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Citizens' global resource distribution preferences during COVID-19 and for future pandemics

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Methods:

Samples


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Samples

Cohort 1

- ✓ Online questionnaire study
- ✓ Summer 2021
- ✓ Recruitment: Respondi (Bilendi)
- ✓  
- ✓ Representative
- ✓ Quality checked
- ✓ **N = 2692**
($n_{\text{England}} = 1328$, $n_{\text{Germany}} = 1364$)

Cohort 2

- ✓ Online questionnaire study
- ✓ Spring 2024
- ✓ Recruitment: Bilendi (Respondi)
- ✓ 
- ✓ Representative
- ✓ Quality checked
- ✓ **N = $n_{\text{Germany}} = 1155$**

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Methods:

Measures

Global justice attitudes in pandemics

Global Resource Distribution Principles Scale (GRDP)

Until enough COVID-19 vaccine can be produced to supply the entire world,
I think it would be just if ...

1	Equality	<i>All countries equally (per capita)!</i>
2	Merit: Development	<i>Countries that developed the resource first!</i>
3	Merit: Production	<i>Countries that produced the resource first!</i>
4	Entitlement: Market	<i>Countries that pay more first!</i>
5	Need: Care	<i>Countries with worse treatment possibilities first!</i>
6	Need: Infections	<i>Countries with highest infection rates first!</i>
7	Need: Deaths	<i>Countries with highest death tolls first!</i>

2021

Separate ratings for
vaccines, tests and
ventilators

Global justice attitudes in pandemics

Global Resource Distribution Principles Scale (GRDP)

In a fictional future pandemic, until enough vaccine can be produced to supply the entire world, I think it would be just if ...

1	Equality	<i>All countries equally (per capita)!</i>
2	Merit: Development	<i>Countries that developed the resource first!</i>
3	Merit: Production	<i>Countries that produced the resource first!</i>
4	Entitlement: Market	<i>Countries that pay more first!</i>
5	Need: Care	<i>Countries with worse treatment possibilities first!</i>
6	Need: Infections	<i>Countries with highest infection rates first!</i>
7	Need: Deaths	<i>Countries with highest death tolls first!</i>
8	Benefit maximisation: Efficiency	<i>End the pandemic globally asap!</i>
9	Merit: Adherence	<i>Societies that adhere to containment measures first!</i>
10	Entitlement: "Value"	<i>Countries with more "valuable" citizens first!</i>

2024

Separate ratings for vaccines, tests and ventilators

Within-society justice attitudes

in “normal” times

Basic Social Justice Orientation Scale (BSJO) (Hülle et al., 2018)

Equality

e.g., “It is just if all people have the same living conditions”

Merit

e.g., “It is just if hard-working people earn more than others”

Entitlement

e.g., “It is fair if people on a higher level of society have better living conditions than those on the lower level”

Need

e.g., “A society is just if it takes care of those who are poor and in need”

Global justice attitudes

in “normal” times

Measure of justice beliefs about global inequality (JBGI) (Reese et al., 2014)

e.g., “Global inequality between people from developed and so-called developing countries is unjust.”

Measure of behavioral intentions toward global inequality (BIGI)

(Reese et al., 2012, 2014)

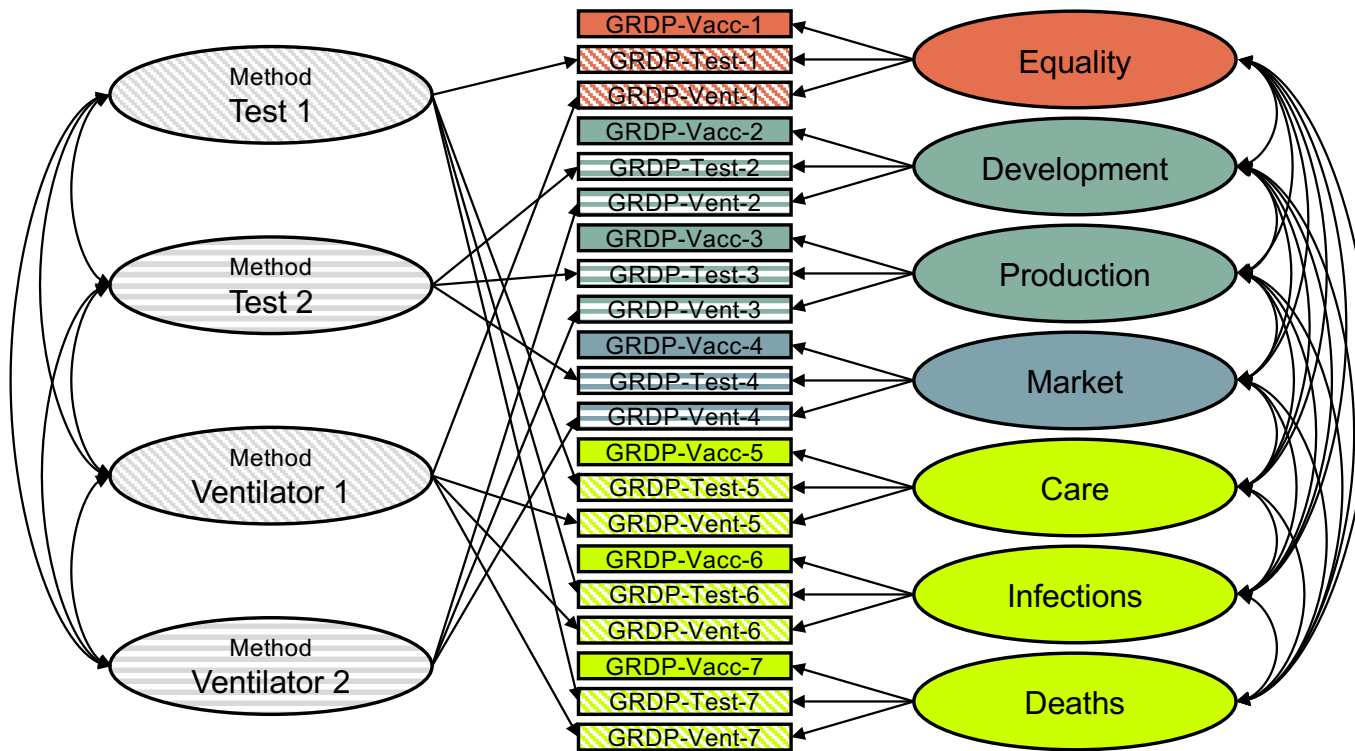
e.g., “I would reduce my standard of living if I could thereby contribute to decreasing global inequality.”

Methods:

GRDP

measurement models

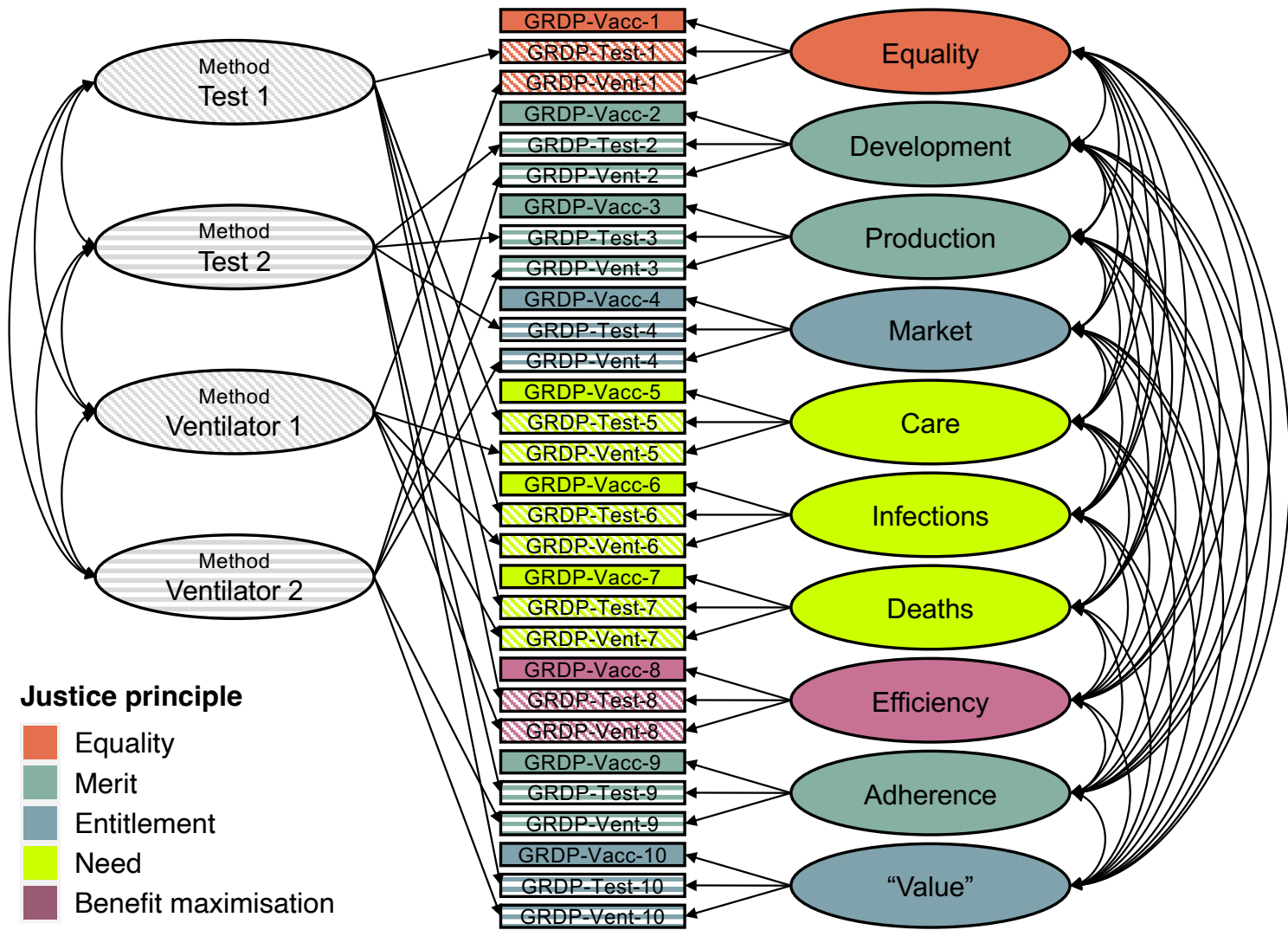
2021



Justice principle

- Equality
- Merit
- Entitlement
- Need
- Benefit maximisation

2024



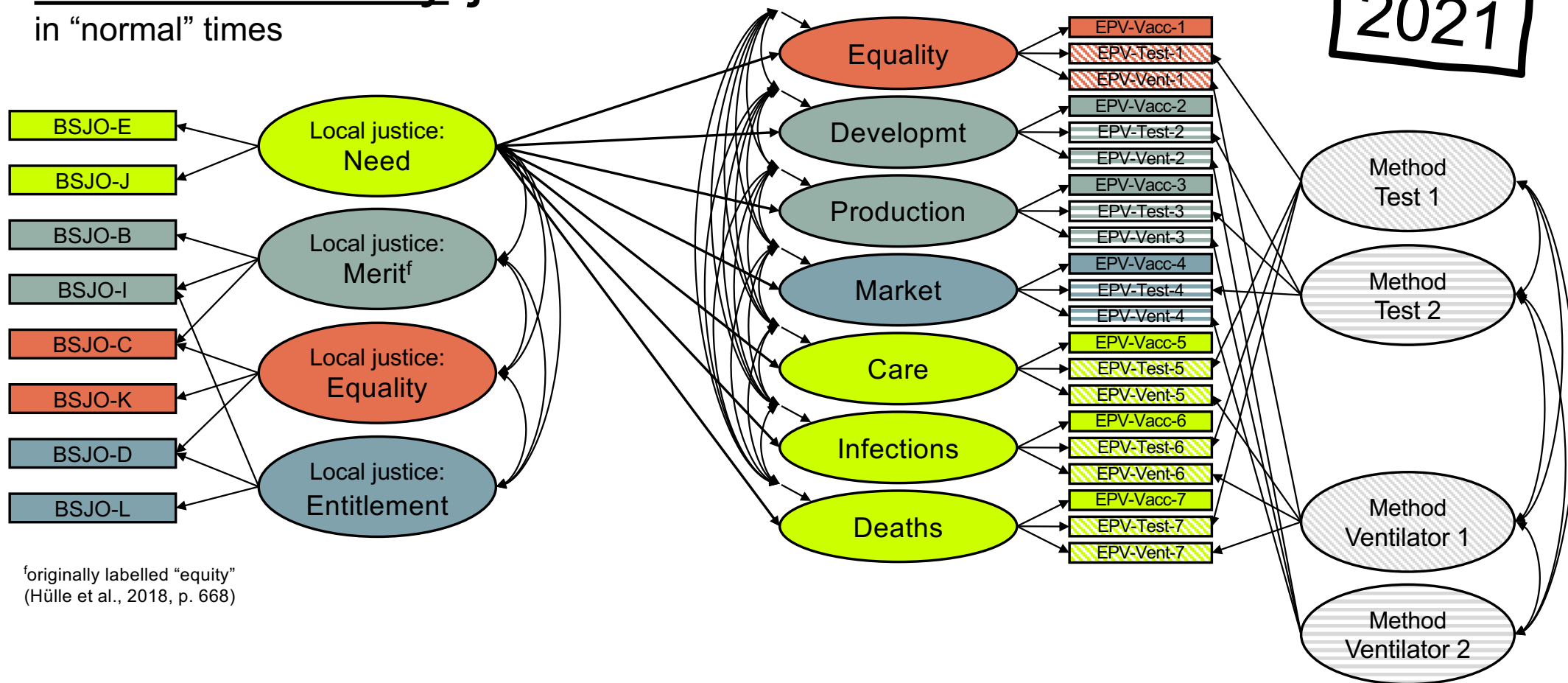
Methods:

Structural models

to predict GRDP scores

Within-society justice attitudes

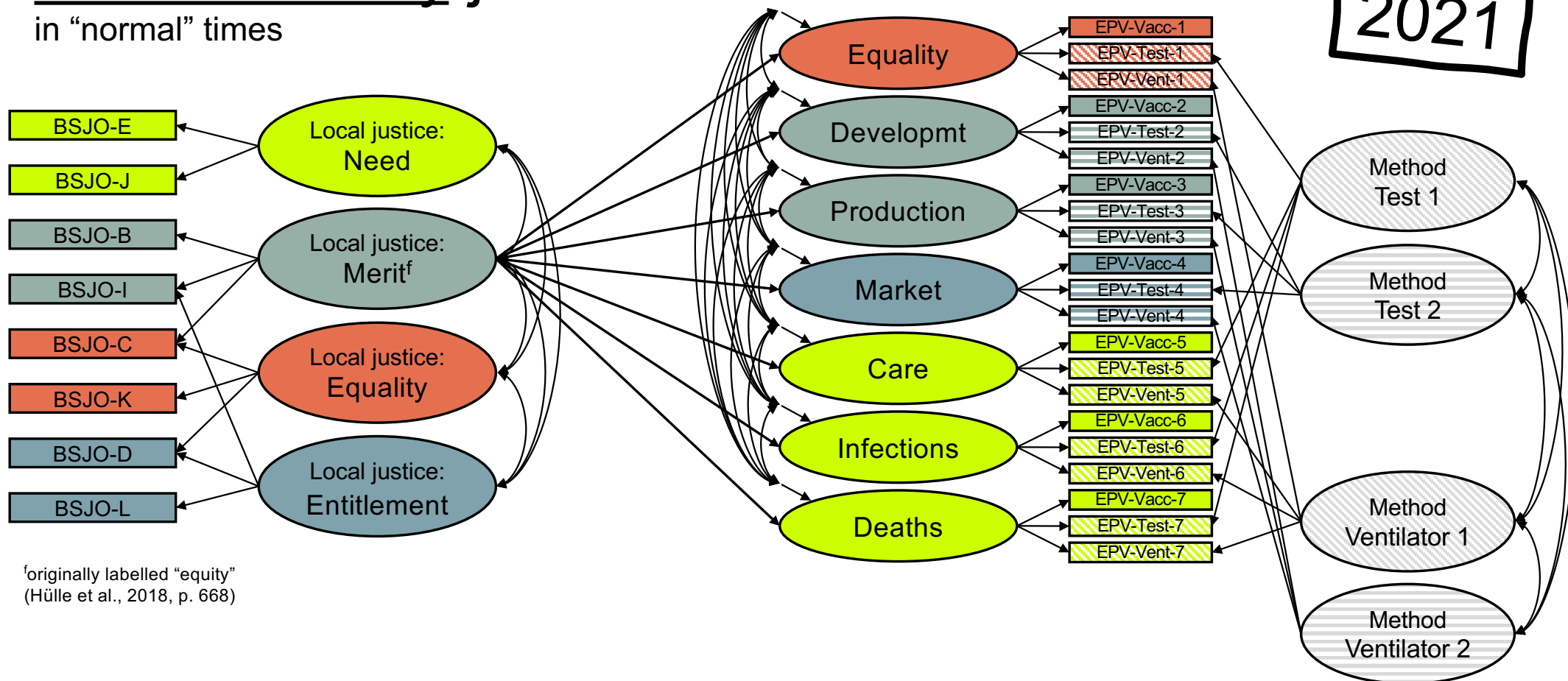
in “normal” times



originally labelled “equity”
(Hülle et al., 2018, p. 668)

Within-society justice attitudes

in “normal” times

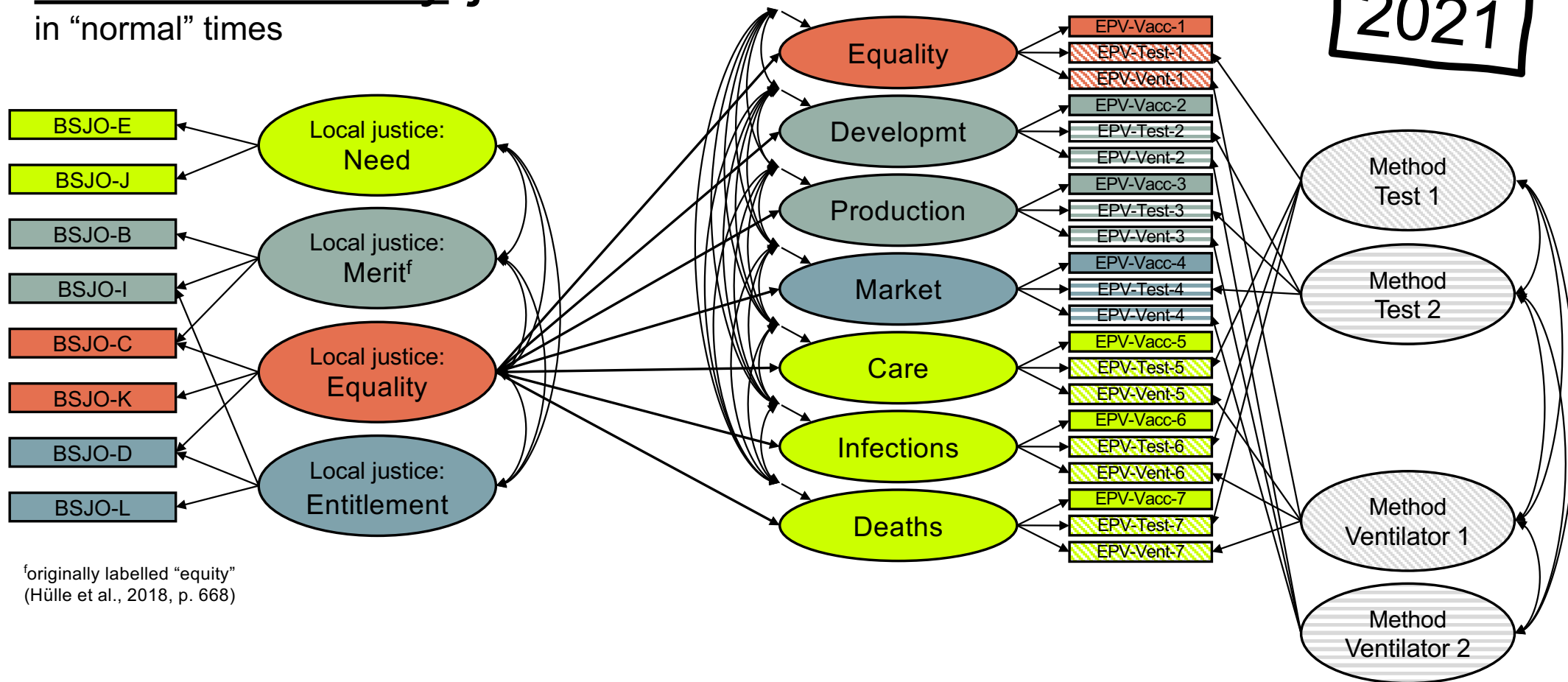


2021

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Within-society justice attitudes

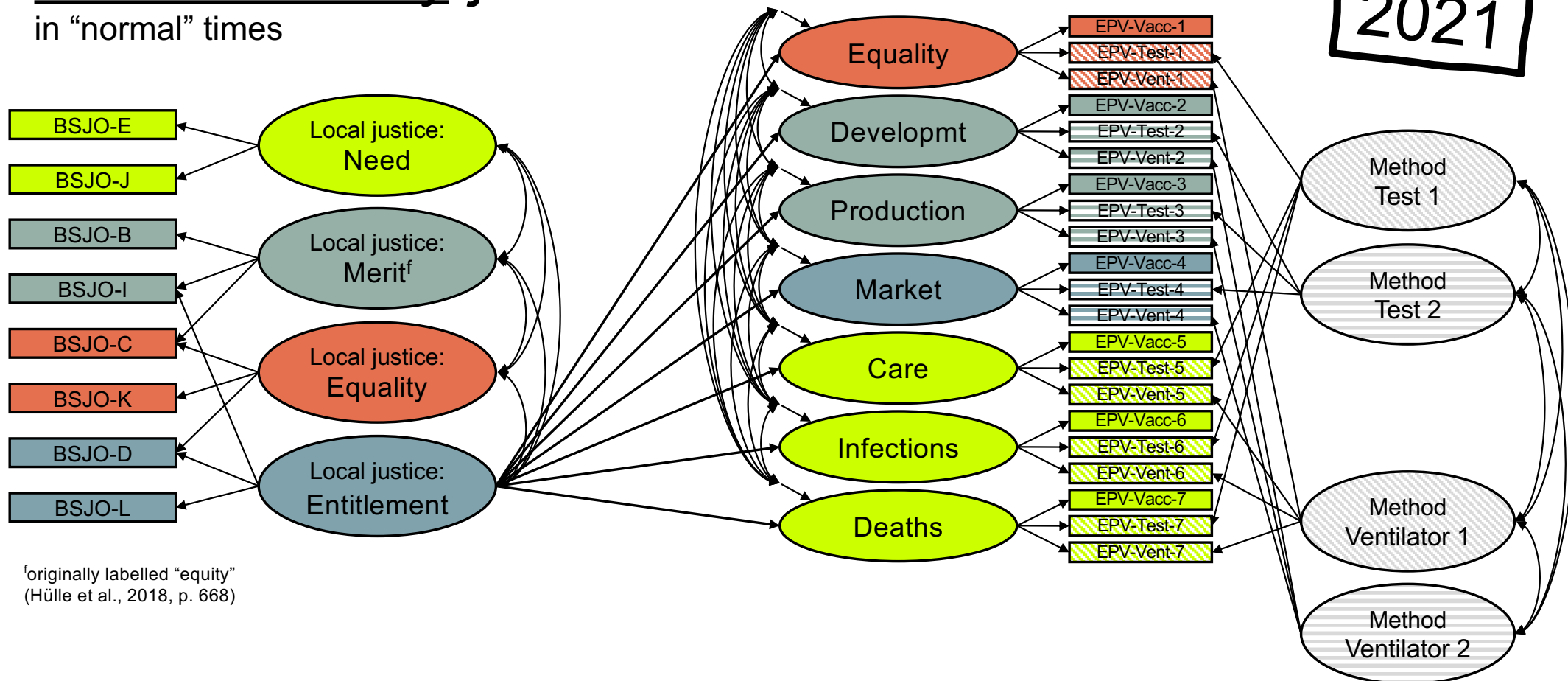
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Within-society justice attitudes

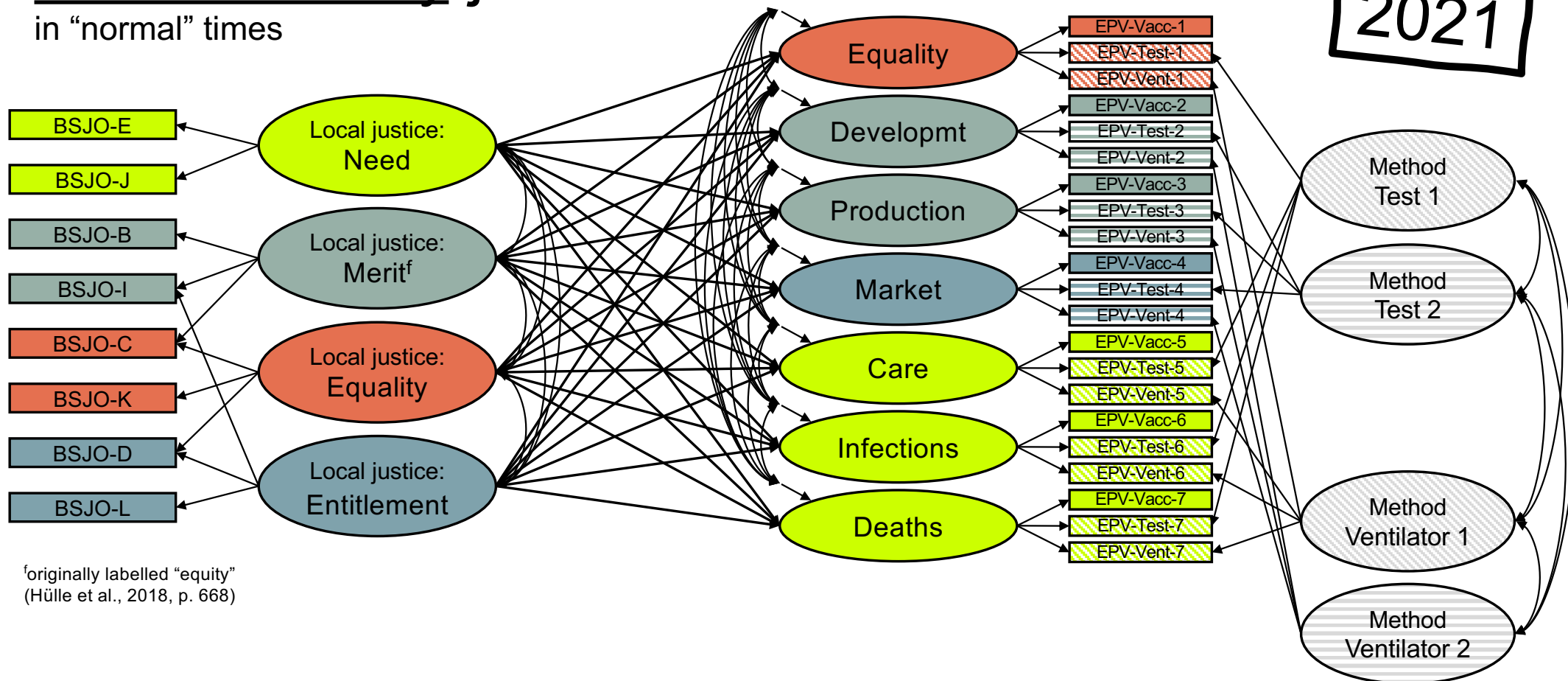
in “normal” times



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Within-society justice attitudes

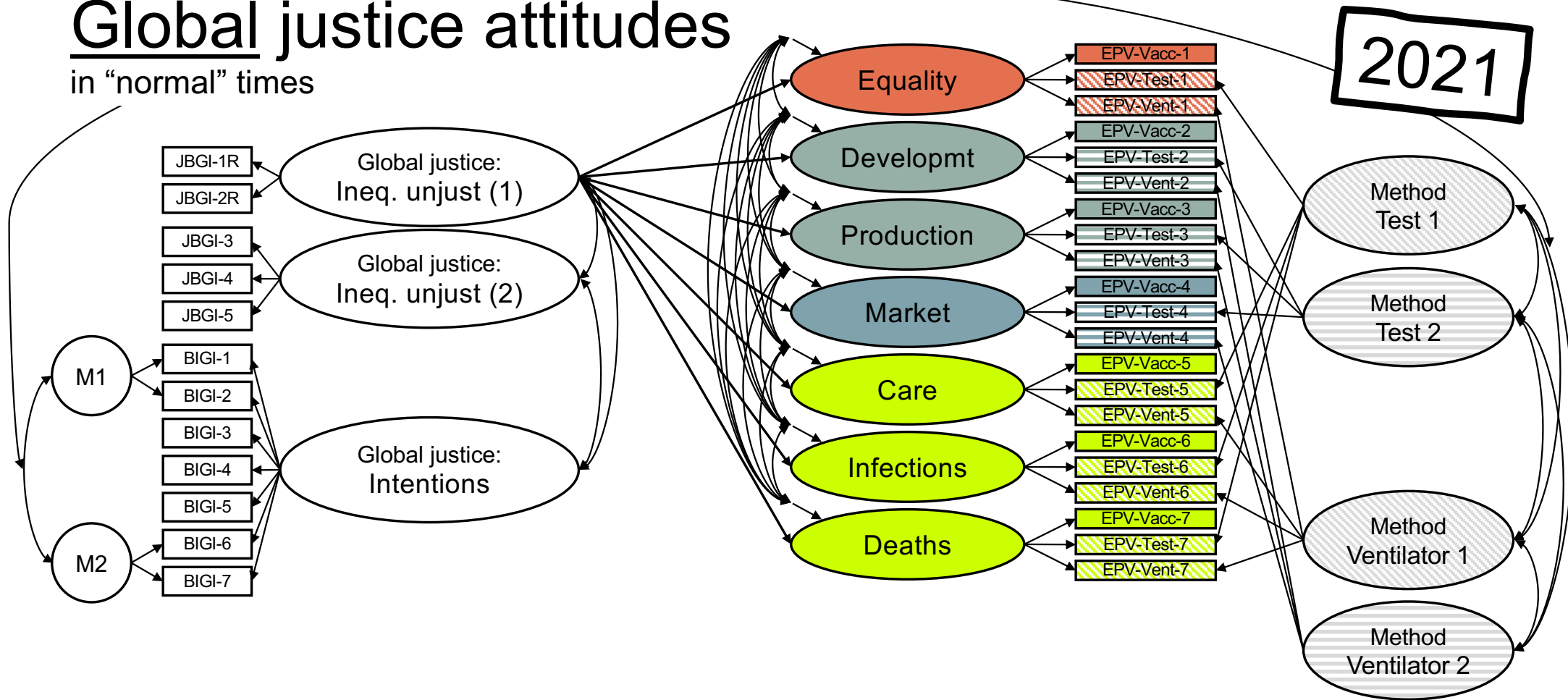
in “normal” times



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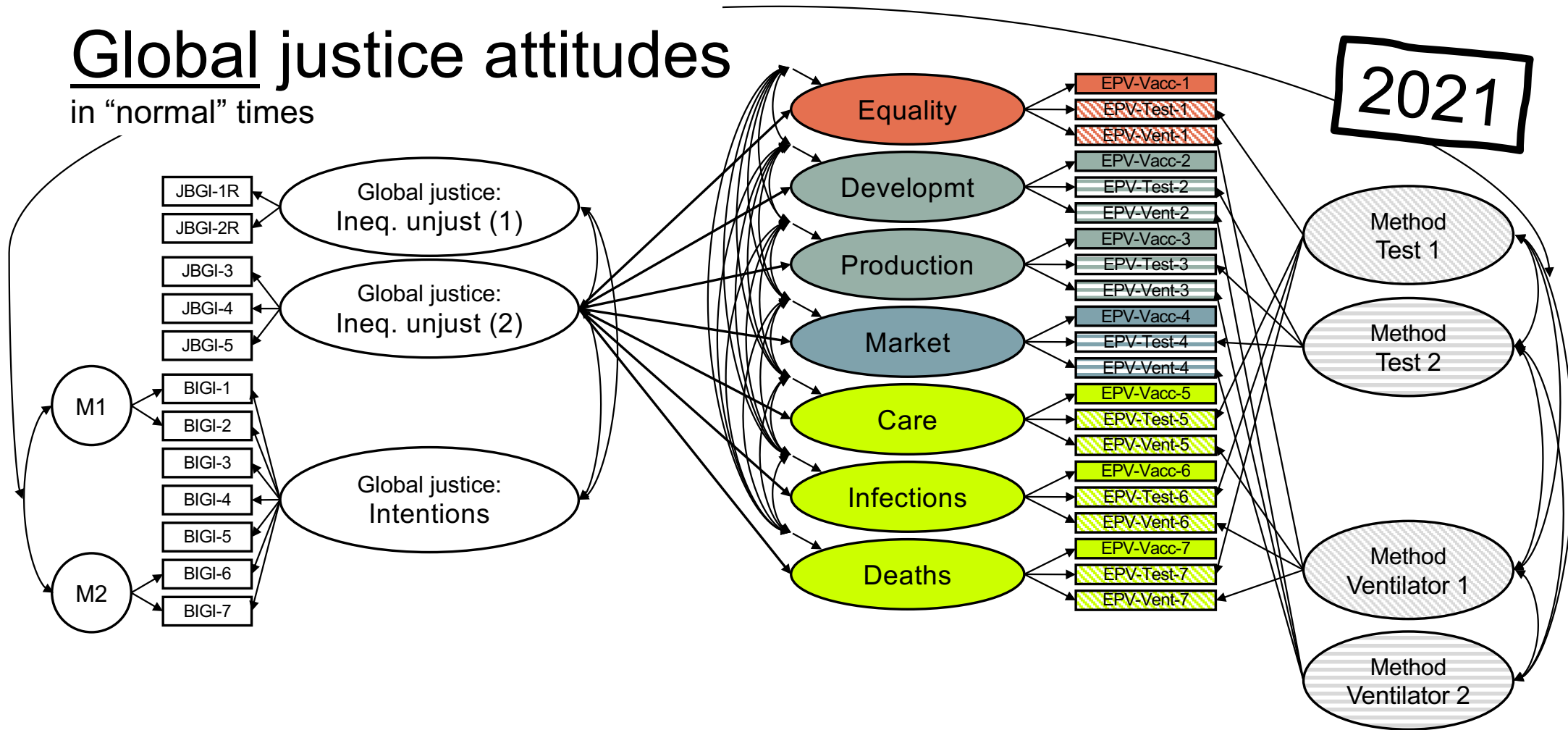
Global justice attitudes

in "normal" times



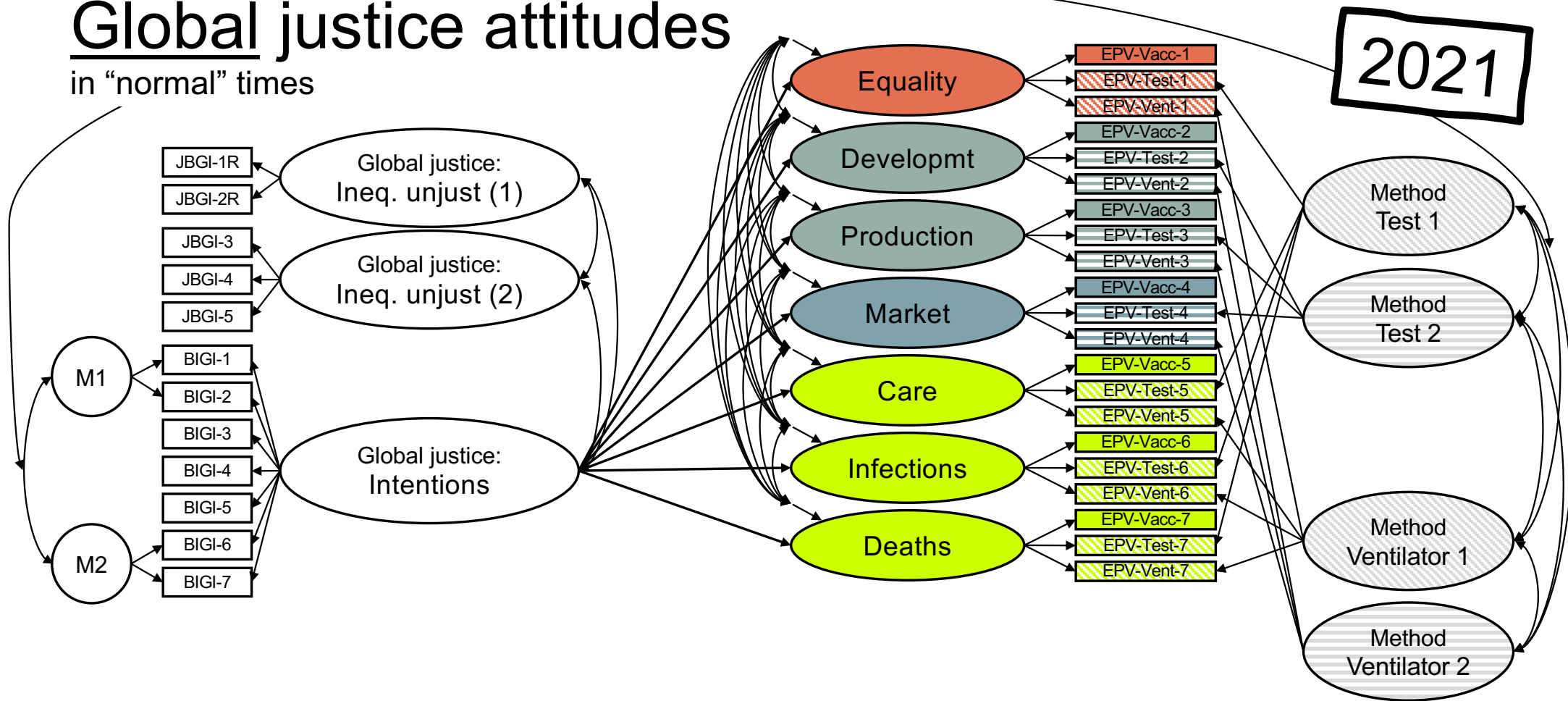
Global justice attitudes

in "normal" times



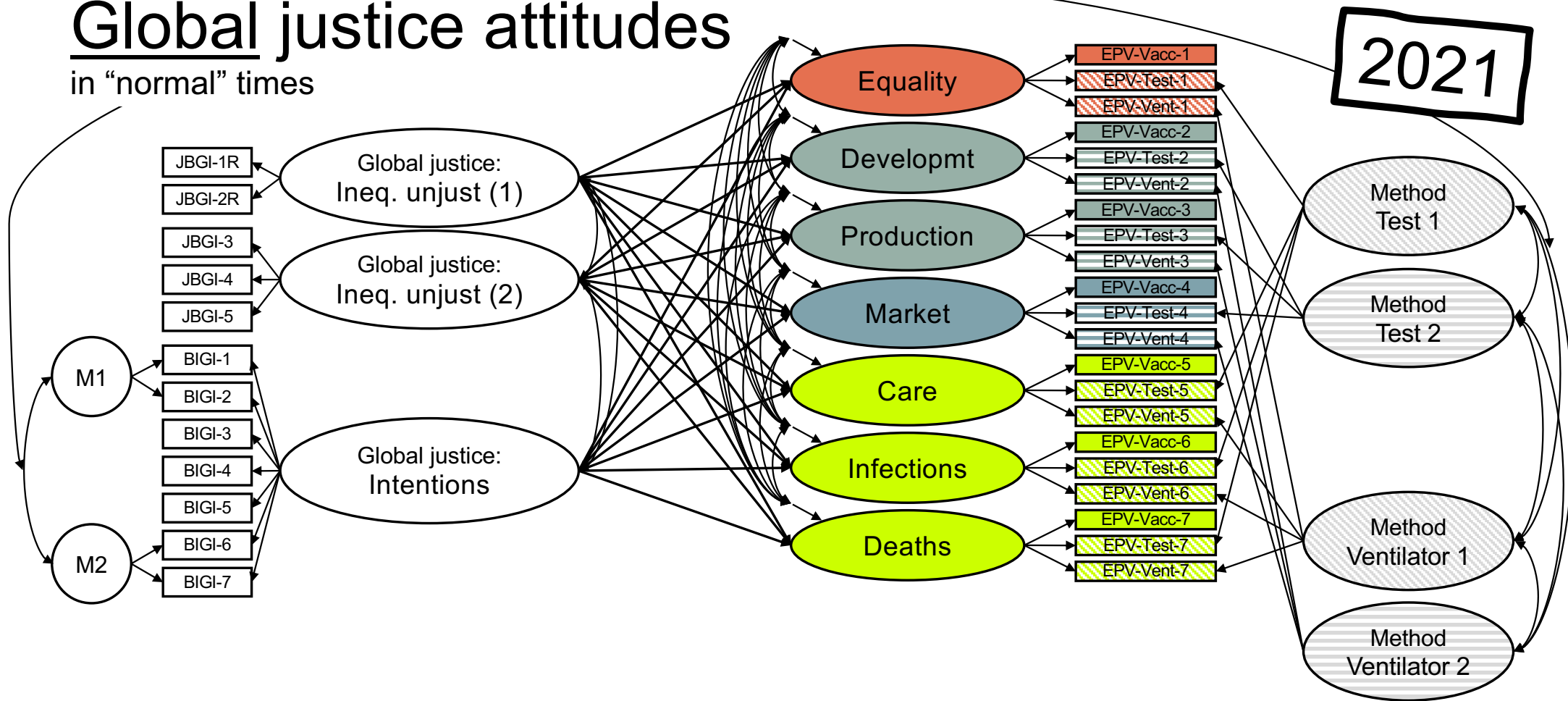
Global justice attitudes

in "normal" times



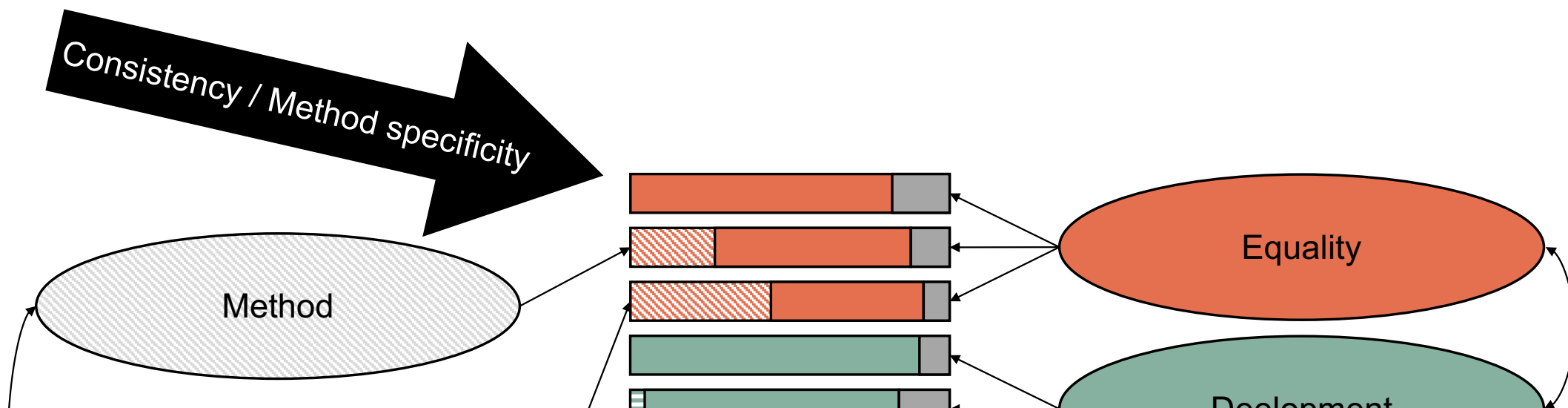
Global justice attitudes

in "normal" times



Results:

Cross-resource consistency



	Observed variable	True-score variable
Consistency	$\text{Cons.}_\gamma = \frac{\sigma_{\text{Justice}}^2}{\sigma_{\text{Justice}}^2 + \sigma_{\text{Method}}^2 + \sigma_{\text{Error}}^2}$	$\text{Cons.}_\tau = \frac{\sigma_{\text{Justice}}^2}{\sigma_{\text{Justice}}^2 + \sigma_{\text{Method}}^2}$
Method specificity	$\text{Spec.}_\gamma = \frac{\sigma_{\text{Method}}^2}{\sigma_{\text{Justice}}^2 + \sigma_{\text{Method}}^2 + \sigma_{\text{Error}}^2}$	$\text{Spec.}_\tau = \frac{\sigma_{\text{Method}}^2}{\sigma_{\text{Justice}}^2 + \sigma_{\text{Method}}^2}$

Latent method specificity (95% bootstrap CI)

	Germany 2021		England 2021		Germany 2024	
	Tests	Ventilators	Tests	Ventilators	Tests	Ventilators
Equality	.04 [.02; .08]	.04 [.01; .08]	.03 [.01; .07]	.05 [.02; .09]	.00 [.00; .02]	.01 [.00; .05]
Development	.28 [.24; .33]	.47 [.41; .53]	.30 [.24; .36]	.48 [.41; .54]	.20 [.16; .25]	.29 [.24; .35]
Production	.28 [.23; .33]	.47 [.41; .52]	.30 [.25; .35]	.50 [.44; .56]	.22 [.18; .27]	.31 [.26; .36]
Market	.06 [.04; .09]	.11 [.07; .16]	.06 [.03; .10]	.14 [.09; .19]	.05 [.03; .09]	.06 [.03; .10]
Care	.22 [.15; .28]	.24 [.18; .32]	.16 [.10; .22]	.26 [.20; .33]	.11 [.06; .14]	.17 [.12; .23]
Infections	.32 [.25; .38]	.38 [.31; .44]	.28 [.22; .35]	.37 [.31; .44]	.24 [.18; .31]	.33 [.26; .40]
Deaths	.29 [.22; .36]	.34 [.27; .41]	.31 [.25; .38]	.36 [.30; .42]	.22 [.13; .28]	.28 [.21; .34]
Efficiency					.00 [.00; .03]	.01 [.00; .03]
Adherence					.00 [.00; .00]	.00 [.00; .00]
Value					.00 [.00; .00]	.00 [.00; .00]

Latent method specificity (95% bootstrap CI)

	Germany 2021		England 2021		Germany 2024	
	Tests	Ventilators	Tests	Ventilators	Tests	Ventilators
Equality	.04 [.02; .08]	.04 [.01; .08]	.03 [.01; .07]	.05 [.02; .09]	.00 [.00; .02]	.01 [.00; .05]
Development	.28 [.24; .33]	.47 [.41; .53]	.30 [.24; .36]	.48 [.41; .54]	.20 [.16; .25]	.29 [.24; .35]
Production	.28 [.23; .33]	.47 [.41; .52]	.30 [.25; .35]	.50 [.44; .56]	.22 [.18; .27]	.31 [.26; .36]
Market	.06 [.04; .09]	.11 [.07; .16]	.06 [.03; .10]	.14 [.09; .19]	.05 [.03; .09]	.06 [.03; .10]
Care	.22 [.15; .28]	.24 [.18; .32]	.16 [.10; .22]	.26 [.20; .33]	.11 [.06; .14]	.17 [.12; .23]
Infections	.32 [.25; .38]	.38 [.31; .44]	.28 [.22; .35]	.37 [.31; .44]	.24 [.18; .31]	.33 [.26; .40]
Deaths	.29 [.22; .36]	.34 [.27; .41]	.31 [.25; .38]	.36 [.30; .42]	.22 [.13; .28]	.28 [.21; .34]
Efficiency					.00 [.00; .03]	.01 [.00; .03]
Adherence					.00 [.00; .00]	.00 [.00; .00]
Value					.00 [.00; .00]	.00 [.00; .00]

Results:

Predictors

Within-society justice attitudes

in "normal" times

Outcomes

$R^2_{mult.}$

2021

Predictors

	$R^2_{mult.}$		Equality		Merit		Entitlement		Need	
	Germany	UK	Germany	UK	Germany	UK	Germany	UK	Germany	UK
Equality (population size)	.26	.21	.46***	.45***	-.31*	-.18 (n.t.)	-.32***	-.22***	.50 (n.t.)	.41 (n.t.)
Development (merit as dev)	.11	.14	-.18***	-.12***	.30*	.34 (n.t.)	.29 (n.t.)	.35 (n.t.)	-.21***	-.09*
Production (merit as produc)	.11	.14	-.17***	-.12***	.29*	.33 (n.t.)	.28 (n.t.)	.34 (n.t.)	-.22***	-.09*
Market (financial bid)	.21	.24	-.27***	-.14***	.33 (n.t.)	.38 (n.t.)	.40***	.41***	-.38***	-.19***
Care (need due to health syste)	.15	.21	.33 (n.t.)	.38 (n.t.)	-.22*	-.20 (n.t.)	-.20***	-.23***	.36***	.47***
Infections (need due to infec)	.12	.21	.27 (n.t.)	.36 (n.t.)	-.13.	-.16 (n.t.)	-.13**	-.21***	.32***	.47***
Deaths (need due to death ra)	.13	.19	.26 (n.t.)	.36 (n.t.)	-.13.	-.18 (n.t.)	-.13**	-.23***	.33***	.45***

Standardized regression coefficients
 from separate models for each predictor facet
 (p values corrected; Benjamini & Hochberg, 1995)

Holds in model
 with other facets

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Global justice attitudes

in "normal" times

2021

Predictors

Outcomes






$R^2_{mult.}$

Global inequality unjust

Factor 1 (inverted)

Factor 2

Behavioral intentions

	$R^2_{mult.}$	$R^2_{mult.}$					
Equality (population size)	.36	.25	.49***	.30***	.55***	.45***	.58***
Development (merit as developer)	.17	.16	-.39***	-.40***	-.29***	-.29***	-.27***
Production (merit as producer)	.17	.17	-.39***	-.40***	-.31***	-.27***	-.27***
Market (financial bid)	.25	.22	-.50***	-.44***	-.42***	-.26***	-.30***
Care (need due to health system)	.22	.27	.36***	.40***	.45***	.49***	.44***
Infections (need due to infection)	.16	.23	.29***	.38***	.37***	.45***	.38***
Deaths (need due to death rates)	.15	.24	.28***	.41***	.36***	.47***	.37***

Standardized regression coefficients
 from separate models for each predictor facet
 (p values corrected; Benjamini & Hochberg, 1995)



Implications



Cooperation has got a mandate!

Even citizens of rich Western countries opt for global solidarity and epidemiological efficiency – even in times of crisis.

For the next global emergency (Mpox? Bird flu?), let us...

- implement fairer and more efficient global distribution mechanisms!
- extend existing ethics-based domestic frameworks to the global level!
- inform pandemic preparations with citizens' ethical views
 - to increase public trust and acceptance for necessary measures in difficult times!
 - to close the gap between ethical knowledge and policy!
- conduct more public opinion research in non-WEIRD countries!



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