

# Privacy and Security Perceptions of European Citizens

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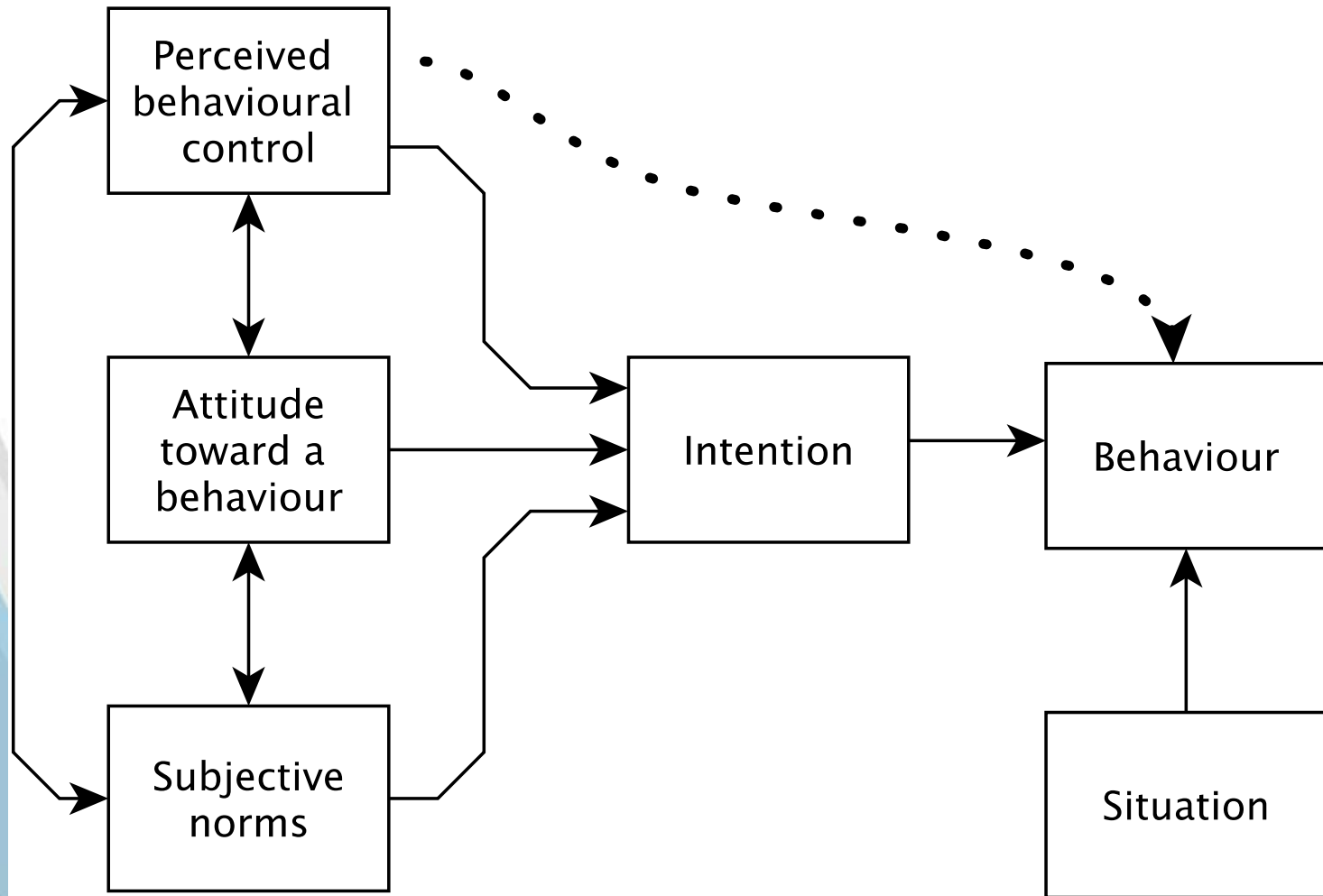
with input from Sven Rung (Fraunhofer), Marc van Lieshout, Merel Ooms,  
Jelmer Ypma (TNO), Gideon Skinner, David Cameron (IPSOS Mori)



# The objective of the project

- Explore the relationship between Human privacy and security
  - Do people actually evaluate the introduction of new security technologies in terms of a trade-off between privacy and security?
  - What are the main factors that affect public assessment of the security and privacy implications of given security technology?
- → Pan-European representative survey

# Theory of Planned Behaviour



# Questionnaire structure

- Section on General Attitudes
  - Trust
  - Security / Privacy concerns
  - Specific attitudes to privacy and data protection practices
  - Values
- Section on Specific Contexts
  - Vignettes/scenarios (split-sampled)
    1. NSA type surveillance
    2. Biometric access control systems
    3. Smart meters
    4. Internet monitoring for terrorists
    5. ANPR cameras
    6. Data collection and trading by ISPs
    7. DNA databases
    8. Crowd surveillance
- Demographics

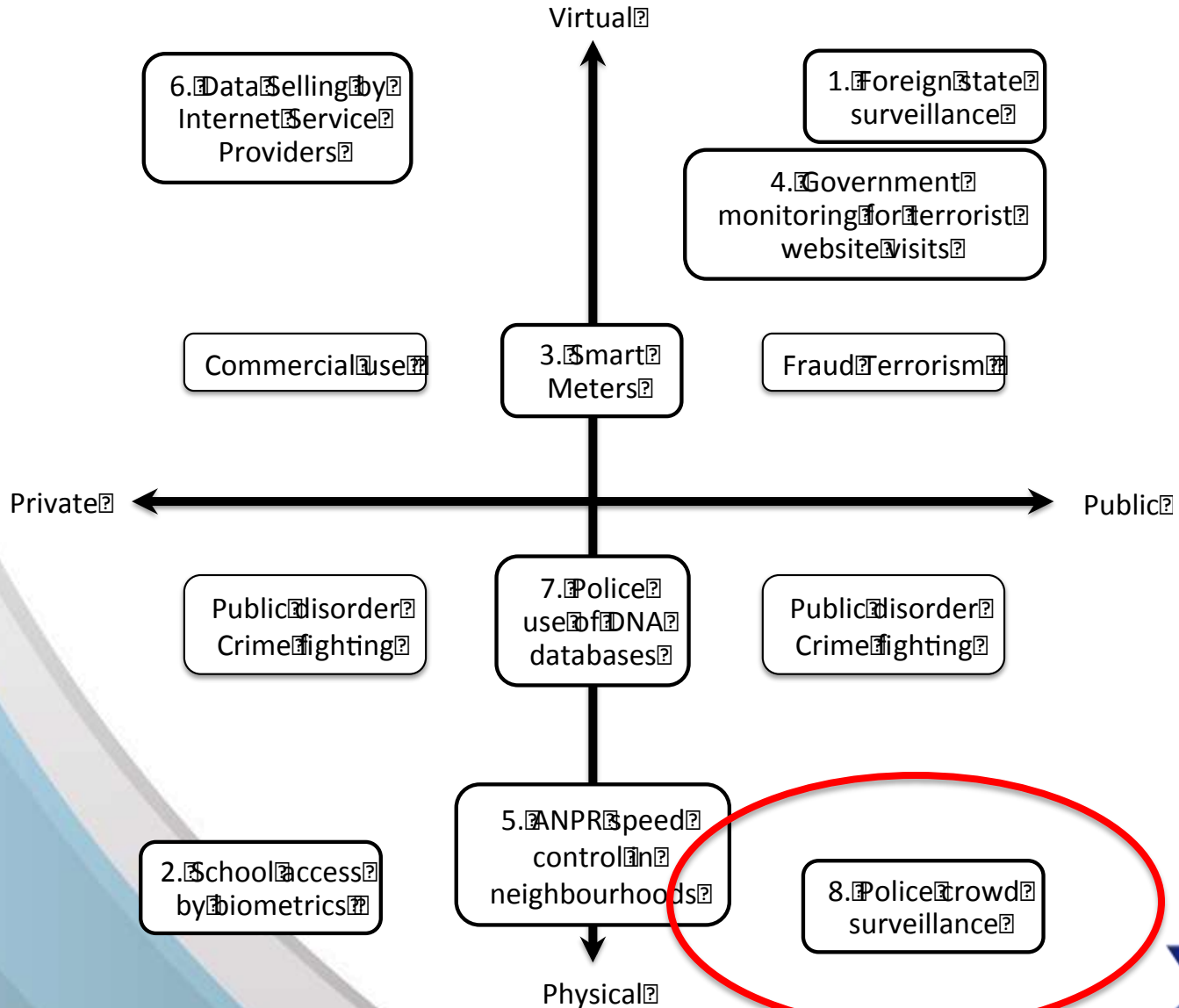
# Survey methodology and technicalities

- Target population: General population, aged 18+
- Number of countries: 27 EU countries (without Croatia)
- 27,195 interviews (~ 1000 per country)
- Interviews carried out amongst a representative sample (based on age, gender and work status)
- Questionnaire duration: 25-30 minutes
- Field work: February – June 2014

# Findings on citizens' attitudes

- Both privacy and security are important to people
- There is no significant relationship between citizens' general attitudes towards “privacy” and “security”.
- However, things are more complicated in concrete cases
  - General attitude  $\neq$  Intention to behave (aka privacy paradox)
  - Other context dependent factors
  - Bounded rationality and compromises

# Vignettes - Overview



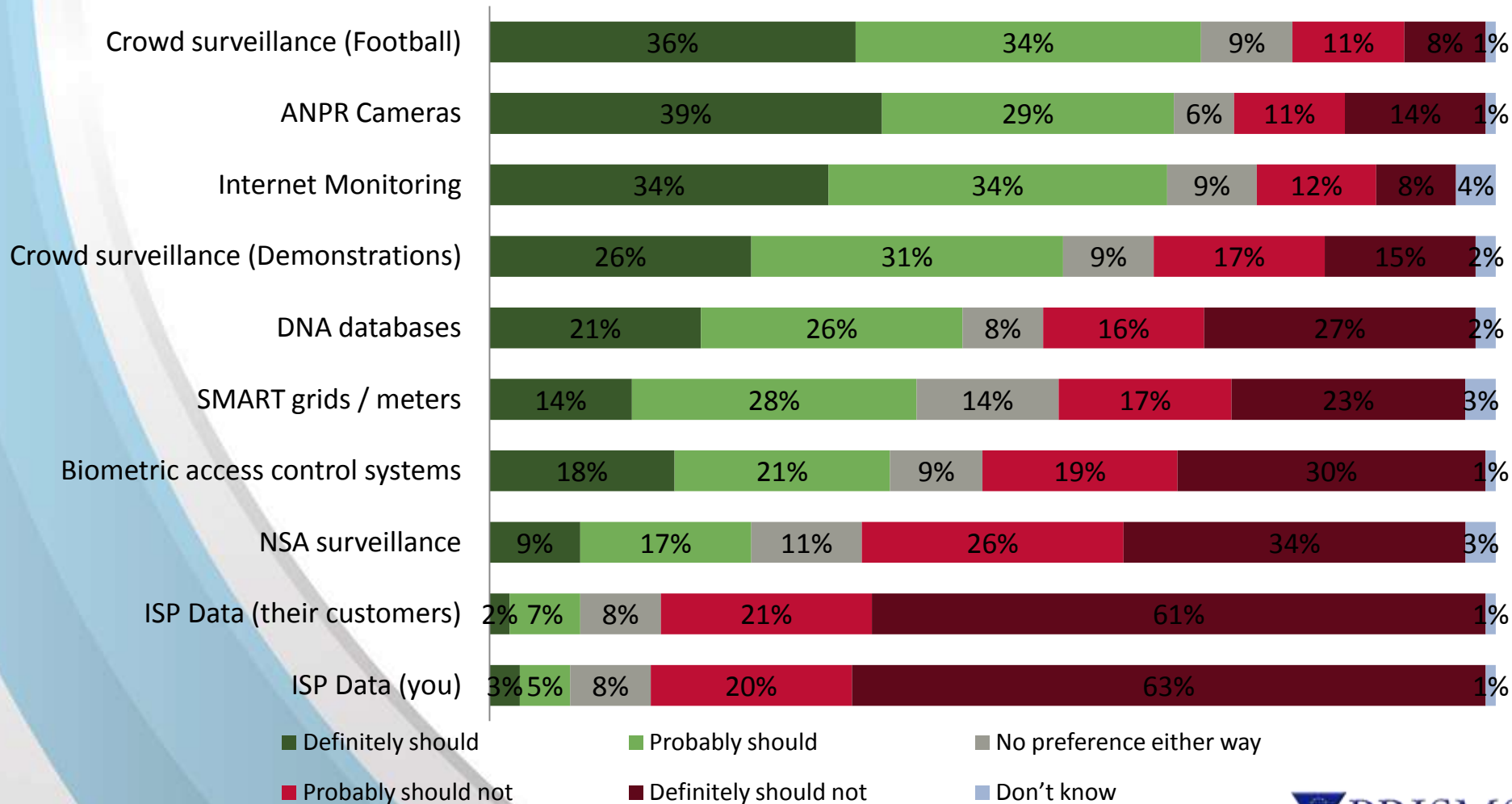
# Vignette „Crowd surveillance“

- Claire is an active **member of an environmental group**, and is taking part in a **demonstration against the building of a new nuclear plant**. The police monitor the crowd in various ways to track and identify individuals who cause trouble: they use uniformed and plain-clothes police, CCTV, helicopters and drones, phone-tapping, and try to find people on social media.
- David is a **football fan** who regularly **attends home matches**. The police monitor the crowd in various ways to track and identify individuals who cause trouble: through uniformed police and plain-clothes police, CCTV, by using helicopters and drones, tapping phones, and by trying to find people on social media.



# Overview: The Vignettes

QB1. To what extent, if at all, do you think that \_\_\_\_ should or should not...?



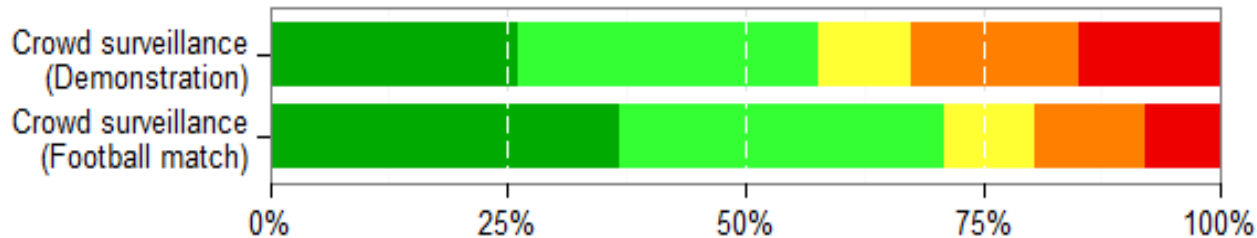
Base: All Valid Responses

# Factors determining the vignettes

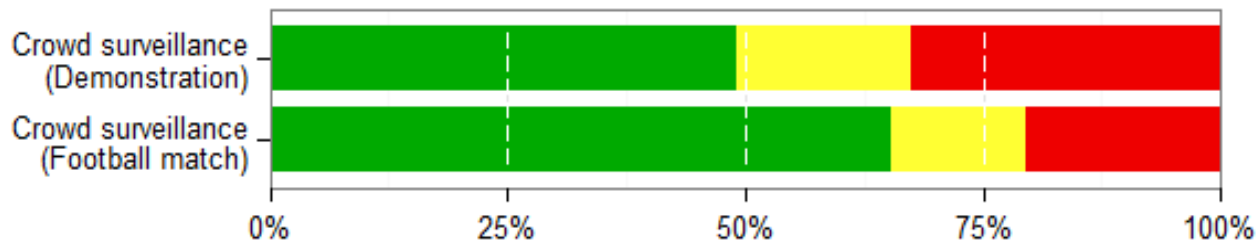
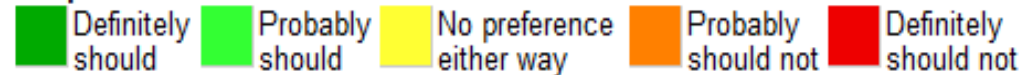
<b>red = significant</b>	Government monitoring	School access by biometrics	Usage of smart meter data	Monitoring terrorist website visits	Speed control in neighbourhoods by ANPR	ISPs selling data	Police uses DNA data bases	Police surveys demonstration	Police surveys football match
Country	0,012	0,000	0,000	0,000	0,000	0,019	0,000	0,000	0,000
Privacy	0,000	0,000	0,000	0,000	0,000	0,008	0,000	0,000	0,000
Personal security	0,000	0,000	0,153	0,000		0,001	0,000	0,001	0,009
General security					0,000				
Privacy activism	0,075		0,219	0,107		0,889	0,009		
Privacy invasion	0,278	0,075	0,309	0,104	0,916	0,042	0,144	0,881	0,136
Trust in institutions	0,002	0,629	0,000	0,003	0,221	0,000	0,000	0,002	0,484
Age	0,001	0,033	0,000	0,511	0,950	0,002	0,005	0,625	0,005
Education	0,006	0,991	0,945	0,720	0,044	0,680	0,025	0,029	0,370
Gender	0,001	0,441	0,425	0,084	0,003	0,121	0,793	0,200	0,333
Political attitude	0,613	0,002	0,004	0,129	0,440	0,632	0,780	0,100	0,213
Internet usage	0,001		0,350	0,097		0,530	0,648		
Living area					0,004				
Work status					0,008				

# Same practice – different context: it makes a difference

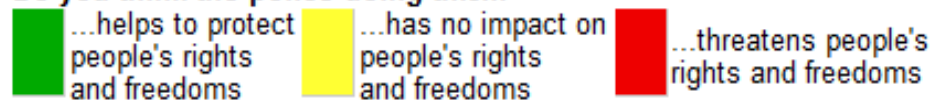
To what extent, if at all, do you think that the police should or should not monitor the [DEMONSTRATION/CROWD] in this way?



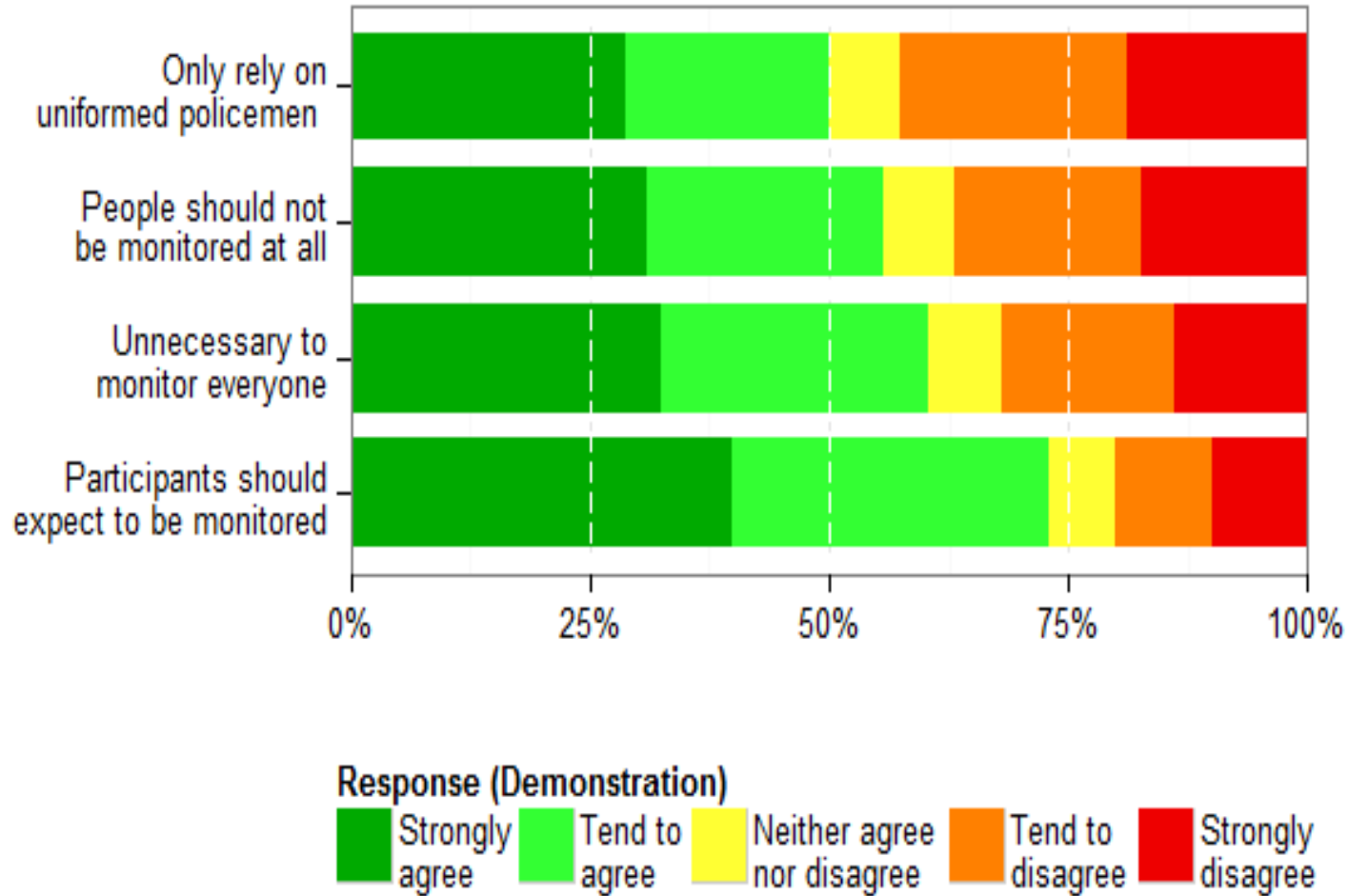
## Response



## Do you think the police doing this...



# Nothing is without alternatives

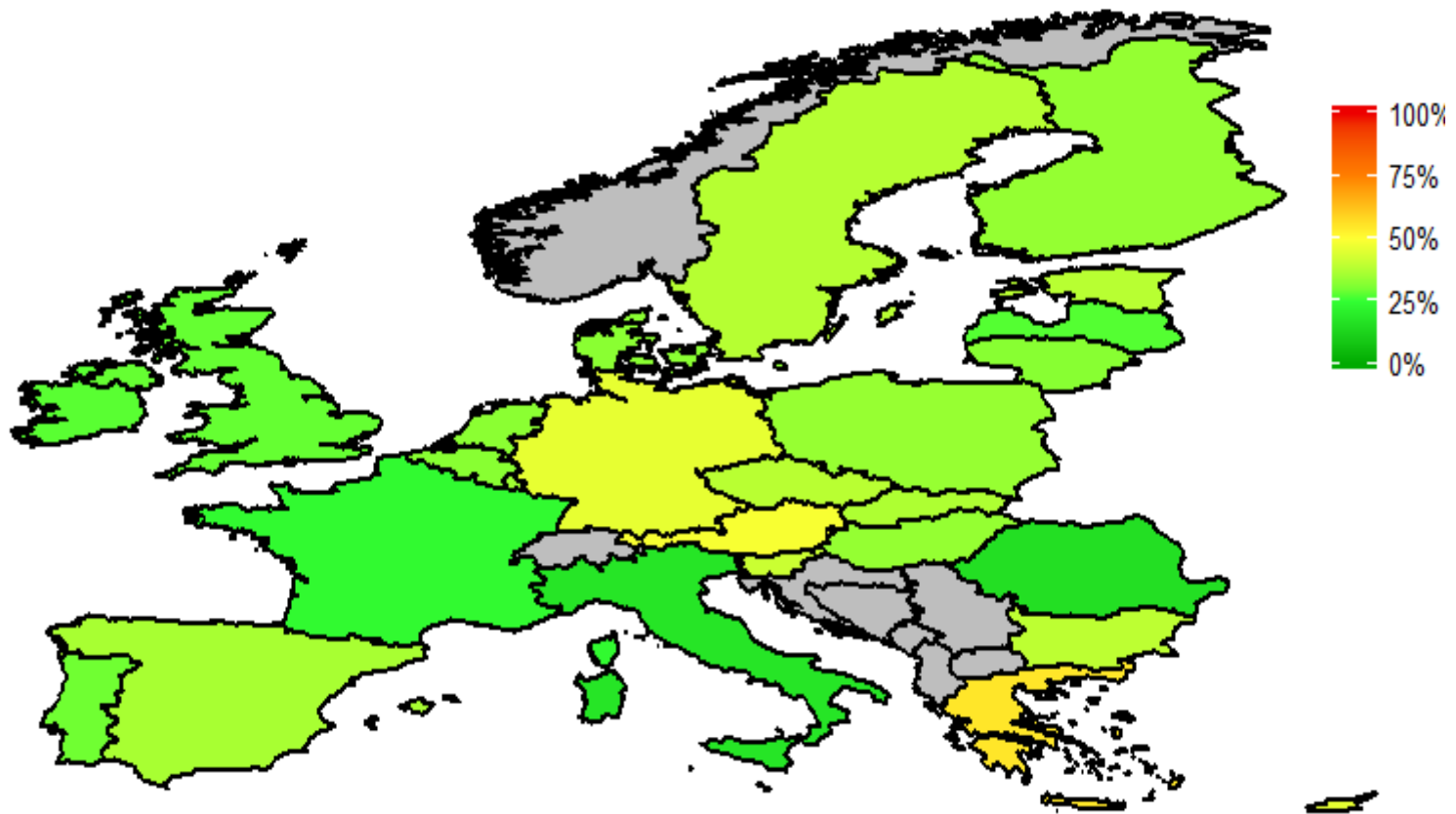


# Some factors influencing the vignette

Linear regression analysis vignette Crowd surveillance (demonstration)			
	Coefficiënt	Std. Error	Sig.
(Constant)	2.591	0.080	0.000
<b>Actively protect your privacy</b>	<b>-0.127</b>	<b>0.037</b>	<b>0.001</b>
<b>Trust in institutions</b>	<b>0.929</b>	<b>0.100</b>	<b>0.000</b>
How satisfied are you with your life as a whole nowadays?	-0.097	0.085	0.252
<b>Gender (1=female)</b>	<b>0.110</b>	<b>0.035</b>	<b>0.002</b>
<b>Lower education</b>	<b>0.481</b>	<b>0.049</b>	<b>0.000</b>
<b>Medium education</b>	<b>0.308</b>	<b>0.040</b>	<b>0.000</b>
Young adults	0.052	0.048	0.279
Adults	0.052	0.041	0.213
R2 = 0,035			
Dependent Variable: To what extent, if at all, do you think the police should or should not monitor the demonstration in this way?			

# Regional differences (1)

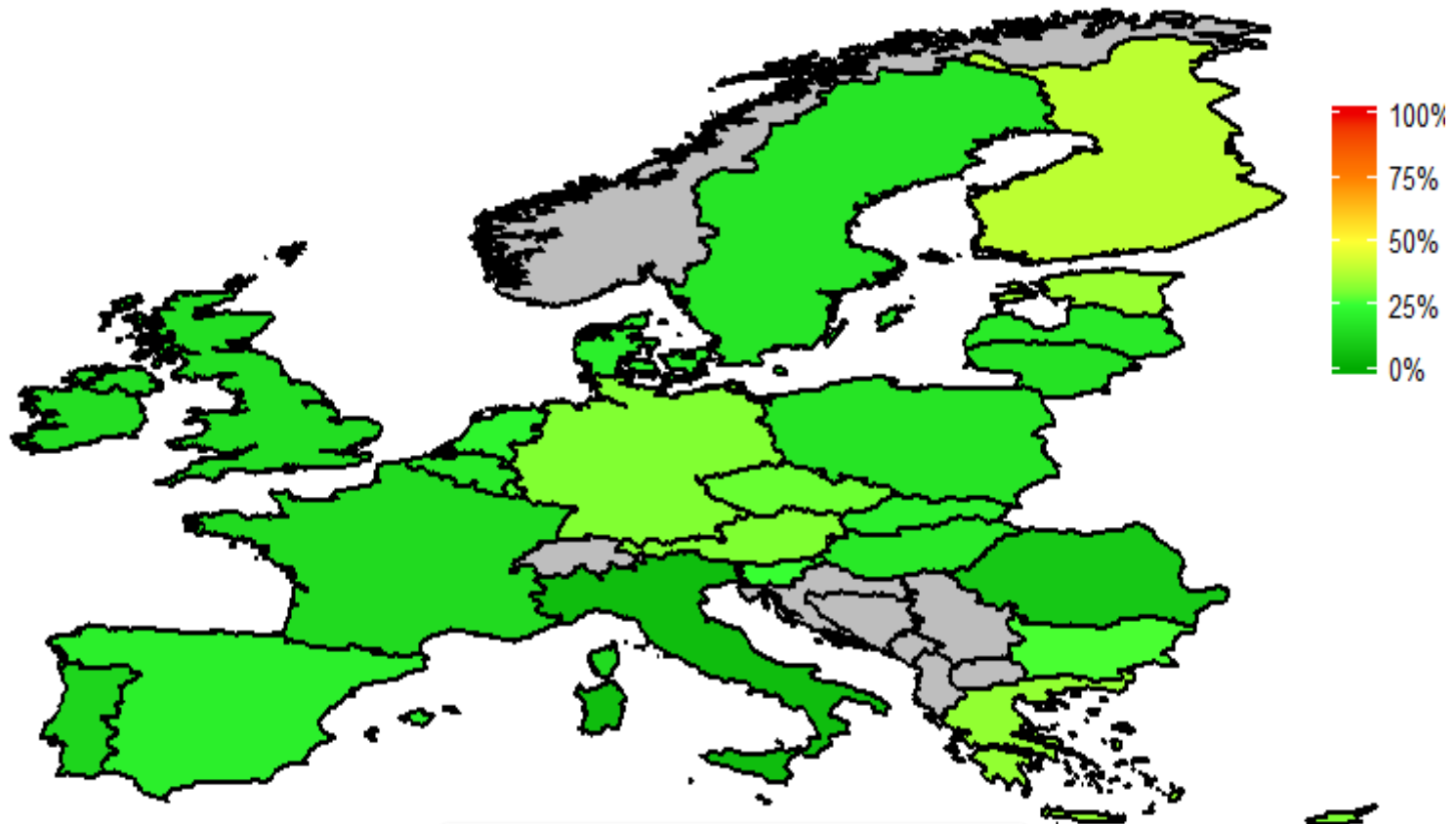
To what extent, if at all, do you think that the police should or should not monitor the DEMONSTRATION in this way?



Greece, Austria, Germany most sceptical  
Romania, Italy most positive

# Regional differences (2)

To what extent, if at all, do you think that the police should or should not monitor the FOOTBALL MATCH in this way?



Finland most sceptical  
Italy, Romania most positive

# Conclusions

- Crowd surveillance (for football scenario) as ANPR (for speeding) is rather acceptable to citizens
  - People tend to accept security practices when it comes close to personal concerns and it affects others
- Trust in institutions crucial
- Education – the higher the education the more the concern: knowledge makes suspicious?
- Gender – only in some cases significant
- Age significant in various directions
  - (younger adults not necessarily less interested?)
  - Significant in most cases (except for monitoring terrorist websites, speed control in neighbourhoods and crowd monitoring demonstrations)
- Rural vs. urban areas –significant only in one vignette
- Work status –significant only in one vignette
- Political attitude (privacy as left-wing construct)
  - Only significant in School access biometrics and Smart metering

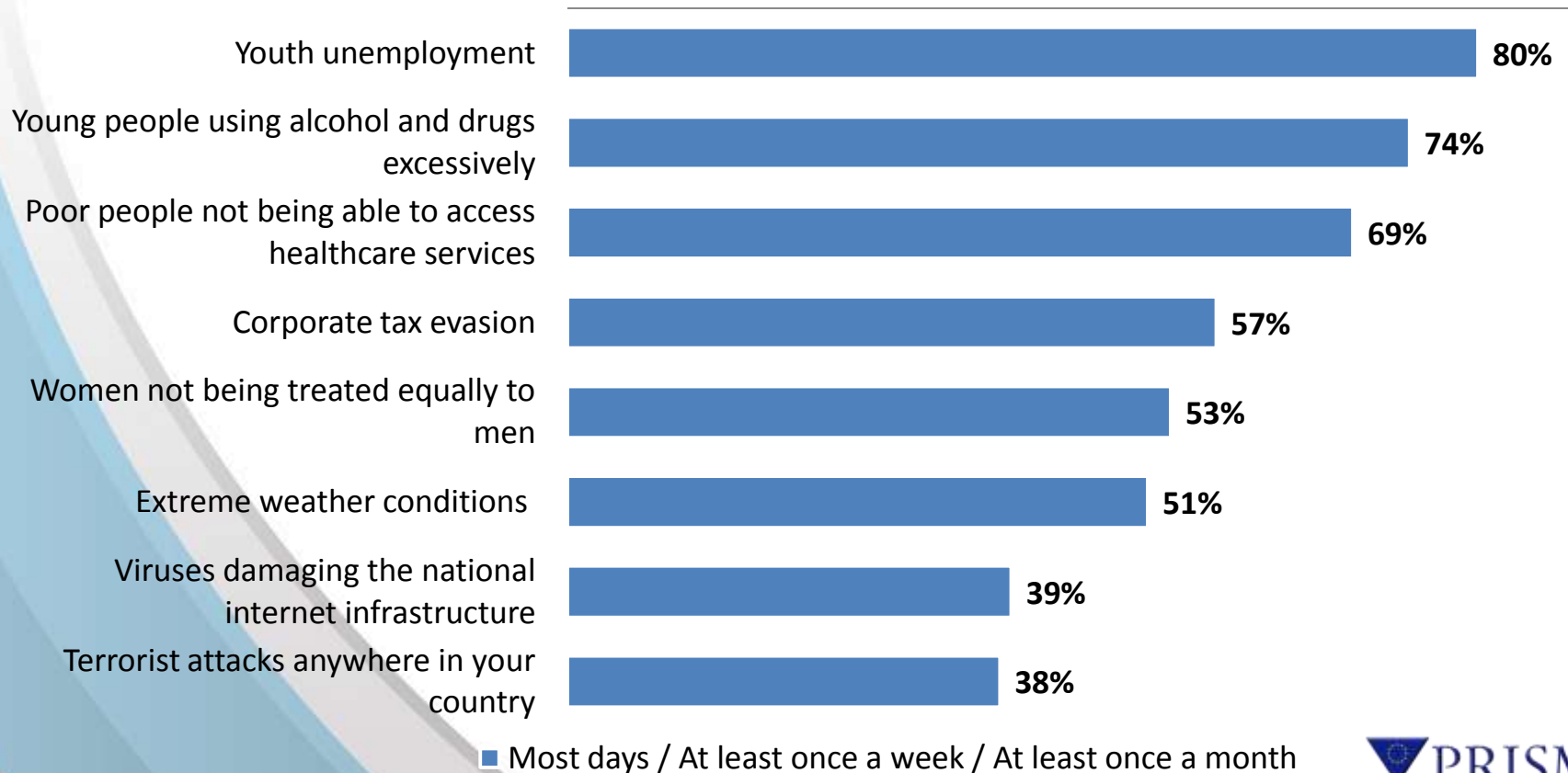




# General Security

Social issues such as unemployment, healthcare and young people are top concerns

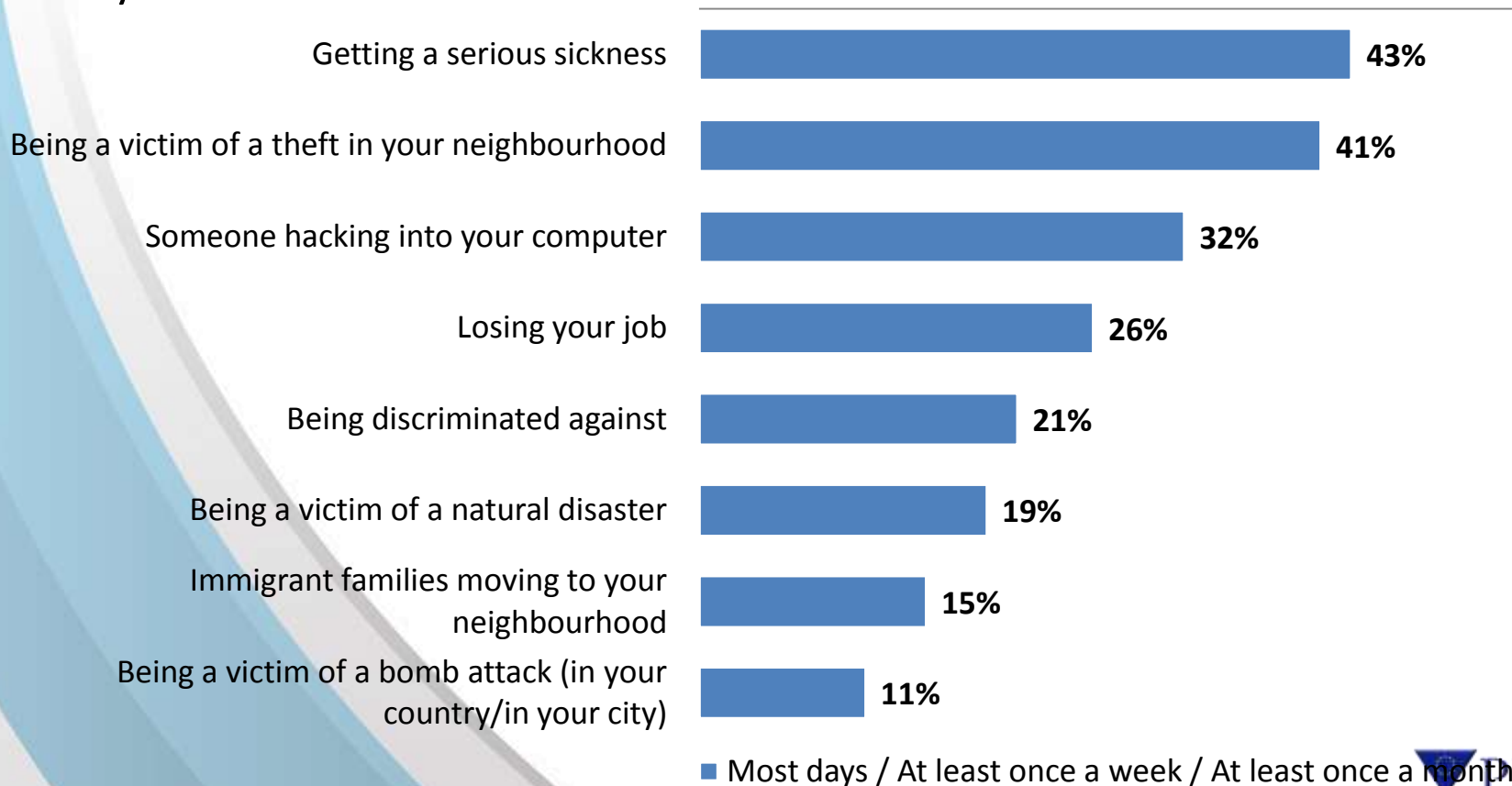
How often, if at all, have you worried about each of the following in your country in the last year?



# Personal Security

Indication that feelings of safety and health are more important to people personally

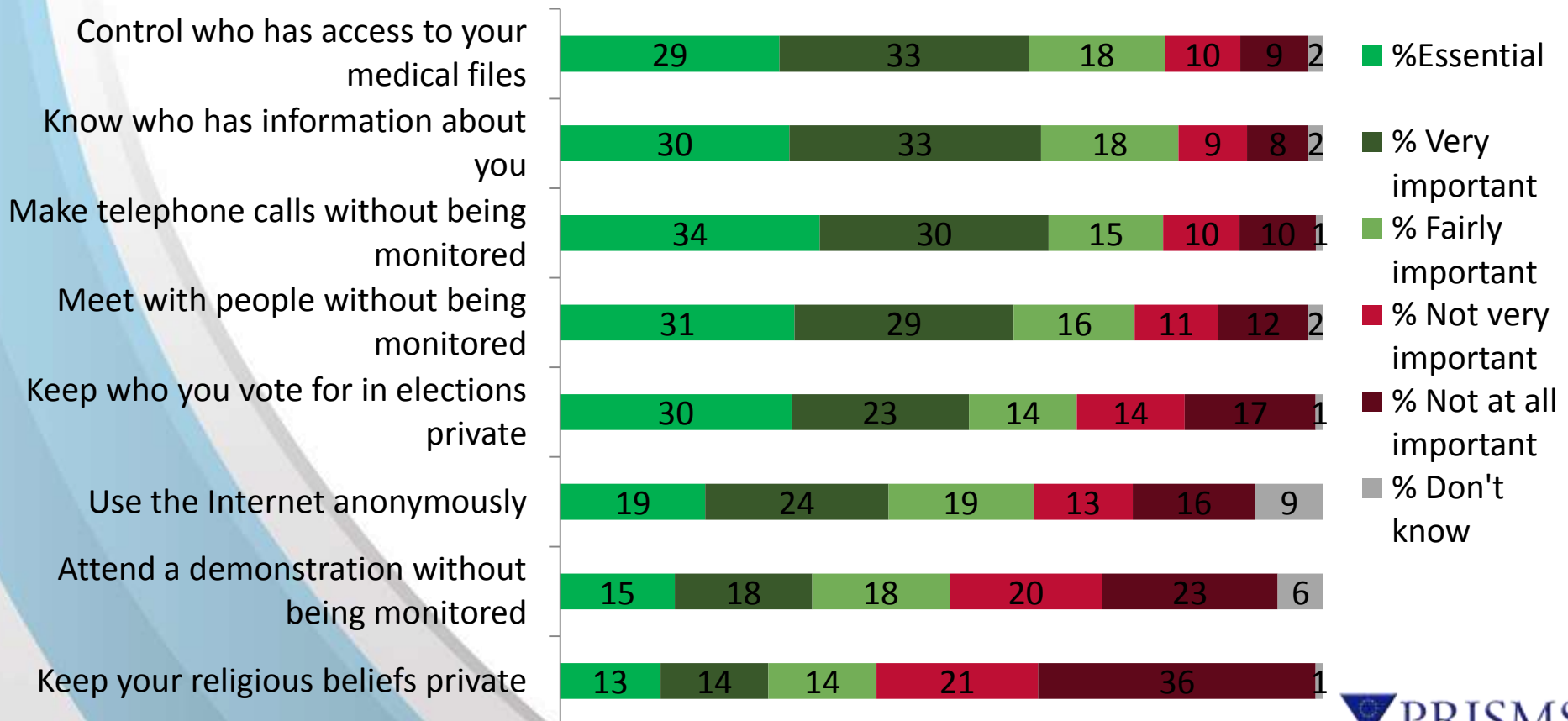
And how often, if at all, have you worried about each of the following in the last year?



# Privacy

A sense that personal control is a crucial aspect of privacy,  
as is freedom of everyday association

How important, if at all, is it for you to be able to...

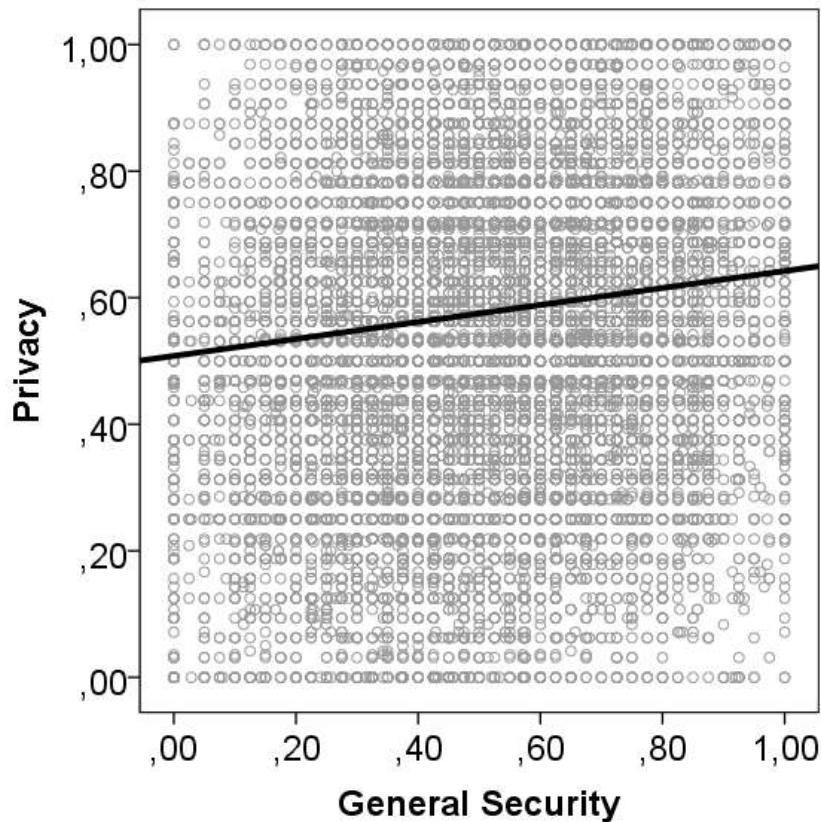


# Factor analysis

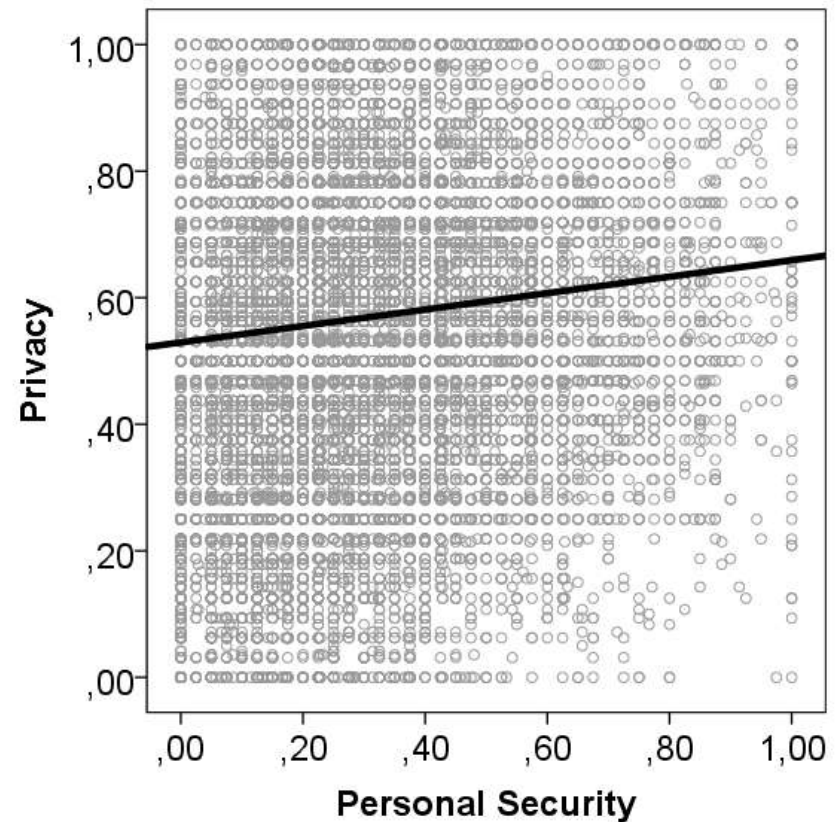
- Goal: Explore if people trade privacy for security (or vice versa) – attitudes level
- Statistical analysis to help derive “constructs” where answers in one question are good predictors for others
- In our case case, combine questions
  - QC3 (8 items on general security worries),
  - QC4 (8 items on personal security worries) and
  - QD1 (8 items on importance of privacy)

➔ We use the three constructs for analysis

# No/Weak correlation between security and privacy attitudes

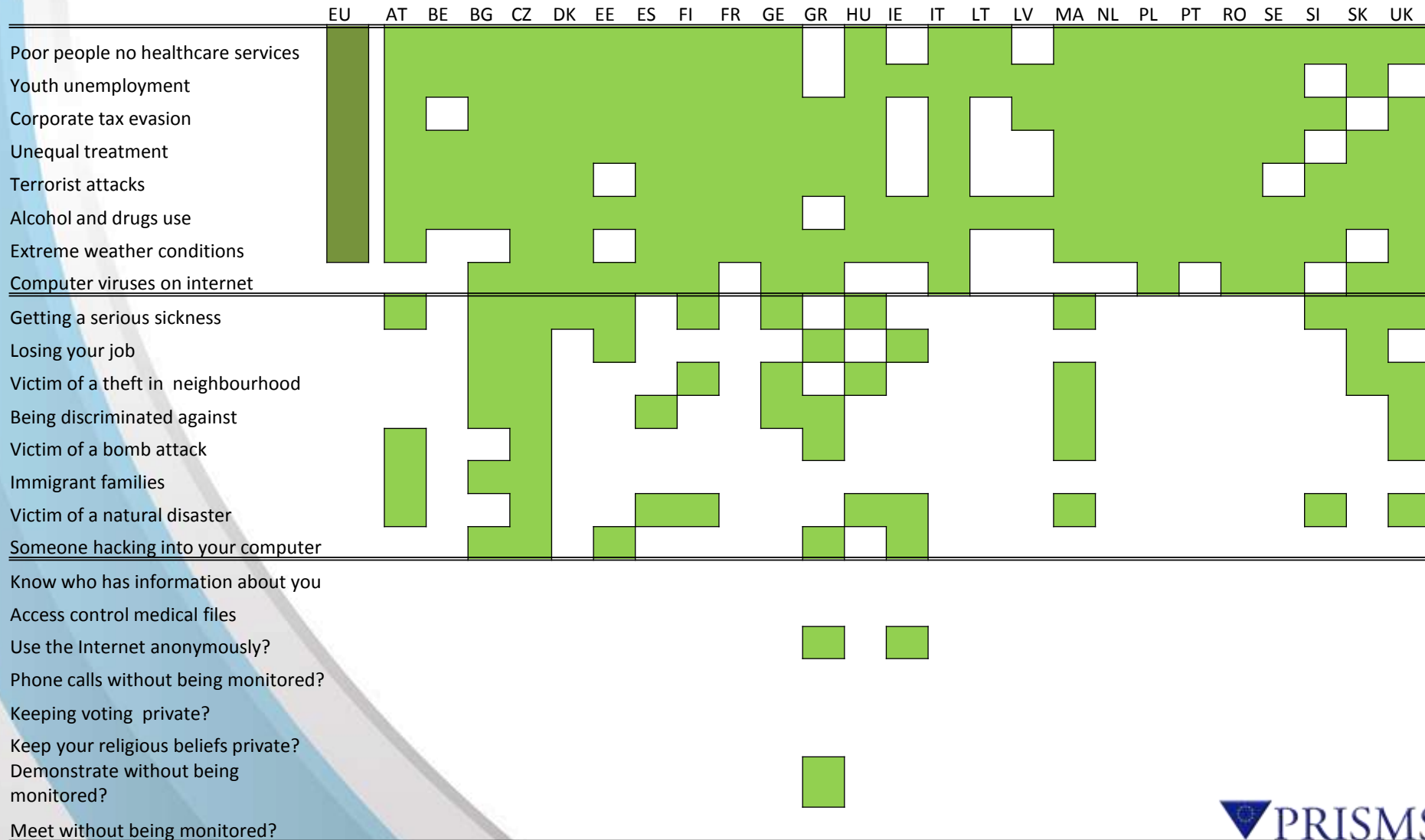


$R^2 = 0.012$



$R^2 = 0.023$

# Construct „General Security“



# Construct „Personal Privacy“

