhere more convenient, to ask you questions about your family and your language use. The researcher will ask you to fill in a written questionnaire and then ask you some questions. The whole process shouldn't take more than one hour, and we would offer you $£ 35$ in recognition of your time.

We will also leave a questionnaire for any other adults who live in your home. It is up to them whether they complete this questionnaire and return it to us.

## Will my participation be confidential?

Yes. Any information you share will be treated confidentially and you won't be named or identifiable in any reports or publications.

## What will happen to the information I give?

The information you provide will be held in accordance with the Data Protection Act (1998). It will only be available to members of the research team.

## What will happen to the results of the study?

The results of this study will appear in a written report produced for the Welsh Government and will be available to the public. The results may also be discussed orally at public events.

Who is organising and funding the research?
This research work is funded by the Welsh Government. The project is organised by Dr Jeremy Evas, Cardiff University and the interviews are conducted by Arad Research Ltd.

## Contact for further information?

For further information, please contact Dr Jeremy Evas (029 2087 4843) or via email (evasi@cardiff.ac.uk).

Should you have any concerns about the research or how it is conducted, please contact Professor Sioned Davies, Head of the School of Welsh, Cardiff University via email (daviessm@cardiff.ac.uk).

## Next steps?

If you decide to participate, complete the consent form to give your permission.
Thank you for taking the time to read this information.

## Appendix 5: Screener Questionnaire

Screener questionnaire for Research Project: Research into Conditions Influencing Welsh Language Transmission and Use in Families

This questionnaire will be used when Arad staff are contacting families in relation to the Language Transmission research. This screener questionnaire will be used to confirm contact details and practicalities for arranging interviews as well as enabling us to confirm the socio-economic characteristics of participants.


Bilingual Greeting: establish whether person is Welsh speaker and wishes to continue in Welsh or English
[For those who have indicated in previous Welsh Government survey that they were prepared to be recontacted]

Continue: I am phoning from Arad Research, working for Cardiff University on a Welsh Government-funded research project to gather the views of families on the use of Welsh and English at home. I understand that you've previously indicated (whilst taking part in the National Survey for Wales) that you'd be willing to be recontacted regarding possible participation in future research. [Researcher to outline research project - refer to briefing note]

## [For those recruited from local social group]

Continue: I understand that [CONTACT NAME] from [ORGANISATION] recently spoke to you about taking part in a research project to gather the views of families on the use of Welsh and English at home. [Check if they remember discussing the research with them - if not refer to briefing note to explain the research].

1. Are you happy to take part in a discussion with one of our researchers? This will involve a short questionnaire, followed by an interview. It shouldn't take more than an hour of your time, and we would offer $£ 35$ in recognition for your time.

## Yes/No

## [If no, thank and close interview]

## [If yes, go to Q2]

So that our researcher can understand a bit more about you before they meet you, l'd like to ask a few questions about you and your household. This should take no more than 5 minutes. Is that ok?

| 2. Ages of all children in your care |  |
| :---: | :---: |
| 3. Age of youngest child in your care (months). If no children aged below 5 then thank and close interview. |  |
| 4. What is your relationship to these children? (Tick all that apply) | Parent <br> Grand-parent <br> Carer <br> Other |
| 5. Which other adults live with you? (Tick all that apply) | None Partner Other (please specify) |

6. Which of the following age categories do you belong to? (Circle)

19 or under
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65+
7. Do you or your partner speak Welsh?
Yes - only me
Yes - only my partner
Yes - both No

8. We will visit you at your home if convenient [alternative if not comfortable with this (e.g. local centre, café, home)]
9. Preferred date and time for undertaking the discussion?

| Address: |  |
| :--- | :--- |
| Date: | Time: |

## Try to book a date, time and location for the interview during the phone call. If not, arrange convenient time to call back to confirm details.

Thank you for your time. We will confirm the date, time and location of the discussion with you during the next week. We will also send you a text message on the day before the interview to confirm.
10. What would be the best way for us to confirm the date, time and location of the discussion?

11. Please note the parent's preferred method for confirmation of date/time/locati on of interview

Letter (take full address)

Phone - note phone number
E-mail - note e-mail address

## Confirm interview date/time/location with researcher and then ensure that:

- Confirmation details are sent out to parent via method above
- Details of date, time and location of interview sent to researcher
- Copy of screener questionnaire provided to relevant researcher
- Phone call made and text sent to confirm arrangements on the day before the interview


## Appendix 6: Interview Consent Form

YMCHWIL I'R AMODAU SYDD YN DYLANWADU AR ARFERION TEULUOEDD MEWN
PERTHYNAS Â THROSGLWYDDO A DEFNYDDIO'R GYMRAEG
RESEARCH INTO CONDITIONS INFLUENCING WELSH LANGUAGE TRANSMISSION AND USE IN FAMILIES

## FFURFLEN CYDSYNIO I GYMRYD RHAN MEWN CYFWELIAD YMCHWIL <br> CONSENT FORM TO PARTICIPATE IN RESEARCH INTERVIEW

Ymchwilwyr: Mae Ymchwil Arad yn gweithio i Brifysgol Caerdydd ar brosiect ymchwil a ariennir gan Lywodraeth Cymru i gasglu barn teuluoedd ar y defnydd o'r Gymraeg a'r Saesneg yn y cartref.<br>Researchers: Arad Research is working for Cardiff University on a Welsh Governmentfunded research project to gather the views of families on the use of Welsh and English at home.<br>Os bydd gennych gwestiynau ynghylch y prosiect hwn, cysylltwch â:<br>Should you have any questions regarding this project, please contact:<br>- Sioned Lewis, Ymchwil Arad Research, sioned@aradresearch.com (029) 20440552<br>- Dr Jeremy Evas<br>Prifysgol Caerdydd (EvasJ@caerdydd.ac.uk) /Cardiff University (EvasJ@cardiff.ac.uk) (029) 20874843

Os bydd gennych bryderon ynghylch yr astudiaeth hon, neu sut y bydd yn cael ei chynnal, cysylltwch â'r Athro Sioned Davies, Pennaeth Ysgol y Gymraeg, Prifysgol Caerdydd drwy ebost (cymraeg@caerdydd.ac.uk) neu dros y ffôn (029 2087 4843)

Should you have any concerns about the research or how it is conducted, please contact Professor Sioned Davies, Head of the School of Welsh, Cardiff University via email (cymraeg@cardiff.ac.uk) or by phone (029 2087 4843)

## Adran 1: Gwybodaeth am y cyfranogwr

Section 1: Information about the participant
Eich enw / Your name:

## Adran 2: Datganiad

Rwyf yn 16 oed neu drosodd, a chydsyniaf i gymryd rhan yn y cyfweliad sy'n rhan o'r prosiect uchod ar [Dyddiad cynnal y cyfweliad
1

1. Rwyf wedi darllen y wybodaeth yn y ddogfen hon.
2. Mae manylion unrhyw weithdrefnau a risgiau wedi eu hesbonio i mi i'm boddhad.
3. Cytunaf i'm cyfranogiad yn y cyfweliad gael ei recordio ac i'r recordiad/nodiadau/trawsgrifiad a'r ffurflen gydsynio hon gael eu cadw mewn storfa ddata o dan amodau Deddf Gwarchod Data (1998) ac o dan gyfrinair. Bydd copïau

## Section 2: Statement

I am 16 years of age or over and consent to take part in this interview which is part of the above project [Date the interview was held _1_1]

1. I have read the information in this document
2. Information regarding procedures and risks have been explained to me to my satisfaction
3. I also agree for my participation in the interview to be recorded and the recording/notes/transcription and this consent form to be kept in data storage under the conditions of the Data Protection

## Adran 2: Datganiad

caled yn cael eu dinistrio.
4. Rwyf yn ymwybodol y dylwn gadw copi o'r ddogfen hon at ddibenion cyfeirio.
5. Deallaf:

- Na chaf fudd uniongyrchol (y tu hwnt i'r taliad cydnabyddiaeth am amser) o gymryd rhan yn y prosiect hwn.
- Fy mod yn rhydd i dynnu'n ôl o'r prosiect ar unrhyw adeg ac i beidio â darparu ateb i gwestiynau penodol.
- P'un a dynnaf yn ôl ai peidio, ni fydd hyn yn effeithio ar unrhyw wasanaeth a ddarperir i mi gan Brifysgol Caerdydd neu Arad.
- Y caf ofyn i'r recordio gael ei stopio ar unrhyw adeg, ac y caf dynnu'n ôl ar unrhyw adeg o'r cyfweliad heb anfantais i mi.

PWYSIG: Ni ryddheir unrhyw fanylion personol a all arwain at ddatgelu fy enw ac ni fydd y recordiad o'm cyfranogiad ar gael yn gyhoeddus.

## Section 2: Statement

Act (1998) and under a password. Physical copies of all documents will be destroyed
4. I am aware that I should retain a copy of this document for reference purposes.
5. I understand:

- I may not receive direct benefit (beyond the payment for recognition of my time below) by participating in this project
- I am free to withdraw from the project at any time and not to provide answers to certain questions
- Whether I withdraw or not, this will not affect any service provided to me by Cardiff University or Arad.
- I may request that the recording be stopped at any time and I may withdraw from the interview at any time without any personal disadvantage.

IMPORTANT: Any personal details that may lead to the disclosure of my name will not be released and the recording of my participation will not be made publicly available.

Rwyf wedi darllen a deall yr uchod ac wedi derbyn taliad o £35 am gymryd rhan yn yr ymchwil. I have read and understood the above and have received a payment of $£ 35$ for participating in the research.

Llofnod y cyfranogwr/Signature of participant:

Dyddiad/Date:

## Adran 3: Datganiad yr Ymchwilydd/Section 3: Researcher's Statement

## Enw'r Ymchwilydd / Name of Researcher:

$\qquad$
Tystiaf fy mod wedi esbonio'r ymchwil i'r cyfranogwr ac ystyriaf ei fod/ei bod yn deall yr hyn sydd ynghlwm wrtho ac yn rhoi cydsyniad rhydd i gymryd rhan.
I certify that I have explained the research to the participant and I consider he/she understands its implications and freely gives consent to participate.

Llofnod yr Ymchwilydd / Signature of Researcher:

Dyddiad / Date:

## Appendix 7: Parental Pre-Interview Questionnaire

## RESEARCH INTO CONDITIONS INFLUENCING WELSH LANGUAGE TRANSMISSION AND USE IN FAMILIES

Researchers: Arad Research is working for Cardiff University on a Welsh Governmentfunded research project to gather the views of families on the use of Welsh and English at home.

Should you have any questions regarding this project, please contact:

- Sioned Lewis, Arad Research (sioned@aradresearch.com) (029) 20440552
- Dr Jeremy Evas, Cardiff University (EvasJ@cardiff.ac.uk) (029) 20874843

Should you have any concerns about the research or how it is conducted, please contact Professor Sioned Davies, Head of the School of Welsh, Cardiff University by email (cymraeg@cardiff.ac.uk) or by telephone (029 2087 4843)

## Reference Number (Office use only):

$\qquad$

## Pre-interview questionnaire

As with all aspects of this project, your participation is voluntary, you may withdraw at any time without providing a reason, your answers will be kept completely confidential, and nobody will be able to identify you or your family from anything you say. You may answer this questionnaire in English or Welsh, and may take part in the interview in English or Welsh. You may choose to be interviewed in English if you completed the questionnaire in Welsh, and vice versa.

## Please answer the following questions:

1. How would you describe your national identity? Please choose all that apply.

| Welsh |  |
| :--- | :--- |
| English |  |
| Scottish |  |
| Northern Irish |  |
| British |  |
| Other (please describe): |  |

2. Can you understand, speak, read or write Welsh? Please choose all that apply.

| Understand spoken Welsh |  |
| :--- | :--- |
| Speak Welsh |  |
| Read Welsh |  |
| Write Welsh |  |
| None of the above (go to question 7) |  |

3. Which of the following best describes your ability to speak Welsh? Please tick one box only.

| I'm fluent in Welsh |  |
| :--- | :--- |
| I can speak a fair amount of Welsh |  |
| I can only speak a little Welsh |  |
| I can just say a few words |  |
| None of the above (go to question 7) |  |

4. Where did you mainly learn to speak Welsh?

| At home, as a young child |  |
| :--- | :--- |
| At nursery (aged three-to-four) |  |
| At primary school (aged 5-10) |  |
| At secondary school (aged 11+) |  |
| At college or univessity (full-time) |  |
| Somewhere else, including on a Welsh for Adults course. |  |
| Please give details below: |  |
|  |  |
|  |  |

5. What language(s) do you and your partner use with your youngest child?

|  | You | Partner |
| :--- | :--- | :--- |
| Always/almost always |  |  |
| Welsh |  |  |
| Mainly Welsh |  |  |
| Roughly equal use of |  |  |
| Welsh and English |  |  |
| Mainly English |  |  |
| Always/almost always |  |  |
| English | Other language |  |

6. Which of the following statements do you feel best represents your language use with your youngest child?

| I just naturally use whichever language feels more appropriate at the time |  |
| :--- | :--- |
| I have consciously chosen to use a particular language with my child and try to stick |  |
| to that |  |
| Other. Please give details below: |  |
|  |  |

7. Circle the appropriate number on each line below to note your answers to the following questions. We can talk in more depth about your answers later:
A. How much control do you have over whether you speak Welsh to your child?

| Very little <br> control |
| :--- |
| 1 |

B. For me to speak Welsh to my child is...

| Very <br> difficult | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

C. I think of myself as a Welsh speaker

| Strongly <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Strongly <br> agree |  |  |  |  |  |  |

D. To speak Welsh is an important part of who I am

| Strongly <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

E. I am not the type of person who would speak Welsh.

| Strongly <br> disagree |
| :--- |
| Strongly |

F. Speaking Welsh to my child is something I do without thinking

| Strongly <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Strongly
agree
8. This table briefly describes some people. Would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? Circle the appropriate number.

|  | Very <br> much <br> like me | Like me | Somewh <br> at like <br> me | A little <br> like me | Not like <br> me | Not like <br> me at all |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| It is important to him/her to think <br> up new ideas and be creative; to <br> do things his/her own way. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to be <br> rich; to have a lot of money and <br> expensive things. | 1 | 2 | 3 | 4 | 5 | 6 |
| Living in secure surroundings is <br> important to him/her; to avoid <br> anything that might be <br> dangerous. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to have <br> a good time; to "spoil" <br> himself/herself. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to do <br> something for the good of <br> society. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important for him/her to help <br> other people nearby; to care for <br> their well-being. | 1 | 2 | 3 | 4 | 5 | 6 |
| He/she believes that being very <br> successful is important to <br> him/her; to have people <br> recognize his/her achievements. | 1 | 2 | 3 | 4 | 5 | 6 |
| Adventure and taking risks are <br> important to him/her; to have an <br> exciting life. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to <br> always behave properly; to avoid <br> doing anything people would say <br> is wrong. | 1 | 2 | 3 | 4 | 5 | 6 |
| Looking after the environment is <br> important to him/her; to care for <br> nature and save resources. | 1 | 2 | 3 | 4 | 5 | 6 |
| Tradition is important to him/her; <br> to follow the customs handed <br> down by his/her religion or family. | 1 | 2 | 3 | 4 | 5 | 6 |

9. Circle the appropriate number on each line below to show how much you agree with the following statements. We can talk in more depth about your answers later:
a. "I think that speaking Welsh to your child is..."

| Extremely <br> bad |
| :--- |
| 1$\| 2$ |

b. Most people who are important to me think that...

| I should <br> not | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

...speak Welsh to my child
c. Where I live, it is normal for people to speak Welsh to their children.

| Completely <br> disagree |
| :--- |
| Completely <br> agree |

d. Where I live, there is enough support and provision (for example, schools) for the Welsh language.

| Completely |
| :--- |
| disagree |


| Completely |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Appendix 8: Interview Schedule

## Qualitative questions

## Name of participant:

$\qquad$
Date Interview held: $\qquad$
Consent form obtained: $\qquad$

In the next part of the session, l'd like to ask you a few questions about how you use English and Welsh with your children.

Before that, can I ask whether any other languages, other than English or Welsh are used in your home and by whom?

I'd now like to ask you a bit about your background:

1. Besides living in [name of town], have you lived anywhere else in your life?

| Area | From | Until |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |

2. Can you tell me a bit about your education? Which of the following qualifications do you have? [Researcher: Tick all relevant boxes.]

| 1-4 O levels / CSEs / GCSEs (any grades), Entry Level, Foundation Diploma |  |
| :--- | :--- |
| NVQ Level 1, Foundation GNVQ, Basic Skills |  |
| $5+$ O levels (passes) / CSEs (grade 1) / GCSEs (grades A*- C), School Certificate, 1 A level |  |
| /2-3 AS levels / VCEs, Welsh Baccalaureate Intermediate Diploma 3 |  |
| NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First / General Diploma, |  |
| RSA Diploma 4 |  |
| Apprenticeship |  |
| 2+ A levels / VCEs, 4+ AS levels, Higher School Certificate, Progression / Welsh |  |
| Baccalaureate Advanced Diploma 6 GO TO Q102 G NVQ Level 3, Advanced GNVQ, City |  |
| and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma |  |
| Degre (for example BA, BSC), Higher degree (for example MA, PhD, PGCE) |  |
| NVQ Level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher Level |  |
| Professional qualifications (for example teaching, nursing, accountancy) |  |
| Other vocational / work-related qualifications |  |
| No qualifications |  |
| Don't know |  |

3. Now a bit about your work. What is your job? If you are on maternity leave, tell us about the position you expect to return to. If relevant, what is your partner's job?

The next part of the conversation is about your use of language when you were growing up.
4. Tell me about how much Welsh was used in your family when you were growing up. [Researcher to listen to narrative and proceed to make distinction between immediate and non-immediate family. Researcher to use the grid below as a prompt if necessary and also ascertain whether the relations below were able to speak Welsh: prompt for frequency using the table below following participant's narrative]
a. So was [name of relative] able to speak Welsh?
b. Did they understand Welsh?

|  | Always/almost <br> always Welsh | Mainly <br> Welsh | Roughly <br> equal <br> use of <br> Welsh <br> and <br> English | Mainly <br> English | Always/almost <br> always English | Another <br> language | Don't <br> know or <br> not <br> applicable |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Mother speaking <br> to you |  |  |  |  |  |  |  |
| You speaking to <br> mother |  |  |  |  |  |  |  |
| Father speaking <br> to you |  |  |  |  |  |  |  |
| You speaking to <br> father |  |  |  |  |  |  |  |
| Brothers and/or <br> sister speaking to <br> you |  |  |  |  |  |  |  |
| You speaking to <br> brothers and/or <br> sisters |  |  |  |  |  |  |  |

5. How about your more extended family then? Who spoke Welsh there and what language did you speak with them? [Researcher to listen to narrative, prompting participant to ask how often they saw the named relative]
a. And how often did you see your [name of relative]?
6. What primary and secondary schools did you go to?
a. What was the name of school?
b. Where was it?
c. And was that a Welsh-medium, English-medium or bilingual school?
d. So which subjects were in English and which subjects were in Welsh?
7. So that was inside the classroom, what language did you speak outside of the classroom with your friends?
a. What different friendship groups did you have?
b. What language did you use with each group?
8. And what did you do outside of school in terms of clubs or activities? How many of those were in Welsh?
9. Did you enjoy using Welsh when you were at school and when growing up in general?
a. So why do you think you enjoyed/didn't enjoy using Welsh?
b. To what extent do you think your early experiences of Welsh has affected how you use Welsh now?
c. And what about how you feel about Welsh?
10. How do you think your fellow pupils generally felt about the Welsh language?
11. And what about the teachers?
12. What were attitudes towards Welsh like in [name of local town] when you were growing up? [Researcher, if participant has lived in several towns, ask about those also]
a. And what about [name of other town]?
13. Let's move on to talk about your language use nowadays. What language do you speak nowadays with your immediate family and others?
[Researcher to listen to narrative and prompt for frequency using the table below following participant's narrative]

|  | Always/ <br> almost <br> always <br> Welsh | Mainly <br> Welsh | Roughl <br> y equal <br> use of <br> Welsh <br> and <br> Englis <br> h | Mainly <br> Englis <br> h | Always/almo <br> st always <br> English | Another <br> languag <br> e | Don't <br> know or <br> not <br> applicabl <br> e |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| With partner |  |  |  |  |  |  |  |
| With mother |  |  |  |  |  |  |  |
| With father |  |  |  |  |  |  |  |
| With brother(s) <br> and/or sister(s) |  |  |  |  |  |  |  |
| At work with <br> customers <br> (maternity?) |  |  |  |  |  |  |  |
| At work |  |  |  |  |  |  |  |$\quad$|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| With your <br> closest friends |  |  |  |  |  |
| With your <br> nearest <br> neighbours |  |  |  |  |  |
| With other <br> acquaintances <br> in the local area |  |  |  |  |  |
| Whilst doing <br> other day-to-day <br> things like <br> shopping |  |  |  |  |  |
| Social activities, <br> e.g. exercise <br> classes in the <br> local area? |  |  |  |  |  |

14. So in what language do you generally feel most comfortable?
a. Are there any situations where you feel particularly more comfortable in [name of language the participant feels more comfortable in]?
b. Do you think that you feel comfortable because you're stronger in one language than another or because your used to using one language more often?
c. Why do you think you're stronger in [name of language?]
15. Let's move on to the media - TV, radio, internet, papers. What do you tend to watch or read? English or Welsh. What about the children?
16. Now l'd like to talk to you about the Welsh language and your identity, how much do you feel that the ability to speak Welsh is an important part of who you are?

## Let's move on to the language you use with your children

17. Remind me again of ages and sex of any children living in your home

| Sex | Age |
| :--- | :--- |
|  |  |
|  |  |
|  |  |

18. What's the name of your youngest child?
19. Tell me about the languages used between you and [Name of Child]. What language(s) do you use with him/her?
a. Are there any times when you don't use [name of language]? Why?
20. So if you generally use [name of language(s)] to talk to [name of child], can you tell us about what language(s) they use when starting a conversation with you?
a. Has that always been the case or has it changed over time? In what way?
21. Can you tell us about a time when you were speaking to [name of child] in Welsh and she/he answered you in English? [Researcher to probe participant further by asking whether this continues to happen frequently and whether it happens when others are present]. What about when you've been speaking English to them and they've answered in Welsh?
a. And does this still happen? How often?
b. Does it happen when you are alone with [name of child] or with other people? If so, who?
22. What change, if any, does the presence of other individuals (apart from your partner) [e.g. grandparent/aunt] cause in your use with a specific language with [Name of child]?
23. Who, if anyone at all, expects you to use a certain language with [name of child]? How do these expectations make themselves felt? [probe: does anyone put pressure on you to [not] use a certain language with child?
24. What language(s) do close family and friends use with your youngest child? Write the name of the person in the top row.

| NAME >>>> |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Always/ almost <br> always Welsh |  |  |  |  |  |
| Mainly Welsh |  |  |  |  |  |
| Roughly equal <br> use of Welsh <br> and English |  |  |  |  |  |
| Mainly English |  |  |  |  |  |
| Always/almost <br> always English |  |  |  |  |  |
| Other <br> language |  |  |  |  |  |

25. How often does your child see the people you named above? Write their names in the column on the left.

|  | More than <br> once a <br> week | Once a <br> week - <br> once a <br> month | Once a <br> month | Less than <br> once a <br> month | Don't <br> know |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

N.25b . Besides family and friends, where else would [ children ] have spent time?
[ Researcher to probe about (i) attend a nursery, how long and how often, and the language medium (ii ) attending children's play groups, e.g. Ti a Fi, story time, how often , and the language

## Family Language Planning

## So now l'd like to ask you a few questions about whether you thought about the language you'd use with [name of child] before she/he was born.

26. Tell me more about whether you discussed what language you were going to use with the baby before it was born ...? [Researcher to listen to narrative and prompt for answers in content of discussion, any worries raised and by whom, and when the discussion(s) took place. If the participant insists that no discussion took place, researcher to push a little further as to whether this is indeed the case and if so, why was it not discussed?].
27. Who else did you discuss this with (e.g. other family members, Twf, health visitor)? What did they say?
28. And what happened as a result of these discussions? What plans (if any) changed after giving birth? [Researcher to find out whether the initial decision, if indeed there was a decision, has been played out in reality].
29. What changed (if anything) since the birth of any subsequent child?
30. How easy or difficult did you find it to use 'baby talk' in English/Welsh? What did you find difficult about it? OR Why do you think you found it easy?
31. Is your language use with your youngest child different to with your older children? How? Why?
32. Are you ever worried about your own ability or your confidence in your Welsh language skills? If so, how and why?

32b . " And what about some of your friends - and you are aware of friends who are perhaps less confident in their Welsh language skills or who have weighed up the pros and cons of what language to raise their children ? What they told you about their decision?

## Role of Welsh in local community and provision

This is the last section and I just want to ask some questions about the [name of research site].

33a. What kind of place is [...]. Busy, lots on, community spirited?
33. So, could you tell us about the activities available for adults in Welsh?
34. [Researcher to probe further and elicit participant's opinion of these activities].
35. So, could you tell us about the activities available for your children in Welsh?
[Researcher to probe further and elicit participant's opinion of these activities].
35 b . Is your child in nursery school or primary school yet?
36. Could you tell us about the schools in the area. What do you think of them? [Researcher prompt for language medium if relevant].
37. Do you think people in the area are enthusiastic about the Welsh language?
38. What expectation (if any) is there for you to speak Welsh in [name of area]?
39. Has anyone ever questioned why you are [not] speaking Welsh to [name of child]? Tell us more about that.
40. Thank you very much, those are all the questions I have for you. Is there anything else you would like to say about what we have discussed today? Do you have any questions for me?

## Appendix 9: Questionnaire for Non-interviewed Partner

## RESEARCH INTO CONDITIONS INFLUENCING WELSH LANGUAGE TRANSMISSION AND USE IN FAMILIES

Arad Research is working for Cardiff University on a Welsh Government-funded research project to gather the views of families on the use of Welsh and English at home.

We have already spoken to your partner, and are eager to hear your views. We are therefore asking you to complete the following questionnaire and return it to us in the self-addressed envelope provided. We appreciate your help in completing this research.

Should you have any questions regarding this project, please contact:

- Sioned Lewis, Arad Research (sioned@aradresearch.com) (029) 20440552
- Dr Jeremy Evas, Cardiff University (EvasJ@cardiff.ac.uk) (029) 20874843

Should you have any concerns about the research or how it is conducted, please contact Professor Sioned Davies, Head of the School of Welsh, Cardiff University by email (cymraeg@cardiff.ac.uk) or by telephone (029 2087 4843)

## QUESTIONNAIRE

Your participation is voluntary, you may withdraw at any time without providing a reason, your answers will be kept completely confidential, and nobody will be able to identify you or your family from your answers. You may answer this questionnaire in English or Welsh.

By completing this questionnaire, you are agreeing to take part in our research. Before doing so, please ensure that the following information is correct.

1. I am 16 years of age or over and consent to complete this questionnaire which is part of the above project.
2. I have read the information in this document.
3. Information regarding procedures and risks have been explained to me to my satisfaction.
4. I also agree for my participation in the project to be recorded and the completed questionnaire to be kept in data storage under the conditions of the Data Protection Act (1998) and under a password. Physical copies of all documents will be destroyed.
5. I am aware that I should retain a copy of this document for reference purposes and return the questionnaire to the project team in the self-addressed envelope.
6. I understand:

- I may not receive direct benefit by participating in this project but that a payment of $£ 35$ has been made to my partner for taking part in the research.
- I am free to withdraw from the project at any time and not to provide answers to certain questions.
- Whether I withdraw or not, this will not affect any service provided to me by Cardiff University or Arad.
- I will return this questionnaire in the pre-paid envelope provided

IMPORTANT: Any personal details that may lead to the disclosure of my name will not be released and the recording of my participation will not be made publicly available.
$\qquad$

## Please answer the following questions:

10. How would you describe your gender?

| Female |  |
| :--- | :--- |
| Male |  |
| Other (please describe): |  |

11. What is your age?
12. Where do you currently live? Please write the name of the town or village.
13. Besides living in [name of town], have you lived anywhere else in your life?

| Area | From | Until |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

14. Which of the following qualifications do you have? Please tick all relevant boxes.

| 1-4 O levels / CSEs / GCSEs (any grades), Entry Level, Foundation Diploma |  |
| :--- | :--- |
| NVQ Level 1, Foundation GNVQ, Basic Skills |  |
| $5+$ O levels (passes)/ CSEs (grade 1) / GCSEs (grades A*- C), School Certificate, 1 A level |  |
| /2 - 3 AS levels / VCEs, Welsh Baccalaureate Intermediate Diploma 3 |  |
| NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First / General Diploma, |  |
| RSA Diploma 4 |  |
| Apprenticeship |  |
| 2+ A levels / VCEs, 4+ AS levels, Higher School Certificate, Progression / Welsh |  |
| Baccalaureate Advanced Diploma 6 GO TO Q102 G NVQ Level 3, Advanced GNVQ, City |  |
| and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma |  |
| Degree (for example BA, BSc), Higher degree (for example MA, PDD, PGCE) |  |
| NVQ Level 4 -5, HNC, HND, RSA Higher Diploma, BTEC Higher Level |  |
| Professional qualifications (for example teaching, nursing, accountancy) |  |
| Other vocational / work-related qualifications |  |
| No qualifications |  |
| Don't know |  |

15. What is your job?
16. How would you describe your national identity? Please choose all that apply.

| Welsh |  |
| :--- | :--- |
| English |  |
| Scottish |  |
| Northern Irish |  |
| British |  |
| Other (please describe): |  |

17. Can you understand, speak, read or write Welsh? Please choose all that apply.

| Understand spoken Welsh |  |
| :--- | :--- |
| Speak Welsh |  |
| Read Welsh |  |
| Write Welsh |  |
| None of the above (go to question 15) |  |

18. Which of the following best describes your ability to speak Welsh? Please tick one box only.

| l'm fluent in Welsh |  |
| :--- | :--- |
| I can speak a fair amount of Welsh |  |
| I can only speak a little Welsh |  |
| I can just say a few words |  |
| None of the above (go to question 15) |  |

19. Where did you mainly learn to speak Welsh?

| At home, as a young child |  |
| :--- | :--- |
| At nursery (aged three-to-four) |  |
| At primary school (aged 5-10) |  |
| A secondary school (aged 11+) |  |
| At college or university (full-time) |  |
| Somewhere else, including on a Welsh for Adults course. <br> Please give details below: |  |
|  |  |
|  |  |

20. How much Welsh was used in your family when you were growing up? Please tick the most appropriate answer in the grid below.

|  | Always/al <br> most <br> always <br> Welsh | Mainly <br> Welsh | Roughly <br> equal use <br> of Welsh <br> and <br> English | Mainly <br> English | Always/al <br> most <br> always <br> English | Another <br> language | Don't <br> know or <br> not <br> applicable |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Mother speaking to <br> you |  |  |  |  |  |  |  |
| You speaking to <br> mother |  |  |  |  |  |  |  |
| Father speaking to <br> you |  |  |  |  |  |  |  |
| You speaking to <br> father |  |  |  |  |  |  |  |
| Brothers and/or <br> sister speaking to <br> you |  |  |  |  |  |  |  |
| You speaking to <br> brothers and/or <br> sisters |  |  |  |  |  |  |  |

21. What language do you speak nowadays with your immediate family and others? Please tick the most appropriate answer in the grid below.

|  | Always/ <br> almost <br> always <br> Welsh | Mainly <br> Welsh | Roughly <br> equal use <br> of Welsh <br> and <br> English | Mainly <br> English | Always/al <br> most <br> always <br> English | Another <br> language | Don't <br> know or <br> not <br> applicable |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| With partner |  |  |  |  |  |  |  |
| With mother |  |  |  |  |  |  |  |
| With father |  |  |  |  |  |  |  |
| With brother(s) <br> and/or sister(s) |  |  |  |  |  |  |  |
| At work with <br> customers (ifyou on <br> maternity leave, think about <br> what normaly used) |  |  |  |  |  |  |  |
| At work |  |  |  |  |  |  |  |
| With your closest <br> friends |  |  |  |  |  |  |  |
| With your nearest <br> neighbours |  |  |  |  |  |  |  |
| With other <br> acquaintances in the <br> local area |  |  |  |  |  |  |  |
| Whilst doing other <br> day-to-day things <br> like shopping |  |  |  |  |  |  |  |
| Social activities, e.g. <br> exercise classes in <br> the local area? |  |  |  |  |  |  |  |

22. What language(s) do you generally feel more comfortable using?

| Welsh |  |
| :--- | :--- |
| English |  |
| Other language |  |
| Welsh and English |  |
| Welsh and other language |  |
| English and Other language |  |

23. Circle the appropriate number on each line below to note your answers to the following questions.
G. How much control do you have over whether you speak Welsh to your child?

| Very little <br> control |
| :--- |
| 1 |

H. For me to speak Welsh to my child is...

| Very <br> difficult | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

I. I think of myself as a Welsh speaker

| Strongly <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

J. To speak Welsh is an important part of who I am

| Strongly <br> disagree |
| :--- |
| Strongly <br> agree | disagree agree

K. I am not the type of person who would speak Welsh.

| Strongly disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

L. Speaking Welsh to my child is something I do without thinking

| Strongly <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Strongly agree
24. Which of the following statements do you feel best represents your language use with your youngest child?

| I just naturally use whichever language feels more appropriate at the time |  |
| :--- | :--- |
| I have consciously chosen to use a particular language with my child and try to stick <br> to that |  |
| Other. Please give details below: |  |
|  |  |
|  |  |

25. This table briefly describes some people. Would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? Circle the appropriate number.

|  | Very <br> much like <br> me | Like me | Somewha t like me | A little like me | Not like me | Not like me at all |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| It is important to him/her to think up new ideas and be creative; to do things his/her own way. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to be rich; to have a lot of money and expensive things. | 1 | 2 | 3 | 4 | 5 | 6 |
| Living in secure surroundings is important to him/her; to avoid anything that might be dangerous. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to have a good time; to "spoil" himself/herself. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to do something for the good of society. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important for him/her to help other people nearby; to care for their well-being. | 1 | 2 | 3 | 4 | 5 | 6 |
| He /she believes that being very successful is important to him/her; to have people recognize his/her achievements. | 1 | 2 | 3 | 4 | 5 | 6 |
| Adventure and taking risks are important to him/her; to have an exciting life. | 1 | 2 | 3 | 4 | 5 | 6 |
| It is important to him/her to always behave properly; to avoid doing anything people would say is wrong | 1 | 2 | 3 | 4 | 5 | 6 |
| Looking after the environment is important to him/her; to care for nature and save resources. | 1 | 2 | 3 | 4 | 5 | 6 |
| Tradition is important to him/her; to follow the customs handed down by his/her religion or family. | 1 | 2 | 3 | 4 | 5 | 6 |

26. Circle the appropriate number on each line below to show how much you agree with the following statements. We can talk in more depth about your answers later:
e. I think that speaking Welsh to your child is...

| Extremely |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| bad | | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- |

## f. Most people who are important to me think that...

| I or my |
| :--- |
| partner |
| should |
| not | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

...speak Welsh to my child
g. Where I live, it is normal for people to speak Welsh to their children.

| Completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | | Completely |
| :--- |
| agree |

h. Where I live, there is enough support and provision (for example, schools) for the Welsh language.

| Completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | | Completely |
| :--- |
| agree |

Thank you
Place the completed questionnaire in the prepaid envelope and return to Arad, 8 Columbus Walk, Cardiff, CF10 4BY
If you prefer you can scan and return via email to sioned@aradresearch.com


[^0]:    ${ }^{1}$ This report was created using bibliographic software. Clicking any citation in the text of the report will take the reader to the relevant entry in the bibliography. Similarly, the report contains many cross-references to its different constituent sections. These are all 'live links' and clicking on any cross-reference will take the reader to the relevant section of the report. Translation work for this report was undertaken by Dr Fiona Gannon, Tidy Translations, and Dr Jeremy Evas. Where other authors' work is cited in this report, it is quoted in its original language. Where bilingual works are cited, e.g. reports, the relevant Welsh language quotation is used in the Welsh language version of this report, and the corresponding English quotation in the English language version of this report.

[^1]:    ${ }^{2}$ See Cenoz and Gorter (2006); Gorter (2006b, 2006a, 2006c); Cenoz and Gorter (2008); Gorter and Shohamy (2008) for definitions and academic studies of linguistic landscapes.

[^2]:    ${ }^{3}$ Fishman (1991a, p. xii) notes that '[to attempt to revive language] via stylish efforts to control the language of education, the workplace, the mass media and governmental services, without having safeguarded [intergenerational language transfer] is equivalent to constantly blowing air into a tire that still has a puncture.'

[^3]:    ${ }^{4}$ There are an increasing number of studies which examine trilingual language transmission and children's linguistic development (e.g. Hoffmann (1985); Stavans (1992); Barnes (2006); Barnes (2011); Braun (2008); Braun (2012); Chevalier (2012); Devlin (2014)). We concentrate on studies of bilingual contexts here.

[^4]:    ${ }^{5}$ Ethnolinguistic vitality refers to the extent to which a group are able to maintain their cultural and linguistic identity and considers the influence of demographic factors on language use.

[^5]:    ${ }^{6}$ The minority languages spoken by the participants in the study were not taught in the education system and therefore acquisition was the result of transmission by parents.

[^6]:    ${ }^{7}$ For instance, Creese and Blackledge (2010) use the term 'flexible bilingualism' to describe approaches to language teaching which do not rely on the strict division between languages.

[^7]:    ${ }^{8}$ The correlation between parents' perceptions of linguistic ability and actual ability has been shown to be relatively weak, see Schwartz and Moin (2012).

[^8]:    ${ }^{9}$ The areas in which the research was carried out were (Fishguard, Amlwch or Llangefni, Blaenau Ffestiniog or Bethesda, Caernarfon, Carmarthen or Lampeter, Ammanford or Ystradgynlais, and Pontardawe).

[^9]:    ${ }^{10}$ Local Government in Wales was reorganised in 1996. The county of Dyfed no longer exists.

[^10]:    ${ }^{12}$ On abolition of the WLB in 2012, the Welsh Government assumed responsibility for the project. In 2016, following a competitive tender process, Mudiad Meithrin (the Welsh language pre-school playgroup movement) assumed responsibility for promotion of intergenerational language transmission—branded as ‘Cymraeg [Welsh language] for Kids.

[^11]:    ${ }^{13}$ Bounty packs (see www.bounty.com) are bags and gift boxes containing free samples of products and information for expectant mothers. Twf has made use of the Bounty scheme to supply leaflets and information about the intergenerational transmission of Welsh to mothers-to-be in Wales.

[^12]:    ${ }^{15}$ The correlation between the proportion of Welsh speakers in each area and the availability of Welsh-speaking social networks is problematic and also may be confounded with other factors such as availability of Welshmedium education.
    ${ }^{16}$ See Office for National Statistics: https://www.ons.gov.uk/census/2011census.

[^13]:    ${ }^{17}$ Or family-the precise definition used depends on the Census report table providing the data for the analysis.

[^14]:    ${ }^{18}$ There were a total of 36 children in lone-parent families where more than one adult in the household (e.g. another family member) was reported as speaking Welsh.

[^15]:    ${ }^{19}$ A technical explanation of a $95 \%$ confidence interval may be found in statistical literature. A non-technical interpretation is that it gives an indication of how uncertain we are about the point estimate-in this case the percentage of children able to speak Welsh-and the width of the interval suggests a range within which the true estimate might lie. Looking at any two local authorities, if the confidence intervals shown overlap it is unlikely that the difference between the percentages observed for those two authorities reflects a real difference. Conversely, non-overlapping confidence intervals suggest that there really is a difference between those two authorities.

[^16]:    ${ }^{20}$ Note the chart is based on lone parent households where one adult was able to speak Welsh. Numbers quoted in the subsequent paragraph relate to lone parent households where one or more adults were able to speak Welsh.

[^17]:    ${ }^{21}$ Note that the percentages for two-couple households where both parents speak Welsh differ slightly from those given in Figure 1. This is because the sources upon which the figures are based come from two different census tables using slightly different criteria to classify different household types.

[^18]:    ${ }^{22}$ The chart shows the results obtained by fitting a logistic regression model to data from the 2011 and 2001 Censuses, contained in census tables DC2601 and C0801 respectively.

[^19]:    ${ }^{23}$ As the comparison of Flintshire and Gwynedd in 3.10 shows, this is not the case in all instances.

[^20]:    ${ }^{24}$ It should however, be noted that Irvine et al. (2008) outlined the possible contribution that TPB could make should it be applied to intergenerational transmission interventions such as Twf. We expand on this in 5.6.

[^21]:    ${ }^{25}$ All questionnaires used in this research project are available in the appendices of this report.

[^22]:    ${ }^{26}$ Data from http://statiaith.com/blog/cyfrifiad-2011/trosglwyddor-gymraeg/siartiau trosglwyddo/

[^23]:    ${ }^{27}$ The National Survey for Wales is an annual survey conducted by the Welsh Government.

[^24]:    ${ }^{28}$ They suggested the TPB as a framework for measuring how successful schemes such as TWF may be in translating intention into action (see Figure 8).

[^25]:    ${ }^{29}$ Note that such studies tend to compare Welsh-English bilingual speakers' English with English monolinguals from a similar area e.g. Rhys and Thomas (2013).

[^26]:    ${ }^{30}$ This scheme, matches fluent 'buddies' or mentors with non-fluent speakers or learners of Catalan to undertake various non-threatening activities through the language.

