

Identity and Change 1991-2001

*Linking the Longitudinal Study to the 2001 Census
21 September 2004, London School of Hygiene and Tropical*

Ludi Simpson, Cathie Marsh Centre for Census and Survey Research
Bola Akinwale, Office for National Statistics

1991 Census

Ethnic group

Please tick the appropriate box

White
Black-Caribbean
Black-African
Black-Other

Indian
Pakistani
Bangladeshi
Chinese
Any other ethnic group

If the person is descended from more than one ethnic or racial group, please tick the group to which the person considers he/she belongs, or tick the 'Any other ethnic group' box and describe the person's ancestry in the space provided.

2001 Census

What is your ethnic group?

Choose one section from A to E, then tick the appropriate box to indicate your cultural background.

A White British Irish
Any other White background

B Mixed White and Black Caribbean
White and Black African
White and Asian
Any other Mixed background

C Asian or Asian British
Indian Pakistani Bangladeshi
Any Other Asian Background

D Black or Black British
Caribbean African
Any other Black background

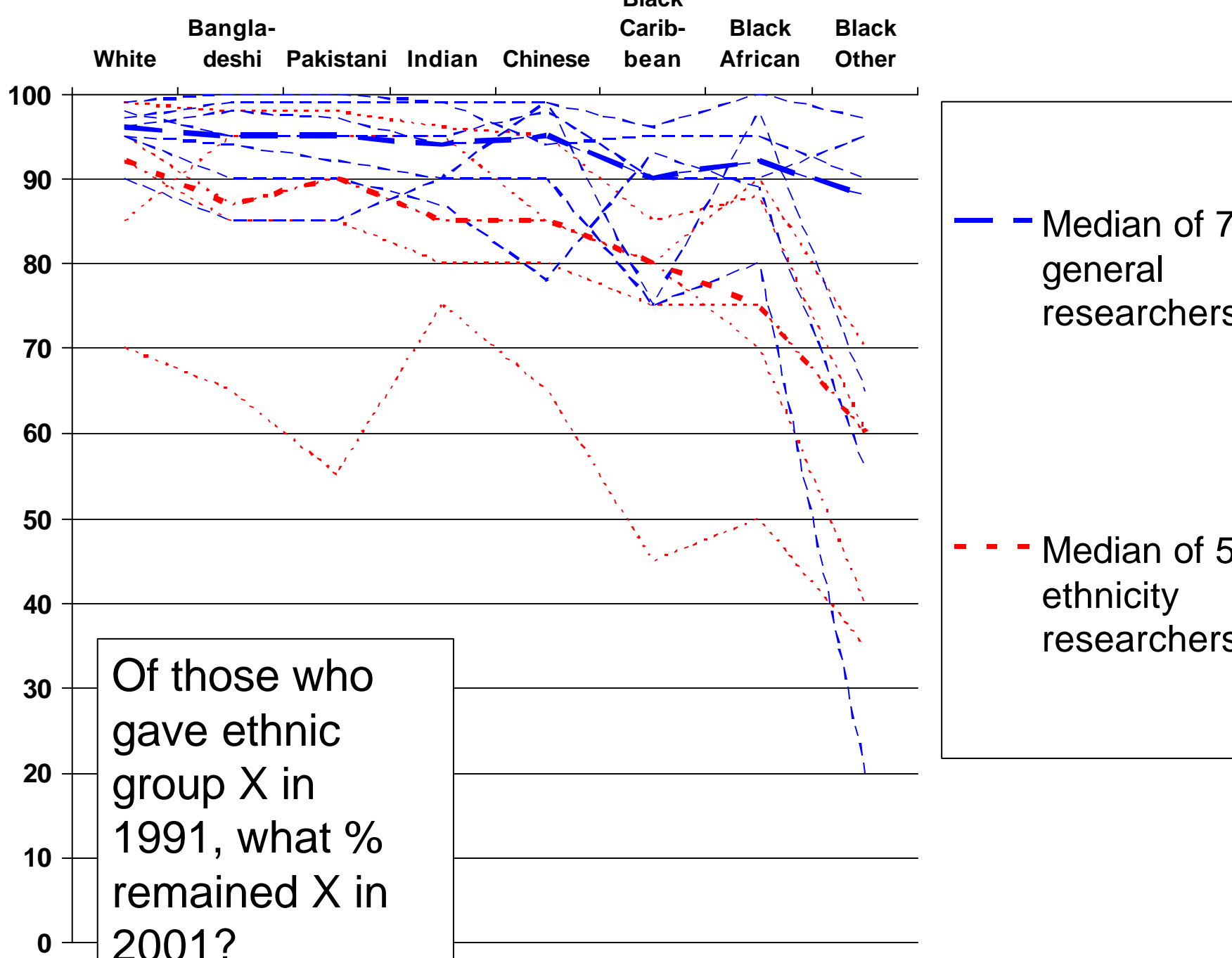
E Chinese or any other ethnic group
Chinese
Any other

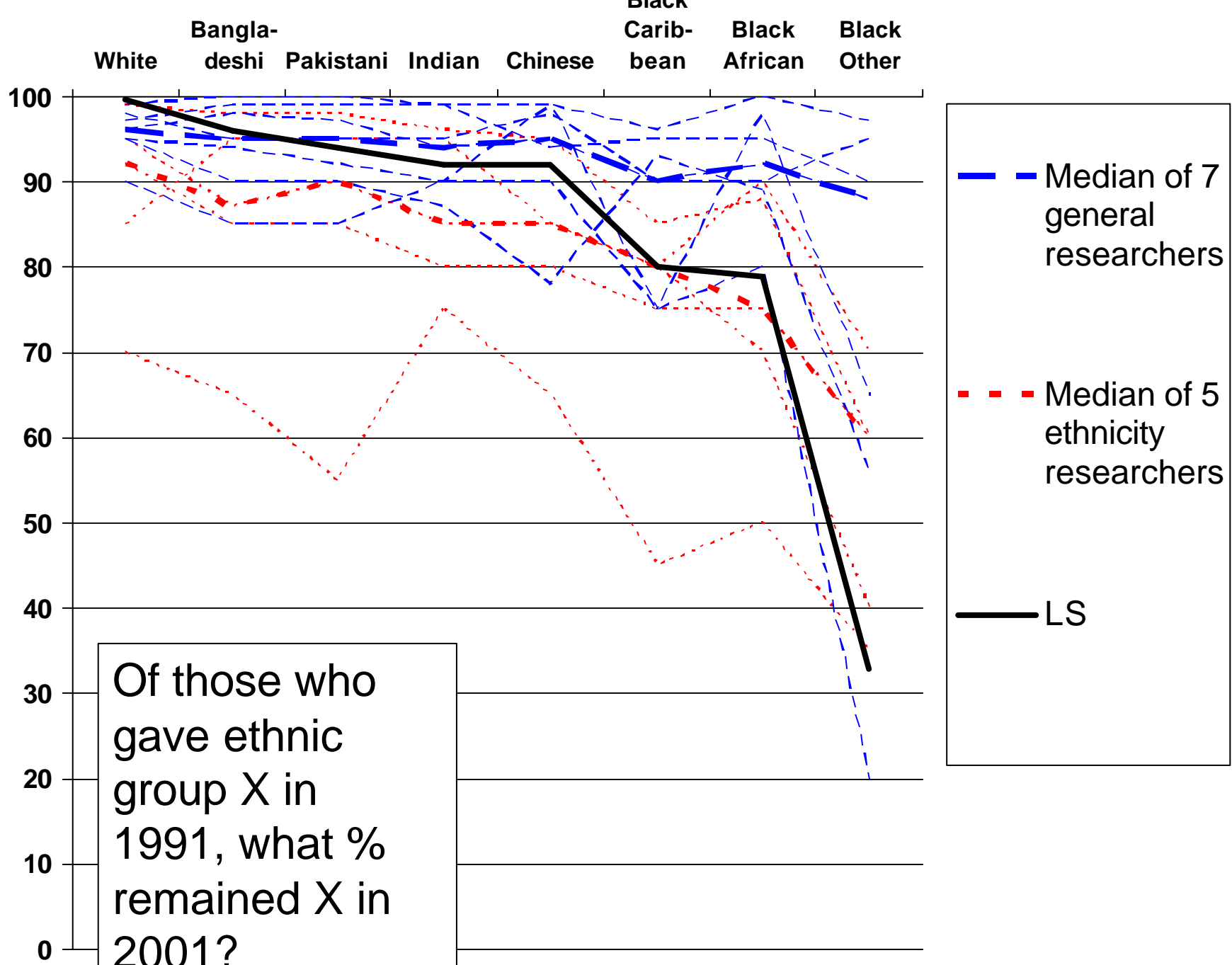
Questions that we have been asked

- Which categories should we put together when comparing 1991 and 2001?
- Is there a stable transition matrix *between* ethnic groups, perhaps age-specific?
- Is instability associated with other variables, including life events?

Sources of instability

- Conscious change of ethnicity
- Question change
 - New and different categories
 - Coding of write-in answers
- Unreliability – measure twice with different results
 - Response error
 - Question ambiguity
 - Transcription and coding errors
 - Erroneous editing and imputation





Measures of stability

<i>LS forward linkage</i>		Degree of fit % keeping X	Marginal fit 2001/1991
89.1%	White	99.5%	99.8%
69.3%	Caribbean	77.2%	93.2%
61.5%	African	77.4%	93.3%
72.8%	Other Black	8.3%	41.7%
80.6%	Indian	91.0%	97.2%
73.3%	Pakistani	91.9%	99.4%
70.9%	Bangladeshi	93.4%	98.5%
70.4%	Chinese	91.0%	95.8%
67.9%	Other Asian	33.6%	102.7%
73.7%	Other	7.0%	36.6%

Stability (% keeping their label): 98.0%

Mean degree of fit: 67.0%

Stability of sex, country of birth and ethnic group

Classification		Number in 1991 Census	Number not in this category in 2001	Degree of fit	Stability	Mean degree of fit
Sex	Male	198,427	376	99.8%	99.8%	99.8%
	Female	218,339	356	99.8%		
Country of birth	UK	384,076	1,243	99.7%	99.5%	98.6%
	Overseas	27,937	702	97.5%		
Ethnic group	White	392,582	2,122	99.5%	99.1%	96.8%
	Other	24,932	1,467	94.1%		

How much of 10-year instability is due to unreliability and question change?

	1991 Census Validation Survey	LFS with 2001 question	LS 2001
White			99.5
Black			76.1
Asian			97.5
Other			37.9
<i>Mean</i>			<i>77.75</i>

How much of 10-year instability is due to unreliability and question change?

	1991 Census Validation Survey	LFS with 2001 question	LS 2001
White	99.6		99.5
Black	88.0		76.1
Asian	98.7		97.5
Other	78.1		37.9
<i>Mean</i>	<i>91.1</i>		<i>77.75</i>

How much of 10-year instability is due to unreliability and question change?

	1991 Census Validation Survey	LFS with 2001 question	LS 2001
White	99.6	99.3	99.5
Black	88.0	82.6	76.1
Asian	98.7	95.2	97.5
Other	78.1	26.9	37.9
<i>Mean</i>	<i>91.1</i>	<i>76</i>	<i>77.75</i>

Comparison 1991-2001

- Use full transition probabilities in either direction?
 - E.g. 0.33% of 1991 White became 2001 Mixed
 - But will vary by ethnic composition of population: age and area
 - Mixed 2001 more than double the write in Mixed of 1991
 - Irish-born not equal to Irish in 2001
 - Nor to Irish descent: need to understand this example of socialisation of ethnicity
- Allocate new 2001 categories to 10 1991 categories
 - White – 3 categories, fit best with 1991 White
 - 1991 Other loses most to 1991 Other White
 - Mixed – four categories

Mixed 1991-2001

- No clear correspondence
 - 1991 White contributes most to 2001 Mixed
 - 1991 write-in Mixed contributes less than 50% to each 2001 Mixed
 - 1991 write in Asian/White all coded to Other-Other
 - 1991 write in Black/Other divided between Black and Other-Other
- Add to non-residual categories?
 - Too big in 2001: poor marginal fit

Alternative allocation of Mixed categories

					Overall Stability	Mean degree of fit	Coefficient of determination
16 categories as in 2001 Census					4.5%	57.1%	
14 categories. 3 White categories together					98.0%	67.0%	
<i>10 categories, allocating 2001 Mixed to other categories as follows</i>	2001 African /White	2001 Caribbean /White	2001 Asian /White	2001 Other Mixed			
Greater London Authority 2003	Other Black	Other Black	Asian Other	Other			
Dorling and Rees 2003, Polarisation	African	Caribbean	Asian Other	Other Black			
Dorling and Thomas 2004, Atlas	African	Other Black	Asian Other	Other Black			
Identity and Change Project 2004	Other Black	Other Black	Other	Other			

Alternative allocation of Mixed categories

					Overall Stability	Mean degree of fit	C squared fit margin
16 categories as in 2001 Census					4.5%	57.1%	
14 categories. 3 White categories together					98.0%	67.0%	
<i>10 categories, allocating 2001 Mixed to other categories as follows</i>	2001 African /White	2001 Caribbean /White	2001 Asian /White	2001 Other Mixed			
Greater London Authority 2003	Other Black	Other Black	Asian Other	Other	98.1%	72.1%	568.7
Dorling and Rees 2003, Polarisation	African	Caribbean	Asian Other	Other Black	98.1%	68.7%	1007.3
Dorling and Thomas 2004, Atlas	African	Other Black	Asian Other	Other Black	98.1%	71.3%	1319.3
Identity and Change Project 2004	Other Black	Other Black	Other	Other	98.2%	73.6%	279.1

Are the residual categories of use for comparisons over time?

- Less than half retained their 1991 label
- By design, a mixture of ambiguous populations
- Other Black, Other
 - Now dominated by mixed groups
 - Poor degree of fit, poor marginal fit
- Other Asian
 - 1991 and 2001 totals similar
 - Only one third kept their label
 - Coding changes: 2001 separate box under S Asian boxes
 - Born in UK: 1991: 22% 2001: 31%
 - Born in South Asia 1991: 20% 2001: 37%
 - Born in Far East: 1991: 40% 2001: 2%

Recommendation:

7 categories for comparison, 1 residual

- White Briton, Irish, Other White ~ White
- All Mixed and residual categories in Other
 - Other not intended for comparison 1991-2001

Fewer categories? White, Black, Asian, Other?

- Avoid when possible
 - But external data with small sample sizes or broad categories
- Choose classification according to context
- Hierarchical from 10/10 is not optimal
 - Start from 16/10
- Black to include Black Other
- Asian to include Asian Other?
 - Allow different allocation in 1991 and 2001

A 4-category classification with high degree of fit

- White: White Britons, Irish, Other White
- Black: Caribbean, Black, Caribbean/White, African/White, Other Black
- Asian: Indian, Pakistani, Bangladeshi, Asian/White, Chinese, Other Asian
- Other: Other, Other Mixed

For LS users

- Will suppressed small cells cause me problems when comparing classifications across time?
 - In this study, the changes were of interest, and often suppressed (less than three) from cell and total.
- In the Longitudinal Study, which ethnic group should I use (as a demographic covariate)?
 - Context – which behaviour is explained by ethnic group?
 - Most recent ethnic group is the most current conception
 - Model the uncertainty
- Imputation: should I include it?
 - It was correct only for Whites; exclude imputed records

Impact and success of imputation

1991 category	Imputed 2001	Imputed to a different category		
		N	% of imputed	% of all records
White	8,027	201	2.5%	0.1%
Black Caribbean	167	117	70.1%	3.4%
Black African	48	45	93.8%	3.6%
Black Other	74	73	98.6%	5.9%
Indian	238	121	50.8%	1.4%
Pakistani	182	91	50.0%	2.1%
Bangladeshi	67	40	59.7%	2.4%
Chinese	18	16	88.9%	1.4%
Other groups - Asian	43	36	83.7%	2.7%
Other groups - Other	80	80	100.0%	3.9%
All groups	8,944	820	9.2%	0.2%

Correlates of change in ethnic group

- How is change in ethnic group label associated with biographical factors and social circumstances?
- Measurement of change constrained by questions asked in 1991 and 2001

Correlates of change in ethnic group: Age

- Across all ethnic groups, change was most likely for people aged 60+
- Among the main ethnic minorities, people aged 0-14 in were more likely to change ethnic identity than other people under 60
- Change was more likely for 1991 dependent children than for other members of household

Correlates of change in ethnic group: Country of birth

- UK-born were more likely to change ethnic group than those born outside UK
- Change was least likely for people born in countries of birth associated with their ethnic group label
- Among White people 1.7% of those born outside the UK changed their ethnic group, compared with 0.1% of the UK-born

Other correlates of change in ethnic group

- 23% of those who lived in a multiple ethnic group household at either Census changed group compared with 0.4% of those in single ethnic group households at both points
- Most stable were in all White (0.1% changed) and all Bangladeshi households (3.5% changed)
- Identity was most stable for members of the largest religion within an ethnic group
- 4.4% of those living in London in 2001 changed ethnic group compared with 0.7% of those outside London

Conclusions

- Ethnic group question
 - Reliability is not complete, probably improved on 1991
 - Residual categories not useful
 - Works unambiguously only for Whites
 - Can expect further changes to question
- Comparison 1991-2001
 - Favoured 7+Other categories (1 other or 3 other)
 - No formulaic conversion of 1991 to 2001
- Who changes ethnicity?
 - UK-born
 - Living in London
 - Poorly fitting labels