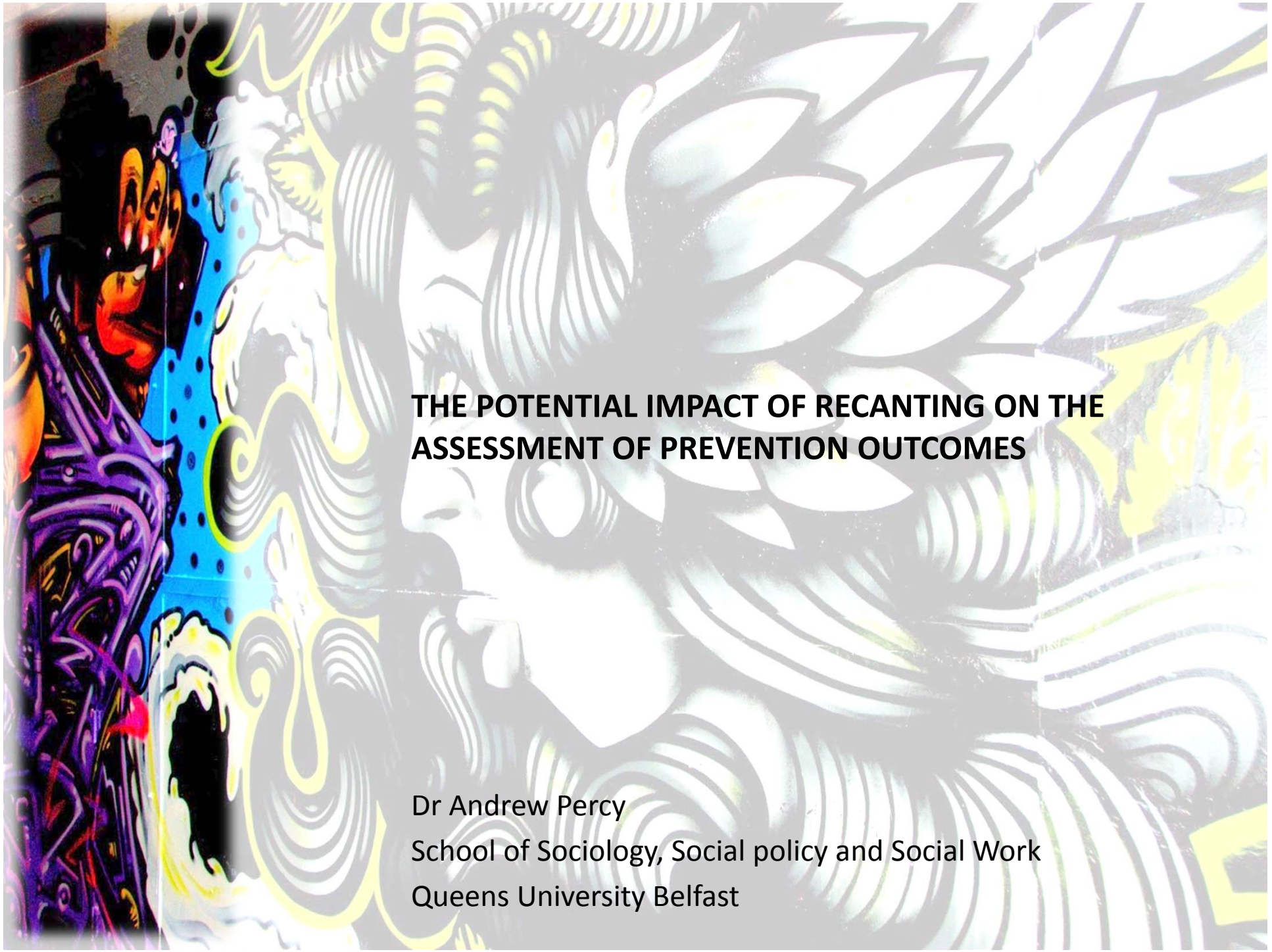

THE POTENTIAL IMPACT OF RECANTING ON THE ASSESSMENT OF PREVENTION OUTCOMES

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Aims

1. Introduce recanting as a source of survey measurement error.
2. Examine patterns and predictors of recanting
3. Discuss possible methods for adjusting for recanting.
4. Consider the implications for prevention trials

Response patterns

Have you ever tried [DRUG], even if it was just once?
(Tick only <u>one</u> box)

Yes.....☐
No.....☐
I'm not sure.☐

In this analysis "Missing" = 0 / Yes =1 / No = 2 / Not sure = 2

Example response patterns (2 sweeps)			
	Time1	Time2	Pattern
1.	0	1	Missing T1 user T2
2.	2	2	Consistent non-user
3.	2	1	New user T2
4.	1	1	Consistent user
5.	**1**	**2**	**Recanted use T2 (not logical)**

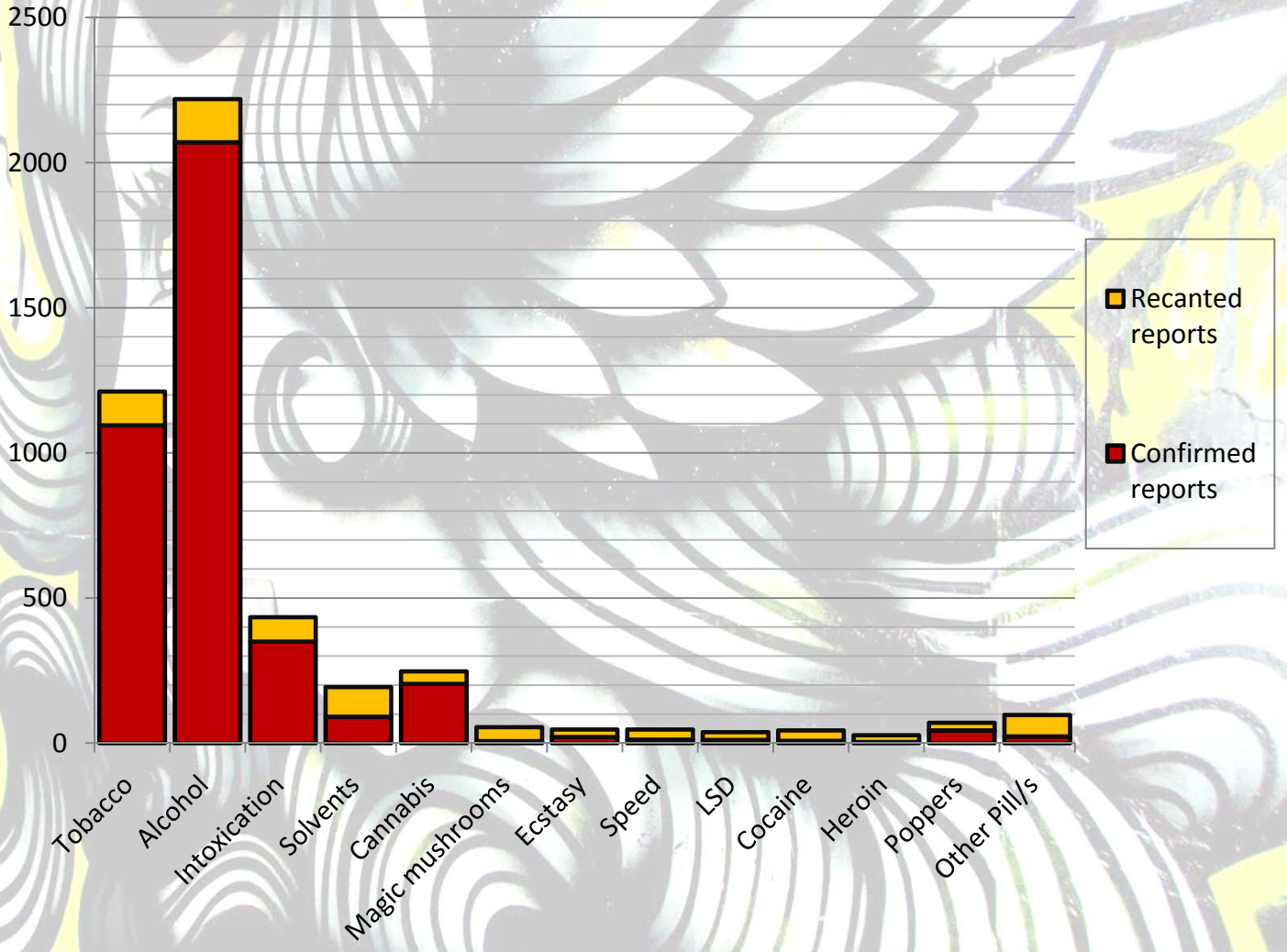
Primary outcomes (e.g. Last year use) follows lifetime use. Successful outcomes (non users and those who reduced consumption) would normally include GROUP 5 – "recanters"

Extent of recanting

	Total positive lifetime reports in T1	Confirmed EVER use in T2	Recanted EVER use in T2
Drug Type	*n*	*%*	*%*
Tobacco	*1211*	90	10
Alcohol	*2219*	93	7
Drunkenness	*434*	81	19
Solvents	*193*	47	53
Cannabis	*247*	83	17
Magic mushrooms	*55*	13	87
Ecstasy	*47*	45	55
Speed	*47*	26	75
LSD	*38*	29	71
Cocaine	*44*	18	82
Heroin	*27*	15	85
Poppers	*70*	63	37
Other Pill/s	*97*	24	76
Total	**4729**	**83**	**17**

Data is from the Belfast Youth Development Study, which has tracked approximately 4,000 school children from 2001 when they were age around 11 (first year of secondary school)
Analysis is based on the number of positive reports

Extent of recanting



Number of drugs recanted

Reported number of drugs used in T1								
Numbers of drugs recanted in T2	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7 or more**
0	100.0	89.3	80.7	61.5	47.5	40.0	34.3	8.7
1		10.7	16.2	30.8	35.6	25.3	20.0	15.2
2			3.1	6.9	11.0	14.7	25.7	21.7
3				0.8	2.5	13.3	14.3	15.2
4					3.4	5.3	5.7	8.7
5						1.3	0.0	13.0
6							0.0	6.5
7 or more								10.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N	**887**	**1244**	**684**	**247**	**118**	**75**	**35**	**46**

Recanting is not simply a product of a “tick everything - tick nothing” style of reporting.

Selective recanting occurs.

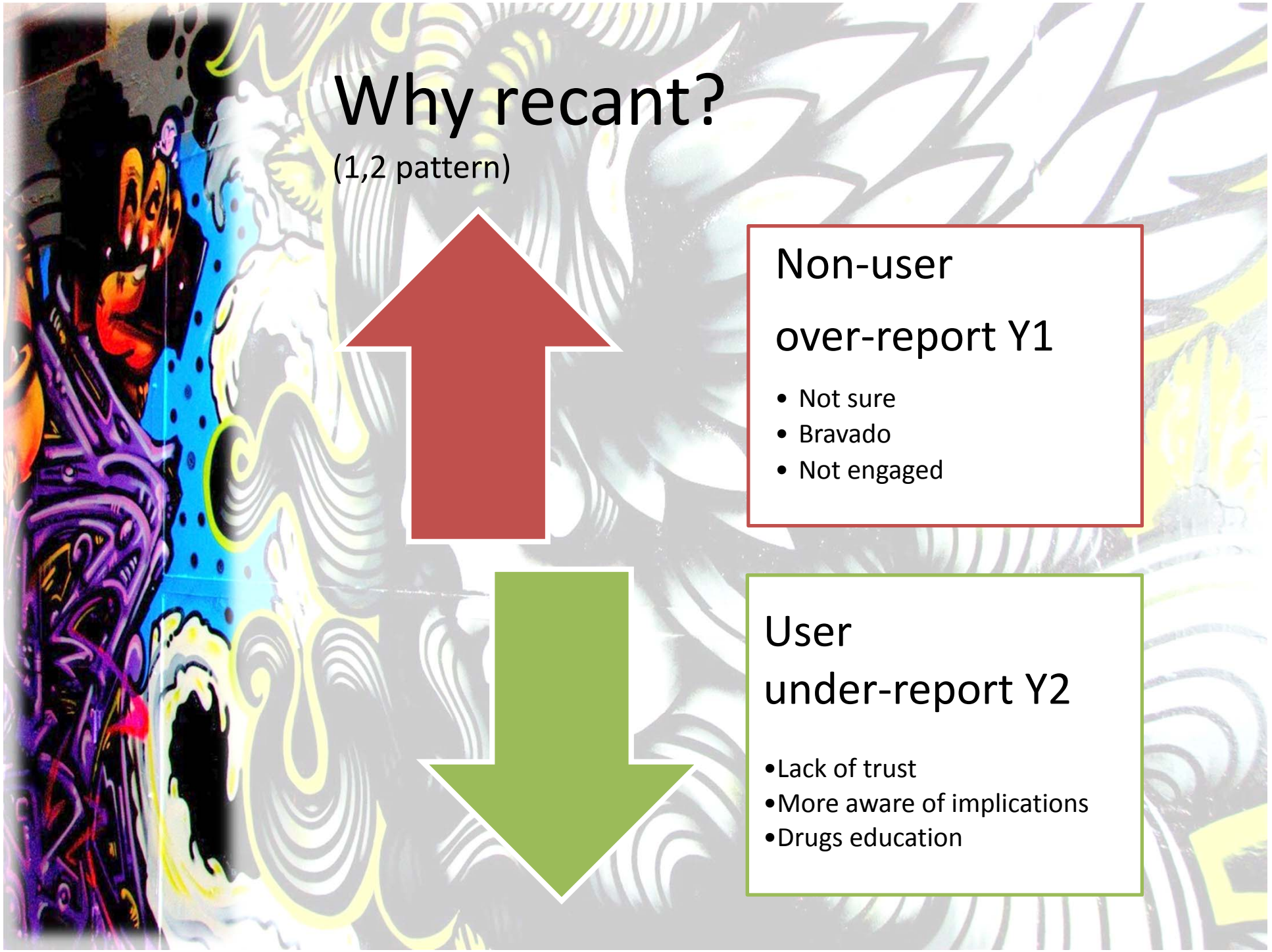
They pick and choose the drugs to recant.

Predictors of recanting

	Alcohol (n=1878)		Drunkenness (n=361)		Cannabis (n=187)	
	OR	Sig	OR	Sig	OR	Sig
Gender						
Female	0.43	**	0.30	**	1.75	
Male	1.00		1.00		1.00	
School Religion						
Catholic	1.82	**	1.35		0.37	
Protestant	1.00		1.00		1.00	
Attitude to Education	1.11	*	1.03		1.05	
School Behaviour	1.07		1.06		0.91	
Educational Expectations	0.96	*	1.02		0.94	*
Socio-economic Status						
Class 5	0.81		1.64		2.35	
Class 4	0.78		1.20		0.69	
Class 3	1.01		1.53		0.66	
Class 2	1.18		1.74		0.65	
Class 1	1.00		1.00		1.00	
Delinquency						
Serious offences	0.04	**	0.05	**	0.05	*
Minor offences	0.23	**	0.28		0.45	
None	1.00		1.00		1.00	
Drugs education						
Received in 2002	0.77		2.05		12.86	**
Received in 2001	0.97		1.72		17.76	**
Not received	1.00		1.00		1.00	
Frequency of prior drug use						
More than once week	<0.01[1]	**	-		-	
Once a week	<0.01[1]	**	-		<0.01[1]	**
Once a month	0.38		-		1.46	
2-5 times	-		-		1.01	
Used to, but not now	0.92		-		2.80	**
Used once	1.00		-		1.00	

Logistic regression estimated in Mplus (MLR estimator with robust standard errors adjusted for the non-independence of sample

While we suspect **method effects**, we could not detect a **school effect**



Why recant?

(1,2 pattern)

Non-user over-report Y1

- Not sure
- Bravado
- Not engaged

User under-report Y2

- Lack of trust
- More aware of implications
- Drugs education

Response patterns over multiple years (3)

Consistent users	Consistent non-users	Unconfirmed user	Unconfirmed non-user	Logical change	Recanted
011	022	100	200	210	120
101	202	010	020	211	121
110	220	001	002	021	102
111	222			201	012
				221	112
					212
					122

Recanting rates

	Smoking	Alcohol	Intoxication	Cannabis	Ecstasy	Cocaine	Heroin	Pills
Consistent user	32.66	56.08	14.76	7.49	0.94	0.38	0.04	1.40
Consistent non user	28.97	7.20	39.60	54.92	76.81	78.33	81.15	73.91
Unconfirmed user	8.70	11.63	6.57	4.15	1.04	0.77	0.35	1.61
Unconfirmed non-user	5.41	2.78	10.19	10.69	14.53	14.97	15.20	13.36
Logical change	19.29	16.39	22.71	19.50	4.15	2.71	1.25	5.80
Recanted	**4.88**	**5.62**	**4.24**	**2.90**	**1.80**	**2.25**	**1.40**	**3.49**
Missing	0.10	0.29	1.92	0.35	0.73	0.60	0.61	0.42
Total	100	100	100	100	100	100	100	100

Correcting for recanting

- *Simple correction:* All positive reports of drug use that were subsequently recanted are considered as false and were set to no use.

- Co*mplex correction:* Where recanted drug use was subsequently followed by a positive drug use report, reaffirming drug use status (i.e. 121 pattern) or were there was previous consistent positive reports (i.e. 112 pattern) the recant was assumed to be an under-reported and the respondent was considered to be a drug user and included in the numerator.

Correcting for recanting

	Smoking	Alcohol	Intoxication	Cannabis	Ecstasy	Speed	Cocaine	Heroin	Pills
Recanting as a proportion of all use.	7.44	6.27	8.79	8.52	22.76	31.11	36.79	46.20	28.39
Raw lifetime prevalence rate	65.52	89.73	48.28	34.04	7.93	7.78	6.10	3.03	12.31
Simple correction	60.65	84.10	44.04	31.14	6.12	5.36	3.86	1.63	8.81
Complex correction.	62.70	86.87	45.17	31.85	6.28	5.55	3.97	1.69	9.21

Differences between raw and corrected proportions are all significant.

Implications?

- Measurement error is sizeable and non-ignorable
  - 2%-6% of all respondents
  - 6% to 46% of users report logical inconsistencies over time
  - Interventions increase the rate of recanting
  - Recanting is counted as a positive outcome
- Adversely affects estimation of :
  - prevalence estimation
  - developmental trajectories
  - age of onset
  - intervention outcomes
- Not aware of any longitudinal study or prevention trial that has adjusted for this form of measurement error.