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Sexual Orientation Identity Mobility in the United Kingdom: A Research Note

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ABSTRACT Sexual identity is fluid. But just how fluid is it? How does such fluidity vary across demographic groups? How do mainstream measures fare in capturing the fluidity? In analyzing data from the United Kingdom Household Longitudinal Study ($N = 22{,}673$ individuals, each observed twice), this research note provides new, population-wide evidence of sexual identity mobility—change and continuity in individuals' sexual orientation identification—in the United Kingdom. Overall, 6.6% of the respondents changed their sexual identity reports between 2011–2013 and 2017–2019. Sexual identity mobility follows a convex pattern over the life course, with higher mobility rates at the two ends than in the middle of the age spectrum. Sexual identity mobility is more prevalent among women, ethnic minority individuals, and the less educated. Changes in people's self-reported sexual identity are closely associated with changes in their partnership status and partner's sex. However, inferring individuals' sexual identity from their partner's sex substantially underestimates the degree of sexual fluidity compared with people's self-reported sexual identity. Our findings encourage researchers and data collectors to fully examine sexual identity mobility and consider its implications for measuring sexual identity.

KEYWORDS Fluidity • Measurement • Partnership • Sexual orientation identity

Introduction

In the past few decades, sexual (orientation) identity has been increasingly mainstreamed as a key characteristic in demographic research (e.g., Black et al. 2000; Chen and van Ours 2018; Gorman et al. 2015; Hsieh and Liu 2019; Liu and Reczek 2021). Efforts have been made to collect data on people's sexual identity, including in surveys such as the National Longitudinal Study of Adolescent to Adult Health (Add Health) in the United States, the United Kingdom (UK) Household Longitudinal Study, and the Household, Income and Labour Dynamics in Australia Survey. While the 2021 UK Census collected data on sexual identity for the first time, the 2020 U.S. Census gave people the option to identify a relationship as same-sex. Sexual identity data have enriched a growing body of demographic research on health disparities (Gorman et al. 2015; Liu and Reczek 2021), employment inequalities (Denier and Waite 2019;

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Waite and Denier 2015), and family formation and well-being (Craig and Churchill 2021; Kolk and Andersson 2020). These studies have provided important insights that inform attendant public policies.

Sexual identity mobility—that is, changes in individuals' sexual orientation identification—is not a new phenomenon (Kinsey et al. 1948). Nevertheless, most research has collected and analyzed cross-sectional data that do not capture sexual identity mobility. A relatively small body of research on sexual identity mobility has drawn primarily on small samples and focused on particular life course segments, such as adolescence as a "prime stage" of sexual identity development (Rosario et al. 2008; Savin-Williams et al. 2012). For example, several studies used the Add Health data to examine U.S. adolescents' sexual fluidity on a scale ranging from 100% heterosexual to 100% homosexual, with mostly heterosexual, bisexual, and mostly homosexual in between (e.g., Savin-Williams et al. 2012; Savin-Williams and Ream 2007). Analyzing an online survey of 188 sexual minority young adults aged 18–26, Katz-Wise and Hyde (2015) found that approximately 48% of the women and 36% of the men reported sexual identity fluidity. Fredriksen-Goldsen and Muraco's comprehensive review (2010) showed that research on adults' and particularly older people's sexual identity fluidity often draws on small convenience samples and thus reports highly variable rates of sexual identity mobility. We know relatively little about how fluid sexual identity is in the general population and how the degree of fluidity varies across demographic groups. Moreover, as demographers explore different ways of measuring sexual identity, some directly asked people to identify their sexual orientation (e.g., the 2021 UK Census), while others used less direct measures, such as the sex of one's partner, to infer individuals' sexual identity (e.g., the 2020 U.S. Census). The accuracy of different measures to capture sexual identity mobility has yet to be assessed comparatively.

In light of the foregoing backdrop, this research note has three objectives. First, it provides new, population-wide evidence of sexual identity mobility in the UK by analyzing rare national longitudinal data on individuals' self-reported sexual identity. Second, it compares the prevalence and patterns of sexual identity mobility as captured by self-reported sexual identity and one's partner's sex. Third, this note examines how mobility in people's self-reported sexual identification varies with age, sex, ethnicity, education, and changes in partnership status. We conclude by discussing the implications of our findings for measuring sexual identity and demographic research.

Methods

Data and Sample

We analyzed data from the United Kingdom Household Longitudinal Study (also referred to as Understanding Society, or USOC)—the only survey in the UK that repeatedly measures individuals' sexual identity. Initiated in 2009, USOC surveyed a nationally representative sample of more than 50,000 individuals aged 16 or older from 30,000 households. They have been reinterviewed each year since, with new sample members added to compensate for attrition (Buck and McFall 2011). USOC adopts a mixed-mode strategy, combining face-to-face interviews and self-completion

modules. Sensitive questions, including those on sexual identity, are asked in a self-completion module to minimize social desirability bias. Only a representative subsample of respondents completes the self-completion module. Where appropriate, we use the weights provided as part of USOC.

We used data from Waves 3 (2011–2013, or "T") and 9 (2017–2019, or "$T + 1$"), as USOC collected information on sexual identity only in odd-numbered waves, and sexual identity information was collected only from respondents aged 16–21 (but not from the full sample) in Waves 5 and 7. We first restricted the sample to respondents who completed the self-completion module and were asked about their sexual identity. We then listwise-deleted 268 person-years with missing values for sexual identity, 10 for age, and 110 for ethnicity. Given our focus on change and continuity in sexual identity, we further limited our sample to respondents who appeared in Waves 3 and 9. Our final analytic sample contains 22,673 respondents who were each observed twice. The average time between the two observations is 6.03 years (standard deviation = 0.14). The relatively long interval not only allows us to capture, for example, adolescents' transition to adulthood (Savin-Williams et al. 2012), but also corresponds with major population auditing exercises such as (mini-)censuses with intervals ranging between 5 and 10 years. See Table A1 in the online appendix for step-by-step details of sample construction.

Measures

Sexual Identity Mobility

The survey asked respondents to identify their sexual orientation using the same categories as those in the 2021 UK Census: "heterosexual or straight," "gay or lesbian," "bisexual," "other," and "prefer not to say." To measure individuals' sexual identity mobility, we first created a dummy variable to capture any differences between one's sexual identity between T and $T + 1$. We then created another 10 dummy variables to capture individuals' transition out of and into self-identifying as heterosexual, gay or lesbian, bisexual, other, and prefer not to say, respectively. Despite debates regarding the presence of "mischievous" respondents and the implications of their "jokester" responses for measuring sexual attraction (Katz-Wise et al. 2015; Savin-Williams and Joyner 2014), USOC's robust quality control and the respondents' plausible reports for the other variables included in our analysis give us good reasons to believe the rate of "mischievous" respondents should be very low in our sample (Lynn and Knies 2016). Still, it is important to interpret the findings with a view to the "performative quality" of survey responses (Hu 2021): sexual identity mobility reflects meaningful change in one's self-perception or self-presentation—both of which are substantively relevant in informing population estimates and policy developments based on such estimates.

Partnership Mobility

Using responses regarding whether a respondent had a cohabiting or nonresidential partner (irrespective of marital status) and the partner's sex, we captured partnership

status using three categories: (1) no partner, (2) different-sex partner, and (3) same-sex partner. Despite the possibility of polyamory, no respondent has reported more than one partner. Then, after comparing partnership status at T and $T + 1$, we created a series of dummy variables to capture individuals' transition out of and into the status of having no partner, a different-sex partner, or a same-sex partner, respectively.

Age Group

To demarcate distinct life stages, we coded the respondents' age at T (top-coded at the 99th percentile; range = 16–87, $M = 47.94$, standard deviation = 17.00; weighted sample characteristics are given here and in the following) into six categories, following the UK Office for National Statistics classification: 16–24 (10.7%), 25–34 (14.1%), 35–44 (17.3%), 45–54 (20.8%), 55–64 (18.6%), and 65 or older (18.5%). These age groups roughly correspond to meaningful life course milestones that demarcate distinct stages of individuals' sexual identity development (Bishop et al. 2020).

Sex

We used a dummy variable to distinguish between women (53.4% of the sample) and men (46.6%). No respondent had changed their sex between the waves. The survey did not collect information on respondents' gender identification nor provide options outside a male–female sex binary.

Race and Ethnicity

Race and ethnicity and associated cultural traditions play a powerful role in shaping people's sexual identification (Nagel 2000). Race and ethnicity are captured across all waves of USOC; on the basis of this, we created a dummy variable to distinguish between White (British, Irish, and other White; 93.3%) and non-White ethnic minority (6.7%) respondents. Although racial and ethnic fluidity has been documented in some research (e.g., Saperstein and Gullickson 2013), our further check showed that no respondent had changed their White versus non-White identification across the survey waves included in our analysis.

Education

Education, particularly at the tertiary level, plays a crucial role in shaping people's sex ideology (Savin-Williams et al. 2012). We captured whether a respondent had a higher education degree at T and $T + 1$ using three categories: consistently no (59.9%), consistently yes (34.9%), and newly obtained a degree (5.2%).

The covariates described above cover key demographic traits that are often collected and analyzed alongside sexual identity in major data initiatives such as the UK

Census. We did not control for other sociodemographic characteristics for several reasons. First, the cell sizes for nonheterosexual identities were small and including further covariates would quickly result in underpowered analyses. Second, time-sensitive measures such as religious affiliation were measured only for the first observation of each respondent in USOC. We do not consider it appropriate to treat and include such measures as time-invariant: for example, with rapid secularization in the past decade, the proportion of people reporting "no religion" in England and Wales increased from 25.2% to 37.2% between 2011 and 2021 (Office for National Statistics 2022). In addition, including a dummy variable distinguishing whether a respondent had a religious affiliation does not change the substantive results for the other variables, and the religion variable, when treated as time-invariant, is largely not associated with sexual identity mobility (see Table A2 in the online appendix).

Analysis

We first conducted descriptive analyses to compare the prevalence and patterns of sexual identity mobility and partnership mobility between T and $T+1$. Then, we fitted a logit model to estimate how the overall rate of sexual identity mobility varied with individuals' demographic traits and changing partnership status. Given the relatively low rate of changes in sexual identity between T and $T+1$, we used the Firth logit specification to minimize estimation bias. Finally, we fitted a series of Firth logit models to predict mobility out of and into each of the five self-reported sexual identity categories between T and $T+1$. Although partnership transitions may vary with and thus mediate the effects of the other covariates, our supplementary tests showed that excluding the partnership mobility measures did not substantively change the estimates for the other predictors (see Table A3 in the online appendix).

Results

Sexual Identity Mobility and Partnership Mobility: Comparing Two Measures

Table 1 describes the patterns of sexual identity mobility in the UK. In columns 1–5, row percentages are reported for the mobility table, and the last two columns report the percentages of all respondents moving out of and into each sexual identity category. Overall, 6.6% of respondents changed their sexual identity reports over the six-year period.

The rate of sexual identity mobility was low among those who self-identified as heterosexual at T, as only 3.3% changed their identity at $T+1$: 0.2% to gay/lesbian, 0.8% to bisexual, 0.6% to other identities, and 1.7% to "prefer not to say." Most people who previously identified as gay/lesbian retained their identity (83.9%); 8.6%, 2.1%, and 1.9% moved to heterosexual, bisexual, and other identities, respectively. By contrast, sexual identity mobility was more prevalent among those who self-identified as bisexual, had other identities, or preferred not to disclose their identity. In line with prior evidence on bisexual fluidity (Diamond 2008), 56.8% of those who self-identified as bisexual at T changed their identity at $T+1$, with the

Table 1 Patterns of sexual identity mobility

	Sexual Identity at $T+1$						
Sexual Identity at T	➔ Heterosexual (21,433; 94.0%)	➔ Gay or Lesbian (305; 1.4%)	➔ Bisexual (243; 1.3%)	➔ Other (118; 0.8%)	➔ Prefer Not to Say (574; 2.5%)	% of All Respondents Who Moved Out of Category From T to $T+1$	% of All Respondents Who Moved Into Category From T to $T+1$
Heterosexual (21,388; 94.2%)	96.7	0.2	0.8	0.6	1.7	3.1	2.8
Gay or Lesbian (278; 1.3%)	8.6	83.9	2.1	1.9	3.6	0.2	0.4
Bisexual (212; 1.1%)	44.0	5.4	43.2	2.4	5.1	0.5	0.9
Other (190; 0.8%)	69.6	4.2	1.4	14.6	10.3	0.7	0.7
Prefer Not to Say (605; 2.6%)	62.2	3.9	3.2	3.6	27.1	2.0	1.8

Notes: $N = 22{,}673$ respondents, each observed twice. T = Wave 3 (2011–2013). $T+1$ = Wave 9 (2017–2019). Row percentages are reported in the cross-tabulation of mobility patterns (i.e., columns 1–5), which may not add up to 100% because of rounding. Data are weighted statistics with unweighted sample sizes. Figures in parentheses are the n and corresponding percentage of each subgroup (n; %). The total percentages of respondents moving out of and moving into categories may not match exactly owing to rounding, and 6.6% of all respondents changed their sexual identity reports between T and $T+1$.

majority (44.0%) moving to a heterosexual identity. The mobility rate was highest among those with other identities at T (85.4%): 69.6% changed to identify as heterosexual, 4.2% as gay/lesbian, 1.4% as bisexual, and 10.3% as "prefer not to say." Finally, among those with a preference for nondisclosure at T, only 27.1% retained their preference and 62.2% changed to a heterosexual identity at $T + 1$.

Table 2 describes change and continuity in people's partnership status. Overall, the sex of one's partner changed between T and $T + 1$ for as few as 0.1% of respondents. Compared with the overall rate of sexual identity mobility estimated based on respondents' self-reported sexual identity (6.6%), research inferring individuals' sexual identity from their partners' sex would have substantially underestimated the rate of sexual identity mobility. This is partly because the measure is unable to go beyond the heterosexual–homosexual binary and capture bisexual and other sexual identities (see Table A4 in the online appendix). Specifically, 22.7% and 0.9% of those who had no partner moved into a different-sex and same-sex relationship, respectively. Among those with a different-sex partner, only 0.1% switched into a same-sex relationship, while 5.7% of those with a same-sex partner switched into a different-sex relationship.

Demographic Variations in Sexual Identity Mobility

Table 3 presents the predicted probabilities (in percentages) from Firth logit models estimating demographic variations in sexual identity mobility. Model 1 predicts overall sexual identity mobility between T and $T + 1$, and Models 2–6 unpack Model 1 by predicting mobility out of and into each of the five sexual identity categories.

In Model 1, the rate of sexual identity mobility followed a convex pattern over the life course: it was higher among young people aged 16–24 (predicted mobility rate, 7.9%) and older adults aged 65 or older (7.4%) than among those aged 25–64 (5.0–6.2%). Models 2b and 6a show that the relatively high mobility rate among older adults was largely driven by their heightened likelihood of moving into a heterosexual identity and forgoing an unwillingness to disclose their sexual identity. As older people grow increasingly dependent on others and their autonomy decreases, they may become more likely to yield to hegemonic heterosexual norms (Fredriksen-Goldsen and Muraco 2010). It is also possible that some older respondents developed a better understanding of the survey question when asked about their sexual identity for a second time (Fredriksen-Goldsen and Kim 2015).

Sexual identity mobility was 10.3% less likely among men (5.7%) than women (6.3%). However, the sex differences varied across specific identity categories. Compared with women, men were 15.1% [(3.05% – 2.59%)/3.05%] less likely to relinquish their heterosexual identity but were over twice (0.42%/0.20%) as likely to change to identify as gay.

Compared with the sexual identity mobility of White people (5.0%), such mobility was more than three times as likely among non-White ethnic individuals (15.5%). This ethnic difference was observed across the board for moving out of and into heterosexual, bisexual, and other sexual identities, and for adopting and forgoing the preference for nondisclosure. The only exception was the transition into and out of gay/lesbian identities (Model 3), where no ethnic difference was observed.

Table 2 Patterns of partnership mobility

Partnership Status at T	Partnership Status at $T+1$			% of All Respondents Who Moved Out of Category From T to $T+1$	% of All Respondents Who Moved Into Category From T to $T+1$
	➔ No Partner (5,732; 28.9%)	➔ Different-Sex Partner (16,721; 70.2%)	➔ Same-Sex Partner (220; 1.0%)		
No Partner (5,452; 28.7%)	76.5	22.7	0.9	6.8	6.9
Different-Sex Partner (17,002; 70.3%)	9.5	90.4	0.1	6.8	6.6
Same-Sex Partner (219; 0.9%)	24.8	5.7	69.7	0.3	0.3

Notes: $N = 22{,}673$ respondents, each observed twice. T = Wave 3 (2011–2013). $T+1$ = Wave 9 (2017–2019). Row percentages are reported in the cross-tabulation of mobility patterns (i.e., columns 1–3), which may not add up to 100% because of rounding. Data are weighted statistics with unweighted sample sizes. Figures in parentheses are the n and corresponding percentage of each subgroup (n; %). The total percentages of respondents moving out of and moving into categories may not match exactly owing to rounding, and the partner's sex changed between T and $T+1$ for 0.1% of all respondents.

Table 3 Predicted probabilities (shown in %, with standard errors in parentheses) from Firth logit models estimating demographic variations in sexual identity mobility

	Overall Mobility	Heterosexual		Gay or Lesbian		Bisexual		Other		Prefer Not to Say	
		Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into
Covariate	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 6a	Model 6b
Age Group at *T*											
16–24 (ref.)	7.89	4.03	2.88	0.26	0.69	1.09	2.07	0.65	0.88	2.08	1.59
	(0.62)	(0.46)	(0.37)	(0.13)	(0.19)	(0.25)	(0.36)	(0.17)	(0.23)	(0.32)	(0.29)
25–34	6.19*	2.63**	2.86	0.29	0.25*	0.73	0.94**	0.86	0.41*	1.79	1.85
	(0.41)	(0.27)	(0.29)	(0.10)	(0.08)	(0.15)	(0.17)	(0.16)	(0.11)	(0.23)	(0.23)
35–44	5.02***	2.43***	2.08*	0.18	0.25*	0.45**	0.64***	0.78	0.40*	1.30*	1.73
	(0.32)	(0.23)	(0.21)	(0.07)	(0.08)	(0.10)	(0.12)	(0.13)	(0.10)	(0.17)	(0.19)
45–54	5.64***	2.35***	2.68	0.18	0.28*	0.56*	0.36***	0.89	0.45	1.76	1.92
	(0.34)	(0.22)	(0.24)	(0.06)	(0.08)	(0.11)	(0.09)	(0.14)	(0.10)	(0.19)	(0.20)
55–64	5.11***	2.29***	2.45	0.12	0.09**	0.29***	0.30***	0.71	0.37*	1.80	1.95
	(0.35)	(0.24)	(0.25)	(0.06)	(0.05)	(0.09)	(0.09)	(0.14)	(0.10)	(0.22)	(0.22)
65+	7.42	2.73*	4.39**	0.10	0.22*	0.37**	0.35***	0.83	0.51	3.53**	2.04
	(0.43)	(0.27)	(0.34)	(0.06)	(0.08)	(0.10)	(0.10)	(0.15)	(0.12)	(0.31)	(0.24)
Sex											
Women (ref.)	6.32	2.81	3.05	0.15	0.20	0.53	0.71	0.83	0.51	2.13	1.96
	(0.21)	(0.14)	(0.15)	(0.04)	(0.04)	(0.06)	(0.07)	(0.08)	(0.06)	(0.13)	(0.12)
Men	5.67*	2.44	2.59*	0.23	0.42**	0.55	0.63	0.74	0.43	1.82	1.73
	(0.23)	(0.16)	(0.16)	(0.05)	(0.06)	(0.08)	(0.08)	(0.09)	(0.07)	(0.13)	(0.13)
Ethnicity											
White (ref.)	5.04	2.26	2.30	0.17	0.30	0.49	0.63	0.63	0.43	1.58	1.48
	(0.15)	(0.10)	(0.10)	(0.03)	(0.04)	(0.05)	(0.06)	(0.06)	(0.05)	(0.09)	(0.08)
Non-White	15.54***	6.07***	8.71***	0.30	0.27	0.90*	0.97*	2.40***	0.83*	6.59***	5.58***
	(0.80)	(0.51)	(0.66)	(0.12)	(0.09)	(0.19)	(0.18)	(0.36)	(0.20)	(0.60)	(0.53)

Table 3 (continued)

	Overall Mobility	Heterosexual		Gay or Lesbian		Bisexual		Other		Prefer Not to Say	
		Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into
Covariate	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 6a	Model 6b
Higher Degree											
Consistently no from *T* to *T*+1 (ref.)	7.30	2.93	3.80	0.21	0.23	0.60	0.66	1.13	0.53	2.58	2.20
	(0.23)	(0.15)	(0.17)	(0.04)	(0.04)	(0.07)	(0.08)	(0.10)	(0.07)	(0.14)	(0.13)
Consistently yes from *T* to *T*+1	4.47***	2.25**	1.70***	0.16	0.33	0.50	0.75	0.35***	0.42	1.32***	1.42***
	(0.22)	(0.16)	(0.14)	(0.04)	(0.06)	(0.08)	(0.10)	(0.06)	(0.07)	(0.12)	(0.12)
Newly obtained from *T* to *T*+1	4.74**	2.67	1.50***	0.17	0.55*	0.38	0.54	0.85	0.39	0.78***	1.66
	(0.63)	(0.47)	(0.38)	(0.12)	(0.18)	(0.15)	(0.15)	(0.32)	(0.17)	(0.27)	(0.46)
Enter Different-Sex Partnership											
No (ref.)	6.00	2.65	2.79	0.18	0.32	0.52	0.64	0.78	0.46	1.98	1.89
	(0.16)	(0.11)	(0.11)	(0.03)	(0.04)	(0.05)	(0.06)	(0.06)	(0.05)	(0.09)	(0.09)
Yes	6.71	2.70	3.94*	0.18	0.09	0.79	1.00	0.96	0.62	2.30	1.31
	(0.70)	(0.44)	(0.58)	(0.10)	(0.07)	(0.23)	(0.23)	(0.28)	(0.21)	(0.45)	(0.33)
Exit Different-Sex Partnership											
No (ref.)	6.01	2.58	2.86	0.19	0.30	0.55	0.67	0.79	0.48	2.00	1.81
	(0.16)	(0.11)	(0.11)	(0.03)	(0.04)	(0.05)	(0.06)	(0.06)	(0.05)	(0.10)	(0.09)
Yes	6.52	3.57*	2.76	0.04	0.31	0.36	0.82	0.80	0.42	1.90	2.49
	(0.61)	(0.46)	(0.41)	(0.06)	(0.12)	(0.16)	(0.23)	(0.23)	(0.17)	(0.34)	(0.40)
Enter Same-Sex Partnership											
No (ref.)	5.93	2.58	2.86	0.18	0.21	0.53	0.65	0.79	0.47	1.98	1.86
	(0.16)	(0.10)	(0.11)	(0.03)	(0.03)	(0.05)	(0.05)	(0.06)	(0.05)	(0.09)	(0.09)
Yes	43.25***	25.06***	0.97	2.14**	17.42***	4.15***	6.23***	2.81	2.01	10.41***	0.82
	(6.02)	(5.13)	(1.35)	(1.71)	(4.32)	(2.22)	(2.28)	(2.25)	(1.65)	(4.06)	(1.16)

Table 3 (continued)

	Overall Mobility	Heterosexual		Gay or Lesbian		Bisexual		Other		Prefer Not to Say	
		Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into	Move Out	Move Into
Covariate	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 6a	Model 6b
Exit Same-Sex Partnership											
No (ref.)	6.00	2.65	2.84	0.16	0.28	0.53	0.67	0.78	0.47	1.98	1.84
	(0.16)	(0.11)	(0.11)	(0.03)	(0.03)	(0.05)	(0.05)	(0.06)	(0.05)	(0.09)	(0.09)
Yes	23.19***	2.46	5.49	8.40***	6.04***	3.51**	2.08	3.83*	2.33	7.84**	11.61***
	(5.18)	(1.96)	(2.84)	(3.43)	(3.02)	(2.17)	(1.65)	(2.37)	(1.88)	(3.50)	(4.18)
Bayesian Information Criterion	9,895	5,392	5,616	599	740	1,519	1,764	2,046	1,385	4,242	4,089

Notes: $N = 22{,}673$ respondents. T = Wave 3 (2011–2013). $T + 1$ = Wave 9 (2017–2019). Asterisks indicate levels of statistical significance for differences from the reference category. Intercepts were estimated in all models but were omitted from the table.

*$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed)

Compared with individuals without a higher education degree (7.3%), consistent degree holders (4.5%) and those who newly obtained a degree between T and $T + 1$ (4.7%) were 38.8% [(7.30% – 4.47%) / 7.30%] and 35.1% [(7.30% – 4.74%) / 7.30%] less likely to experience sexual identity mobility. The negative association between education and sexual identity mobility was observed for moving into and out of heterosexual identity, moving out of other sexual identities, and moving into and out of nondisclosure, but not for moving into and out of gay/lesbian and bisexual identities. In fact, compared with individuals consistently without a degree (0.2%), those who obtained a degree between T and $T + 1$ (0.6%) were over twice as likely to adopt gay/lesbian identities.

Sexual identity mobility was closely associated with partnership changes. People who moved into or out of a same-sex relationship were about seven times (43.3% vs. 5.9%) or four times (23.2% vs. 6.0%) as likely to change their sexual identity, respectively, than those who had not experienced such relationship changes. Exiting a different-sex relationship was associated with an increased likelihood of relinquishing a heterosexual identity. By contrast, compared with people who never had a same-sex partner, those who previously had and currently have a same-sex partner were more likely to both move into and out of gay/lesbian and bisexual identities. Notably, people who newly formed a same-sex relationship (vs. those who did not) were much more likely to adopt (17.4%) than relinquish (2.1%) gay/lesbian identities (difference, $\chi^2 = 5.27$, $p < .05$) and were more likely to forgo (10.4%) than adopt (0.8%) a preference for not disclosing their sexual identity ($\chi^2 = 12.40$, $p < .001$).

Discussion

We provided new, population-wide evidence of the prevalence and patterns of sexual identity mobility and their demographic variations in the UK. Over a six-year period, a significant minority of people (6.6%) changed their sexual identity reports. While the rate of sexual identity mobility captured by self-reported sexual identity is relatively low among those who previously identified as heterosexual (3.3%), it is higher among those who self-identified as gay/lesbian (16.1%) and particularly high among those with bisexual (56.8%) and other sexual identities (85.4%). Our evidence complicates efforts, such as an increasing range of surveys and the latest censuses in the United States and the UK, at establishing the prevalence of different sexual identities in the population. These findings should encourage scholars to more fully incorporate sexual identity as a time-varying rather than a static characteristic in demographic research. While policies addressing socioeconomic and health inequalities experienced by sexual minority individuals are welcome (Liu and Reczek 2021; Waite and Denier 2015), such policies need to account for the fact that their target populations are very much in flux.

Our findings also reveal demographic variations in sexual identity mobility. The result of a convex pattern of sexual identity mobility across age groups calls into question the linear assumption that sexual identity "stabilizes" over the life course. This implicit assumption has given rise to much research focusing on adolescence as a critical stage of sexual identity development (Katz-Wise and Hyde 2015; Savin-Williams and Ream 2007). Rather, our findings suggest that changes in sexual identity

reports represent an equally worthy research topic among the elderly and indeed across the full life span. We also found that sexual identities are more fluid among women, ethnic minority individuals, and the less educated. While it is beyond our scope here to explain these demographic variations, these findings do suggest that sexual identity is particularly fluid and thus more elusive to measure in some population groups than others. Moreover, sexual identity measures capture both how individuals understand their sexual orientation and how they would like to present themselves to the public (Katz-Wise et al. 2015; Savin-Williams and Joyner 2014). Although we are not able to disentangle these two latent dimensions, our study builds on the premise that sexual identity measures are substantively important in informing population estimates and policies.

Equally important, we demonstrated how different measures of sexual identity affect our understanding of the prevalence and patterns of sexual fluidity. It is not uncommon that demographers infer sexual identity from one's partner's sex (Denier and Waite 2019). Our findings suggest that despite a close association between sexual identity mobility and partnership (sex) mobility, indirectly measuring sexual identity using a partner's sex would substantially underestimate the prevalence of sexual identity fluidity (as in the 2020 U.S. Census) compared with using self-reported sexual identity (as in the 2021 UK Census). Such indirect inference further masks fluidity by failing to allow for bisexual identities at all—forcing people into dichotomous homosexual and heterosexual orientations. Given the prevalence of bisexuality in the population and elevated identity fluidity for this group, inferring sexual orientation from partnership status may create unstable estimates of sexual minority populations.

The limitations of this research suggest a few important directions for future research. Sexual orientation is a multidimensional construct (Diamond 2008). We focused only on sexual orientation identity, but future research could also consider longitudinal changes in sexual attraction, behavior, and attitudes in the general population (England et al. 2016; Mishel 2019). Our two-wave analysis with a predetermined time lag means that we have not been able to ascertain the nuanced temporal dynamics of sexual identity mobility, such as how often it takes place. Despite these limitations, our evidence emphasizes the need to more fully consider sexual fluidity as we mainstream sexual identity into data collection, demographic research, and policy making. ■

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Ethics Statement The secondary data analyzed here were collected under a protocol compliant with the Helsinki Declaration on human subjects testing, with full ethical approval at the institution of the original data collector (i.e., the University of Essex), and with informed consent from all participants. The anonymized data set was then released through the UKDA. Because we conducted analysis of a fully anonymized secondary data set and had agreed to the relevant conditions of confidentiality and terms of use set out by the UKDA, further ethical approval from the authors' institutions was not required.

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