

# SEM 3

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## 0.1 Itembatterien

### Islamophobie:

- mm01: ISLAMAUSUEBUNG IN BRD BESCHRAENKEN
  - -10 Befragter gehört einer islamischen Religionsgemeinschaft an (Code 1 in rd03)
  - -9
  - 1 Stimme überhaupt nicht zu
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7 Stimme voll und ganz zu
- mm02: ISLAM PASST IN DIE DEUTSCHE GESELLSCHAFT
- mm03: ANWESENHEIT VON MUSLIMEN BRINGT KONFLIKT
- mm04: STAAT SOLLTE ISLAM. GRUPPEN BEOBACHTEN
- mm05: MUSLIMISCHER BUERGERMEISTER IN ORDNUNG
- mm06: UNTER MUSLIMEN SIND VIELE REL. FANATIKER

### Nationalbewusstsein:

- mn11: DEUTSCH SEIN: DEUTSCHE STAATSBUERGERSCH.
- mn12: DEUTSCH SEIN: CHRISTL.RELIGION ZUGEHOER.
- mn13: DEUTSCH SEIN: BEKENNTNIS ZUR DEMOKRATIE
- mn14: DEUTSCH SEIN: VIELE DEUTSCHE BEKANNT
- mn15: DEUTSCH SEIN: ALTE STAATSANGEH.AUFGEBEN
- mn16: DEUTSCH SEIN: VERBUNDENHEIT ZU DEUTSCHL.
- mn17: DEUTSCH SEIN: ALTE GEBRAEUCHE ABLEGEN
- mn18: DEUTSCH SEIN: GUT DEUTSCH SPRECHEN
- mn19: DEUTSCH SEIN: WESTLICHE WERTE TEILEN
- mn20: DEUTSCH SEIN: MIND. 1 ELTERNTEIL DEUTSCH
- mn21: DEUTSCH SEIN: IN DEUTSCHLAND GEBOREN

### Sozio-Ökonomische Variablen

- sex: GESCHLECHT (Int.: Geschlecht der befragten Person ohne Befragen eintragen!)
  - 1 Männlich
  - 2 Weiblich
- age: ALTER: metrisch
- agec: ALTER: KATEGORISIERT 6
  - 18 - 29 Jahre
  - 30 - 44 Jahre
  - 45 - 59 Jahre
  - 60 - 74 Jahre
  - 75 - 89 Jahre
  - Über 89 Jahre
- isced97: BEFR.: ISCED 1997 - 6 STUFEN: International Standard Classification of Education (ISCED) 1997, 6 Stufen

1. Level - Primary education or first stage of basic education
  2. Level - Lower secondary or second stage of basic education
  3. Level - (Upper) secondary education
  4. Level - Post-secondary non-tertiary education
  5. Level - First stage of tertiary education
  6. Level - Second stage of tertiary education
- Allgemeiner Bildungsabschluss?

# 1 MICE

MICE can handle both MAR and Missing Not at Random (MNAR) (p. 15).

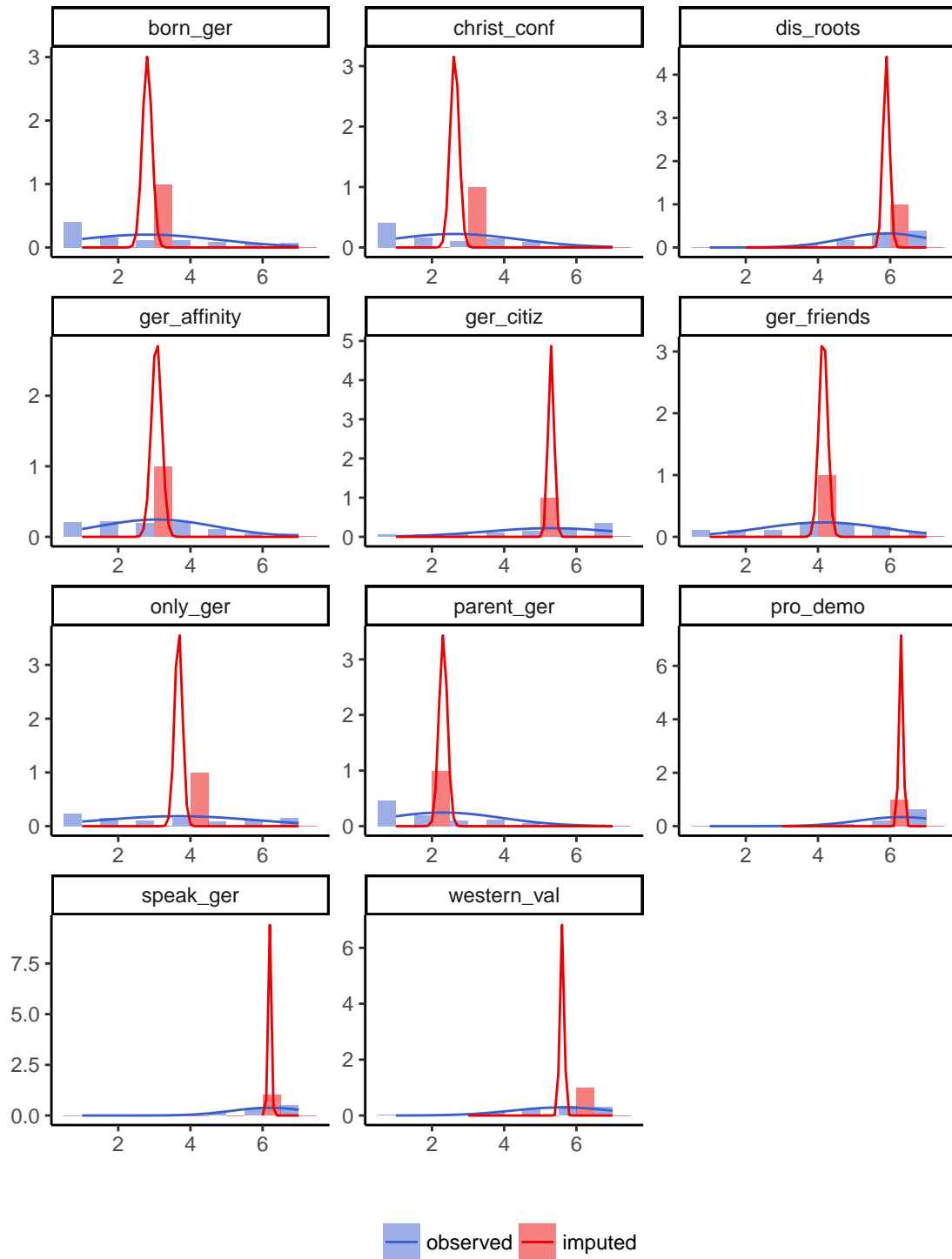
## Options for method:

- `pmm` Predictive mean matching (any)
- `norm` Bayesian linear regression (numeric)
- `norm.nob` Linear regression ignoring model error (numeric)
- `norm.boot` Linear regression using bootstrap (numeric)
- `norm.predict` Linear regression, predicted values (numeric)
- `mean` Unconditional mean imputation (numeric)
- `2l.norm` Two-level normal imputation (numeric)
- `2l.pan` Two-level normal imputation using pan (numeric)
- `2lonly.mean` Imputation at level-2 of the class mean (numeric)
- `2lonly.norm` Imputation at level-2 by Bayesian linear regression (numeric)
- `2lonly.pmm` Imputation at level-2 by Predictive mean matching (any)
- `quadratic` Imputation of quadratic terms (numeric)
- `logreg` Logistic regression (factor, 2 levels)
- `logreg.boot` Logistic regression with bootstrap
- `polyreg` Polytomous logistic regression (factor,  $\geq 2$  levels)
- `polr` Proportional odds model (ordered,  $\geq 2$  levels)
- `lda` Linear discriminant analysis (factor,  $\geq 2$  categories)
- `cart` Classification and regression trees (any)
- `rf` Random forest imputations (any)
- `ri` Random indicator method for nonignorable data (numeric)
- `sample` Random sample from the observed values (any)
- `fastpmm` Experimental: Fast predictive mean matching using C++ (any)

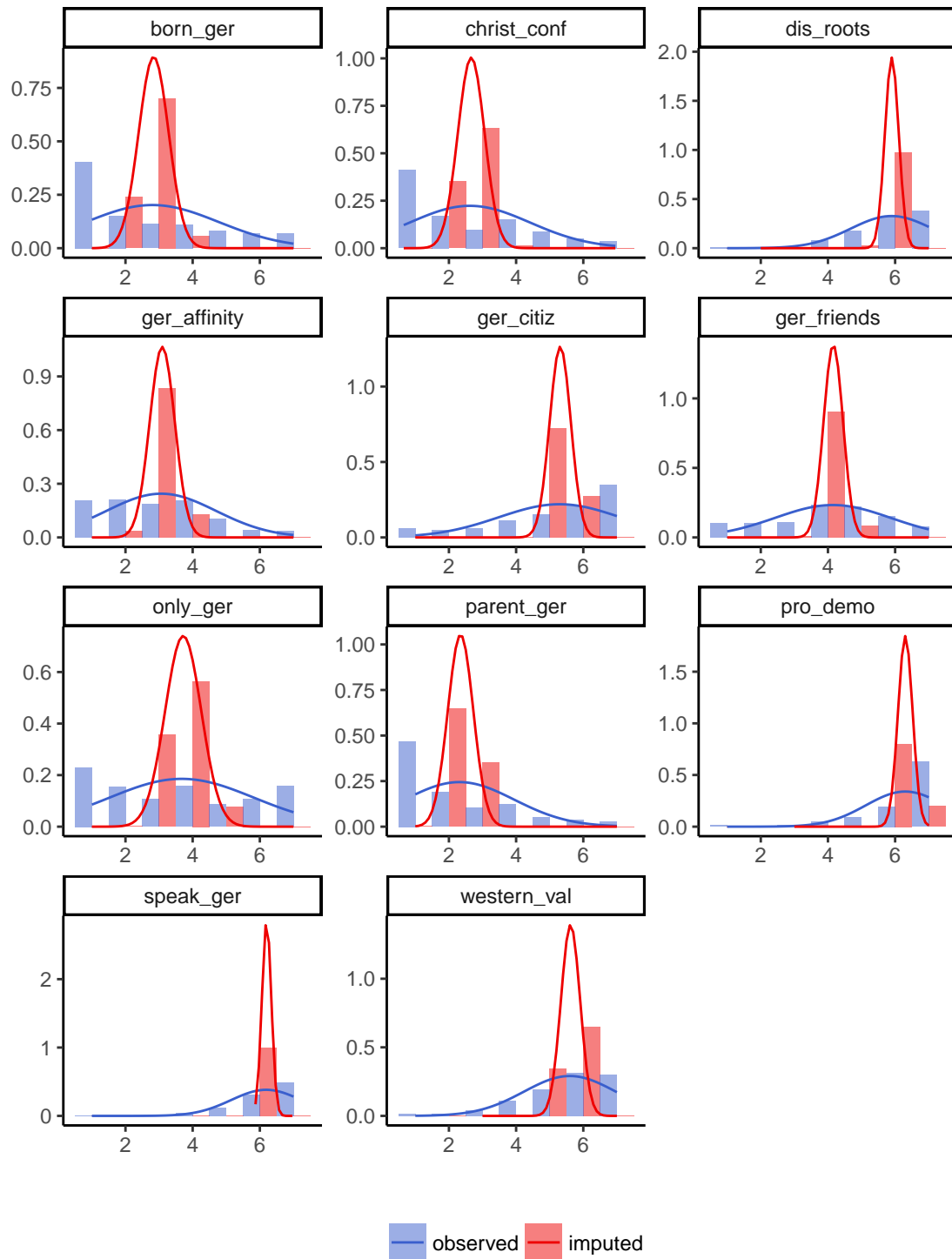
The functions `mice.impute.norm()` and `mice.impute.norm.nob()` impute according to a linear imputation model, and are fast and efficient if the model residuals are close to normal. The second model ignores any sampling uncertainty of the imputation model, so it is only appropriate for very large samples

## 1.1 Häufigkeitsverteilungen für Nationalbewusstsein

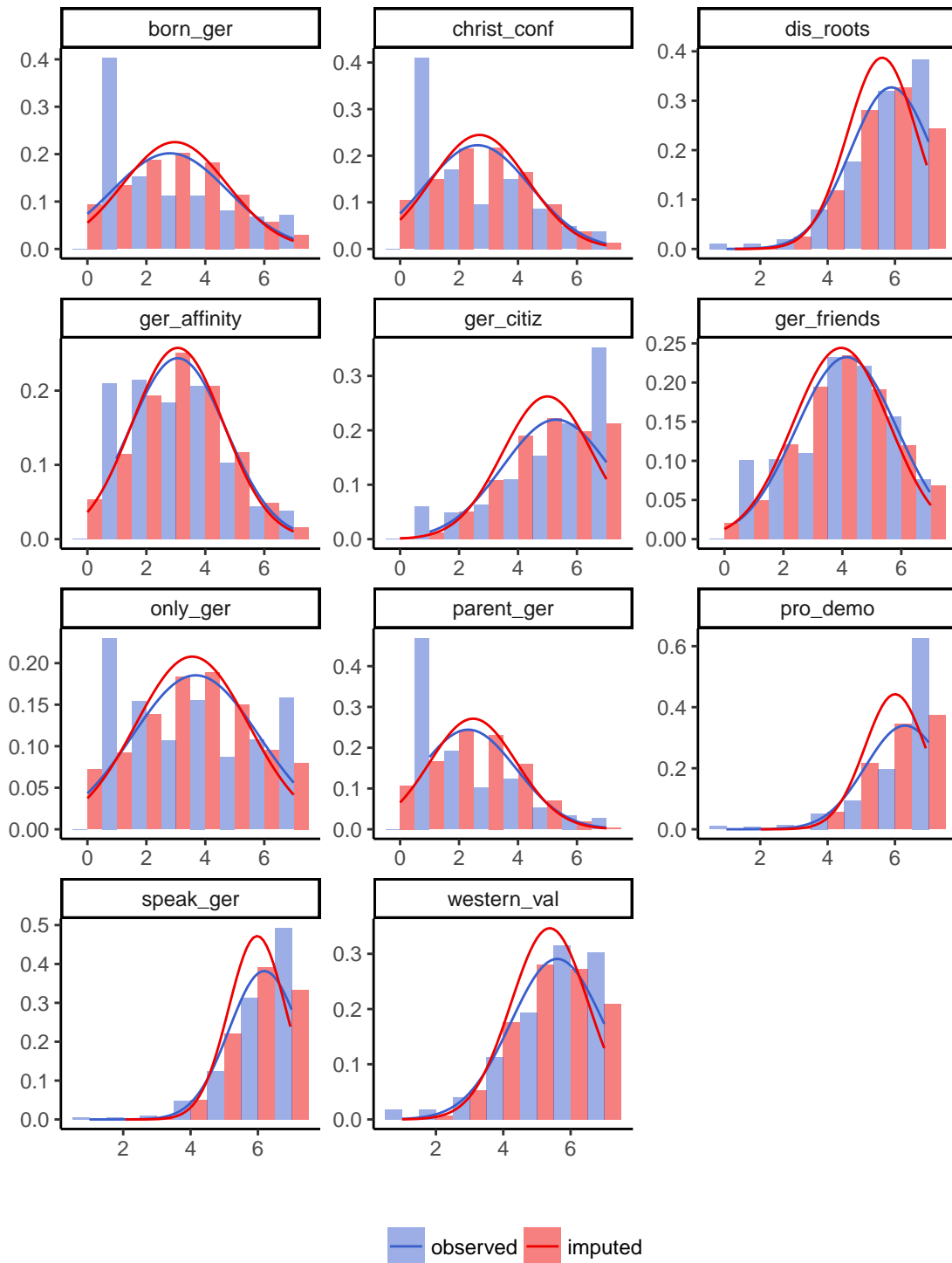
### Item-Batterie Nationalbewusstsein: Unconditional mean imputation



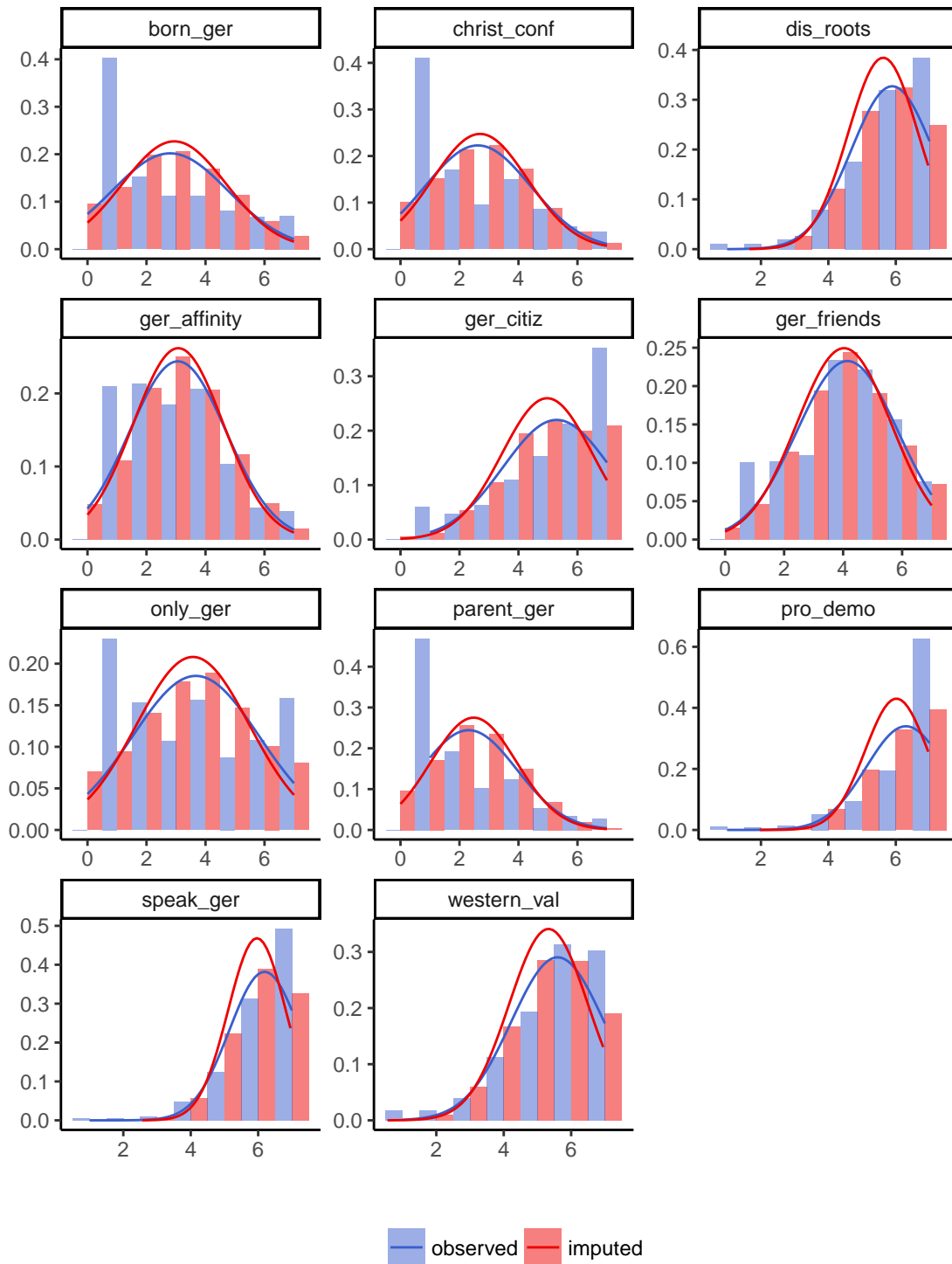
# Item-Batterie Nationalbewusstsein: Linear regression, predicted val



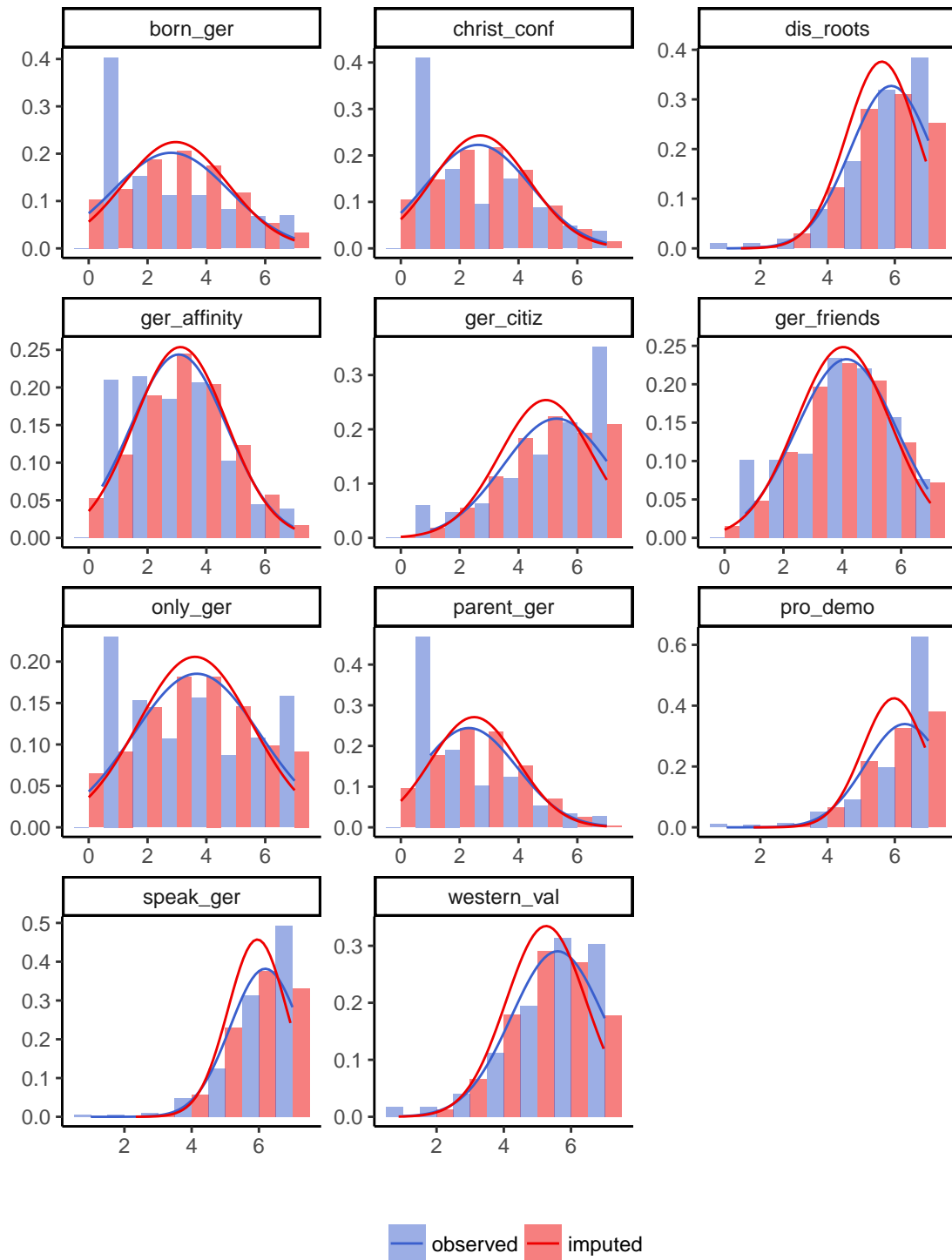
# Item-Batterie Nationalbewusstsein: Linear regression using bootstra



# Item-Batterie Nationalbewusstsein: Linear regression ignoring mode



## Item-Batterie Nationalbewusstsein: Bayesian linear regression



## Item-Batterie Nationalbewusstsein: Predictive mean matching

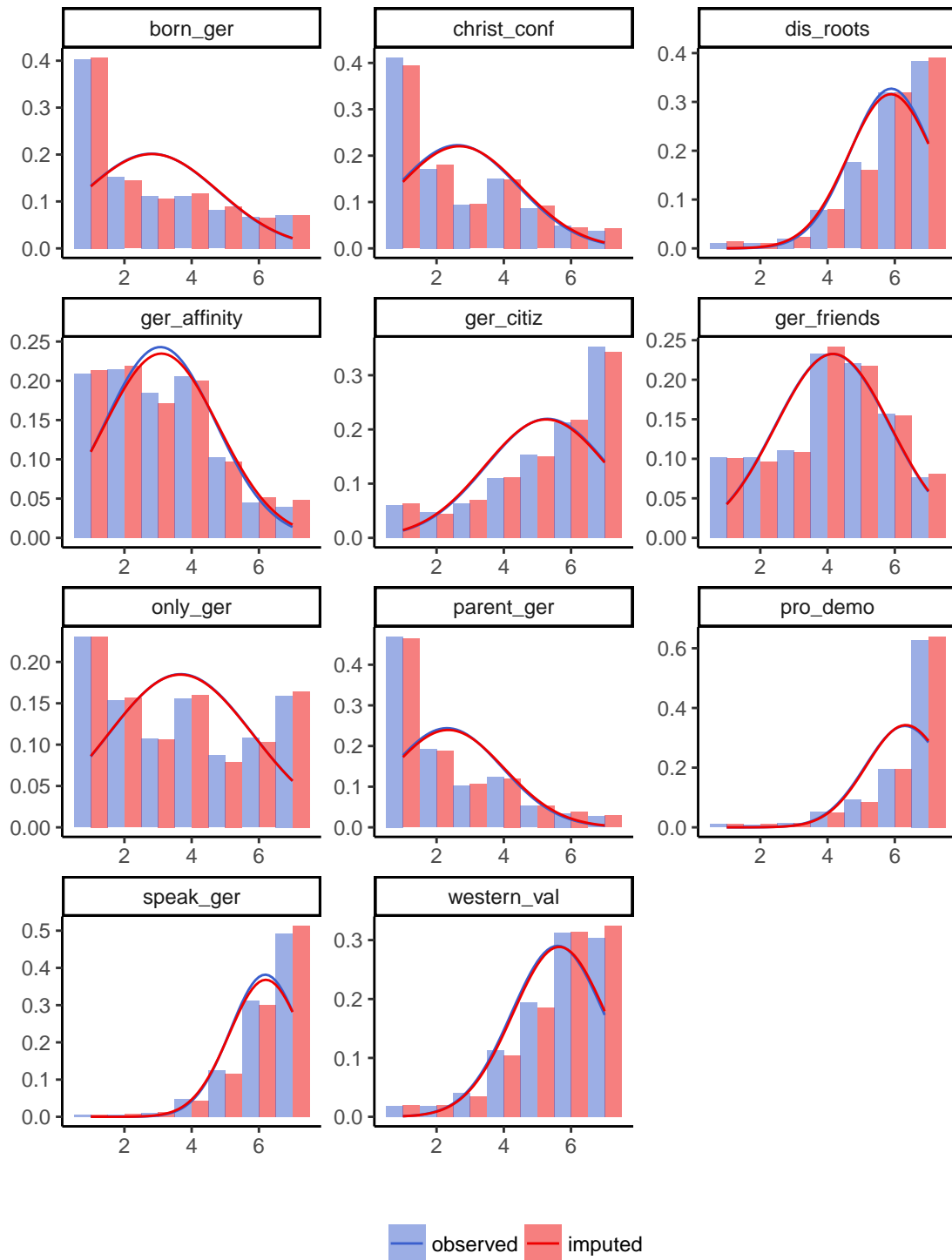




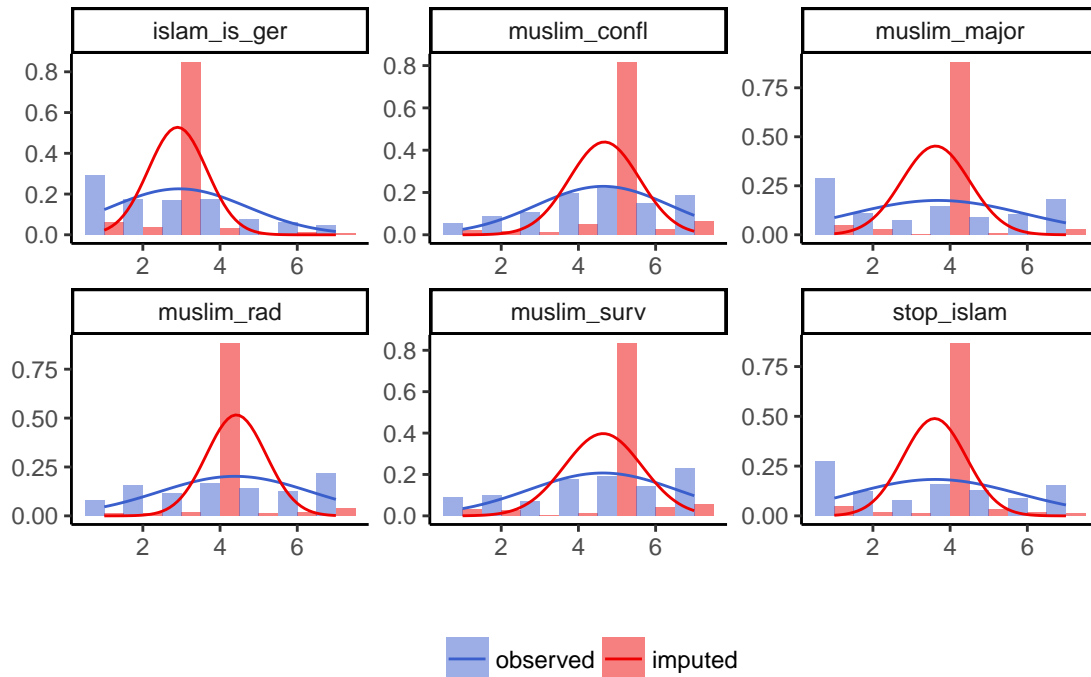
Table 1: Alle

vars	method	mean	median	sd	var
born_ger	Listwise deletion	2.79	2	1.97	3.88
	Unconditional mean imputation	2.80	2	1.97	3.87
	Linear regression, predicted values	2.80	2	1.97	3.88
	Predictive mean matching	2.85	2	1.98	3.93
christ_conf	Listwise deletion	2.61	2	1.77	3.14
	Unconditional mean imputation	2.62	2	1.78	3.17
	Linear regression, predicted values	2.63	2	1.79	3.19
	Predictive mean matching	2.68	2	1.81	3.28
dis_roots	Listwise deletion	5.90	6	1.22	1.48
	Unconditional mean imputation	5.89	6	1.22	1.48
	Linear regression, predicted values	5.89	6	1.22	1.48
	Predictive mean matching	5.94	6	1.21	1.46
ger_affinity	Listwise deletion	3.06	3	1.63	2.65
	Unconditional mean imputation	3.06	3	1.63	2.65
	Linear regression, predicted values	3.07	3	1.63	2.66
	Predictive mean matching	3.10	3	1.64	2.70
ger_citiz	Listwise deletion	5.31	6	1.81	3.26
	Unconditional mean imputation	5.30	6	1.81	3.27
	Linear regression, predicted values	5.29	6	1.81	3.27
	Predictive mean matching	5.37	6	1.79	3.20
ger_friends	Listwise deletion	4.15	4	1.71	2.92
	Unconditional mean imputation	4.15	4	1.71	2.92
	Linear regression, predicted values	4.15	4	1.71	2.92
	Predictive mean matching	4.17	4	1.69	2.85
only_ger	Listwise deletion	3.67	4	2.15	4.64
	Unconditional mean imputation	3.67	4	2.14	4.59
	Linear regression, predicted values	3.67	4	2.14	4.59
	Predictive mean matching	3.71	4	2.18	4.76
parent_ger	Listwise deletion	2.30	2	1.62	2.62
	Unconditional mean imputation	2.31	2	1.62	2.63
	Linear regression, predicted values	2.31	2	1.63	2.65
	Predictive mean matching	2.34	2	1.67	2.79
pro_demo	Listwise deletion	6.30	7	1.18	1.39
	Unconditional mean imputation	6.30	7	1.17	1.37
	Linear regression, predicted values	6.30	7	1.17	1.37
	Predictive mean matching	6.35	7	1.13	1.28
speak_ger	Listwise deletion	6.19	6	1.04	1.09
	Unconditional mean imputation	6.19	6	1.04	1.08
	Linear regression, predicted values	6.19	6	1.04	1.08
	Predictive mean matching	6.21	6	0.99	0.99
western_val	Listwise deletion	5.59	6	1.38	1.90
	Unconditional mean imputation	5.60	6	1.37	1.86
	Linear regression, predicted values	5.60	6	1.37	1.87
	Predictive mean matching	5.66	6	1.35	1.82

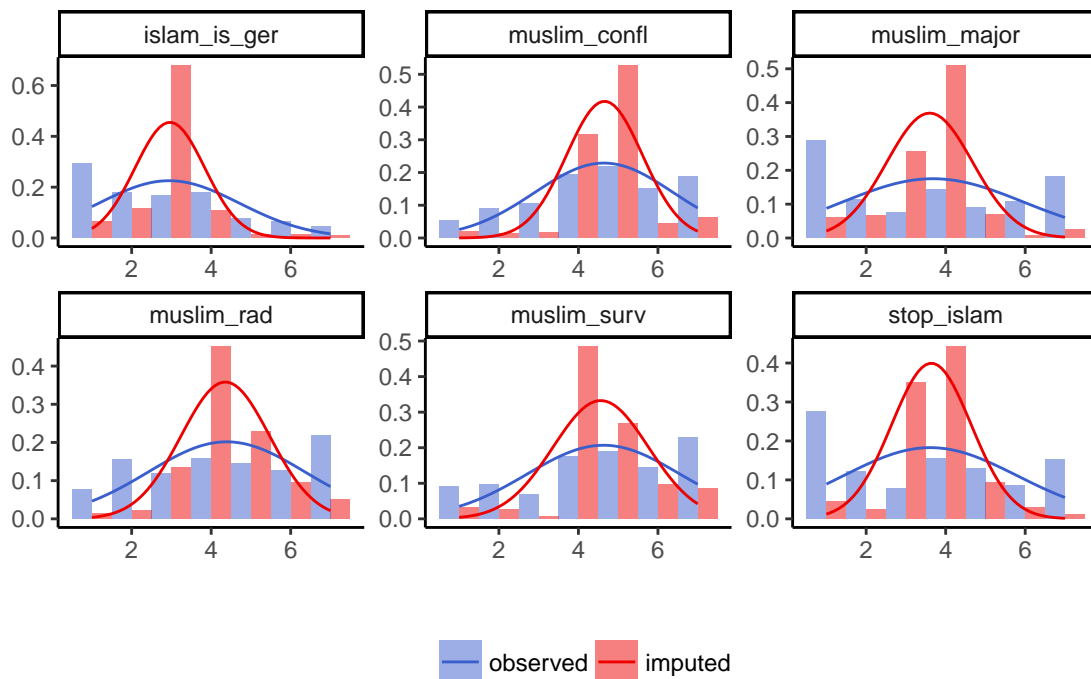
## 1.2 Deskriptive Statistik für unterschiedlich imputierte Variablen Nationalbewusstsein

### 1.3 Häufigkeitsverteilungen für Islamophobie

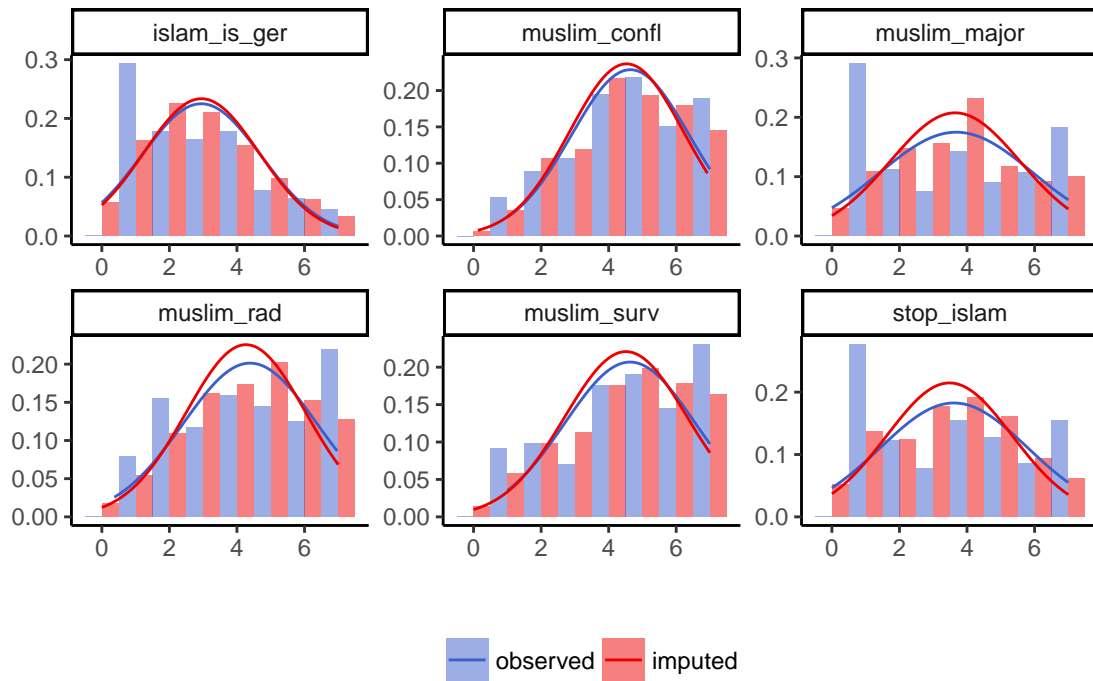
Item-Batterie Islamophobie: Unconditional mean imputation



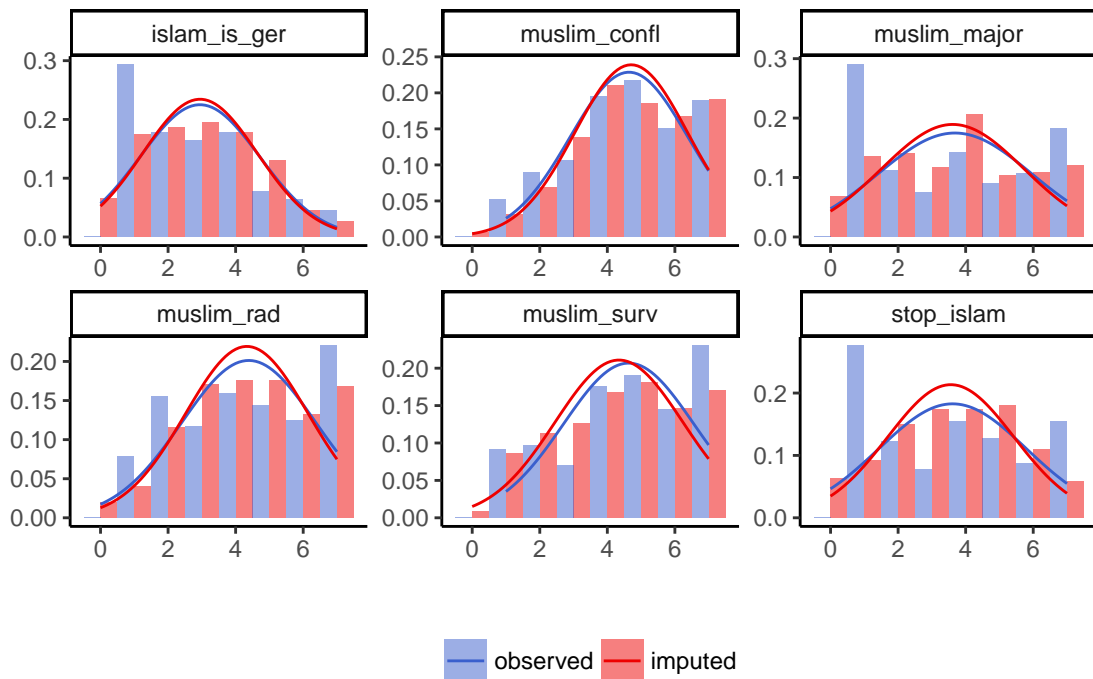
Item-Batterie Islamophobie: Linear regression, predicted values



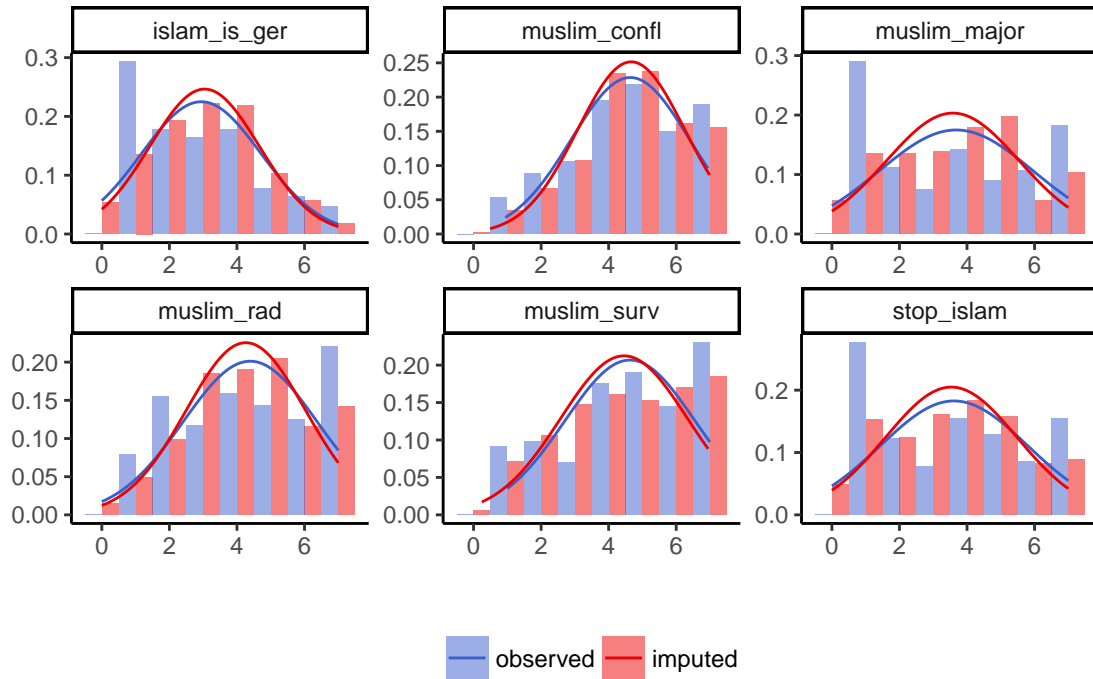
### Item-Batterie Islamophobie: Linear regression using bootstrap



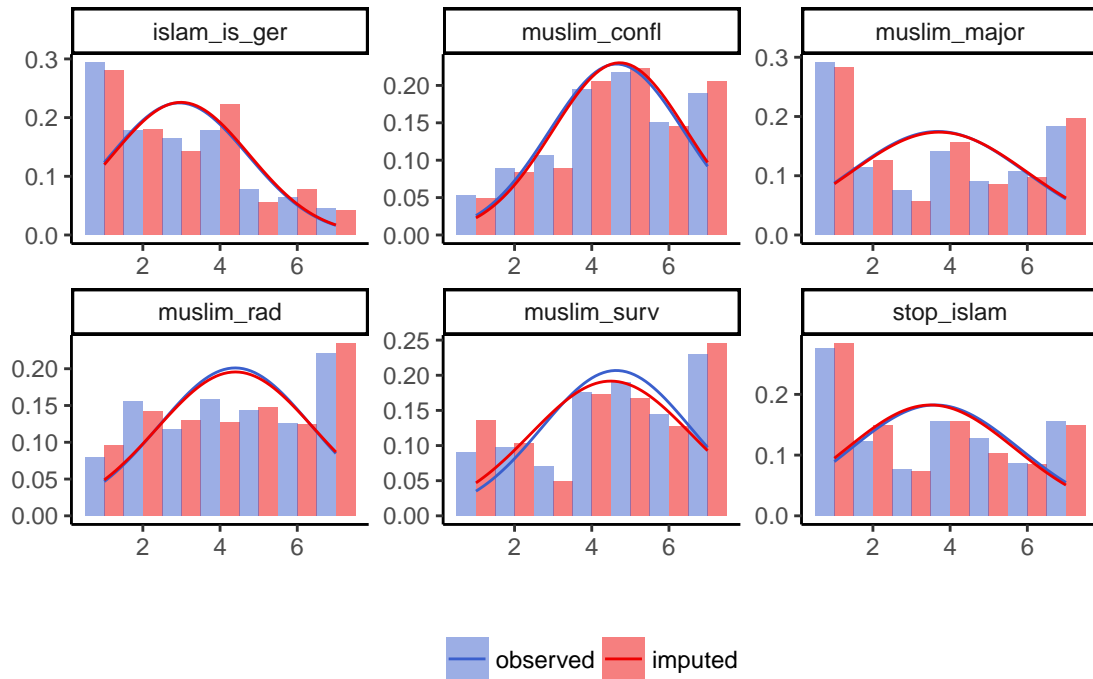
### Item-Batterie Islamophobie: Linear regression ignoring model error



### Item–Batterie Islamophobie: Bayesian linear regression



### Item–Batterie Islamophobie: Predictive mean matching



The function `mice.impute.pmm()` implements predictive mean matching (Little 1988), a general purpose semi-parametric imputation method. Its main virtues are that imputations are restricted to the observed values and that it can preserve non-linear relations even if the structural part of the imputation model is wrong. A disadvantage is that it may fail to produce enough between-imputation variability if the number of predictors is small.

## 1.4 Deskriptive Statistik für unterschiedlich imputierte Variablen Islamophobie

Table 2: Alle

vars	method	mean	median	sd	var
islam_is_ger	Listwise deletion	2.94	3	1.77	3.14
	Unconditional mean imputation	2.94	3	1.76	3.10
	Linear regression, predicted values	2.94	3	1.75	3.06
	Predictive mean matching	2.95	3	1.77	3.14
muslim_confl	Listwise deletion	4.65	5	1.74	3.03
	Unconditional mean imputation	4.64	5	1.74	3.02
	Linear regression, predicted values	4.64	5	1.72	2.97
	Predictive mean matching	4.64	5	1.74	3.04
muslim_major	Listwise deletion	3.68	4	2.28	5.21
	Unconditional mean imputation	3.68	4	2.26	5.13
	Linear regression, predicted values	3.68	4	2.25	5.06
	Predictive mean matching	3.69	4	2.28	5.21
muslim_rad	Listwise deletion	4.39	4	1.98	3.92
	Unconditional mean imputation	4.39	4.39	1.96	3.85
	Linear regression, predicted values	4.39	4.28	1.95	3.81
	Predictive mean matching	4.39	4	1.98	3.92
muslim_surv	Listwise deletion	4.63	5	1.92	3.70
	Unconditional mean imputation	4.63	5	1.92	3.69
	Linear regression, predicted values	4.63	5	1.91	3.64
	Predictive mean matching	4.64	5	1.93	3.74
stop_islam	Listwise deletion	3.61	4	2.18	4.77
	Unconditional mean imputation	3.61	4	2.17	4.71
	Linear regression, predicted values	3.61	4	2.15	4.64
	Predictive mean matching	3.61	4	2.18	4.77