Supplemental Materials for Meijers et al., "Stimulating Sustainable Food Choices Using Virtual Reality: Taking an Environmental vs Health Communication Perspective on Enhancing Response Efficacy Beliefs" *Environmental Communication*, **2021.**

Contents

1. Manipulation Checks

Table S1. Means and Standard Deviations for the manipulation checks

	Means (Standard Deviation)			
	Health Impact (standardized)		Environmental impact (standardized)	
Control	-0.16	(0.77)	-0.89	(1.16)
Health, text	0.63	(0.67)	-0.00	(0.85)
Health, text + visual	0.78	(0.64)	-0.22	(1.03)
Environment, text	-0.59	(0.96)	0.52	(0.41)
Environment, text + visual	-0.66	(0.92)	0.59	(0.55)

Table S2. Means and Standard Deviations for Vividness

	Means (Standard Deviation)	
	Vividness	
Control	5.04	(1.34)
Health, text	5.43	(1.31)
Health, text + visual	5.30	(1.18)
Environment, text	5.32	(1.20)
Environment, text + visual	5.66	(1.17)

2. Instigating Behavior Change

Table S3. Results Mediation Model – T1.

Model 4 Hayes – Product choices in VR supermarket while doing grocery shopping mediated by personal response efficacy (standardized).

	B	se	t	p	LLCI	HLCI
DV: Personal response efficacy						
Model summary: $F(4, 242) = 4.28$, $p = .002$, $R = .26$, $R^2 = .07$						
Constant	-0.31	0.13	-2.43	.016	-0.56	-0.06
Health, tekst	0.59	0.18	3.24	.001	0.23	0.94
Health, text + visual	0.67	0.18	3.72	< .001	0.32	1.03
Environment, tekst	0.50	0.18	2.79	.006	0.15	0.85
Environment, text + visual	0.52	0.18	2.89	.004	0.17	0.87
DV: Product choices						
Model summary: $F(5, 241) = 18.36$, $p < .001$, $R = .52$, $R^2 = .28$						
Constant	4.95	0.21	23.05	< .001	4.53	5.38
Health, tekst	1.90	0.31	6.16	< .001	1.29	2.51
Health, text + visual	1.85	0.31	5.93	< .001	1.24	2.47
Environment, tekst	1.95	0.31	6.38	< .001	1.35	2.55
Environment, text + visual	2.22	0.31	7.27	< .001	1.62	2.82
Personal response efficacy	0.31	0.11	2.85	.005	0.09	0.52
Relative direct effect						
Omnibus test direct effect: $F(4, 241) = 16,80$, $p < .001$, $R_{change} = .202$						
Health, tekst	1.90	0.31	6.16	< .001	1.29	2.51
Health, text + visual	1.85	0.31	5.93	< .001	1.24	2.47
Environment, tekst	1.95	0.31	6.38	< .001	1.35	2.55
Environment, text + visual	2.22	0.31	7.27	< .001	1.62	2.80

Relative indirect effect	B_{boot}	se_{boot}	$LLCI_{boot}$	$HLCI_{boot}$
Health, tekst	0.18	0.09	0.03	0.37
Health, text + visual	0.21	0.09	0.05	0.38
Environment, tekst	0.15	0.08	0.02	0.32
Environment, text + visual	0.16	0.08	0.03	0.34

3. Maintaining Behavior Change

Table S4. Results Mediation Model – T2.

Results PROCESS Model 4 (Hayes, 2013) – Maintaining behavior change in the regular supermarket mediated by personal response efficacy (standardized) at T2.

	B	se	t	p	LLCI	HLCI
DV: Personal response efficacy						
Model summary $F(4, 232) = 3.56$, $p = .008$, $R = .24$, $R^2 = .06$						
Constant	-0.28	0.13	-2.17	.031	-0.53	-0.03
Health, text	0.53	0.18	2.88	.004	0.17	0.89
Health, text + visual	0.60	0.18	3.29	.001	0.24	0.96
Environment, text	0.51	0.18	2.82	.005	0.15	0.87
Environment, text + visual	0.50	0.18	2.69	.008	0.13	0.86
DV: Product choices						
Model summary $F(5, 231) = 4.23$, $p = .001$, $R = .29$, $R^2 = .08$						
Constant	1.98	0.14	13.80	<.001	1.70	2.26
Health, text	-0.13	0.21	-0.62	.534	-0.54	0.28
Health, text + visual	-0.19	0.21	-0.93	.355	-0.60	0.22
Environment, text	-0.19	0.20	-0.93	.352	-0.59	0.21
Environment, text + visual	-0.09	0.21	-0.42	.678	-0.50	0.32
Personal response efficacy	0.33	0.07	4.57	<.001	0.19	0.48
Relative direct effect						
Omnibus test direct effect: $F(4, 231) = 0.30$, $p = .877$, $R_{change} = .004$						
Health, text	-0.13	0.21	-0.62	.534	-0.54	0.28
Health, text + visual	-0.19	0.21	-0.93	.355	-0.60	0.22
Environment, text	-0.19	0.20	-0.93	.352	-0.59	0.21
Environment, text + visual	-0.09	0.21	-0.42	.678	-0.50	0.32
Relative indirect effect	B_{boot}	se_{boot}	$LLCI_{boot}$	$HLCI_{boot}$		
Health, text	0.18	0.07	0.06	0.32		
Health, text + visual	0.20	0.07	0.07	0.36		
Environment, text	0.17	0.06	0.06	0.30		
Environment, text + visual	0.17	0.07	0.04	0.33		

Table S5. Results Mediation Model – T3.

Results PROCESS Model 4 (Hayes, 2013) – Maintaining behavior change in the regular supermarket mediated by personal response efficacy (standardized) at T3.

	B	se	t	p	LLCI	HLCI
DV: Personal response efficacy						
Model summary $F(4, 222) = 3.47$, $p = .009$, $R = .24$, $R^2 = .06$						
Constant	-0.28	0.13	-2.16	.032	-0.53	-0.02
Health, text	0.53	0.19	2.86	.005	0.17	0.90
Health, text + visual	0.58	0.19	3.14	.002	0.22	0.95
Environment, text	0.51	0.18	2.80	.006	0.15	0.87
Environment, text + visual	0.52	0.19	2.79	.006	0.15	0.89
DV: Product choices						
Model summary $F(5, 221) = 2.91$, $p = .014$, $R = .25$, $R^2 = .06$						
Constant	2.34	0.15	15.55	<.001	2.04	2.64
Health, text	-0.13	0.22	-0.59	.558	-0.56	0.30
Health, text + visual	-0.30	0.22	-1.38	.170	-0.74	0.13
Environment, text	-0.22	0.21	-1.02	.309	-0.64	0.20
Environment, text + visual	-0.10	0.22	-0.43	.665	-0.53	0.34
Personal response efficacy	0.29	0.08	3.68	<.001	0.13	0.44
Relative direct effect						
Omnibus test direct effect: $F(4, 221) = 0.56$, $p = .691$, $R_{change} = .009$						
Health, text	-0.13	0.22	-0.59	.558	-0.56	0.30
Health, text + visual	-0.30	0.22	-1.38	.170	-0.74	0.13
Environment, text	-0.22	0.21	-1.02	.309	-0.64	0.20
Environment, text + visual	-0.10	0.22	-0.43	.665	-0.53	0.34

Relative indirect effect	B_{boot}	se_{boot}	$LLCI_{boot}$	$HLCI_{boot}$
Health, text	0.15	0.06	0.05	0.28
Health, text + visual	0.17	0.07	0.04	0.33
Environment, text	0.15	0.06	0.04	0.27
Environment, text + visual	0.15	0.07	0.03	0.32

4. Catalyzing Behavior Change: Spill-over

Table S6. Results Mediation Model – T2.

Results PROCESS Model 4 (Hayes, 2013) – Catalyzing behavior change in the regular supermarket mediated by personal response efficacy (standardized) at T2.

	B	se	t	p	LLCI	HLCI
DV: Personal response efficacy						
Model summary $F(4, 232) = 3.56$, $p = .008$, $R = .24$, $R^2 = .06$						
Constant	-0.28	0.13	-2.17	.031	-0.53	-0.03
Health, text	0.53	0.18	2.88	.004	0.17	0.89
Health, text + visual	0.60	0.18	3.29	.001	0.24	0.96
Environment, text	0.51	0.18	2.82	.005	0.15	0.87
Environment, text + visual	0.50	0.18	2.69	.008	0.13	0.86
DV: Product choices						
Model summary $F(5, 231) = 2.56$, $p = .028$, $R = .23$, $R^2 = .05$						
Constant	2.60	0.17	15.26	$< .001$	2.27	2.94
Health, text	-0.30	0.25	-1.22	.225	-0.79	0.19
Health, text + visual	-0.10	0.25	-0.43	.670	-0.59	0.38
Environment, text	0.11	0.24	0.45	.650	-0.37	0.59
Environment, text + visual	0.07	0.25	0.29	.773	-0.42	0.56
Personal response efficacy	0.26	0.09	3.04	.003	0.09	0.43
Relative direct effect						
Omnibus test direct effect: $F(4, 231) = 0.90$, $p = .462$, $R_{change} = .014$						
Health, text	-0.30	0.25	-1.22	.225	-0.79	0.19
Health, text + visual	-0.10	0.25	-0.43	.670	-0.59	0.38
Environment, text	0.11	0.24	0.45	.650	-0.37	0.59
Environment, text + visual	0.07	0.25	0.29	.773	-0.42	0.56

Relative indirect effect	B_{boot}	se_{boot}	$LLCI_{boot}$	$HLCI_{boot}$
Health, text	0.14	0.07	0.03	0.29
Health, text + visual	0.16	0.07	0.04	0.31
Environment, text	0.13	0.06	0.03	0.28
Environment, text + visual	0.13	0.07	0.02	0.29

Table S7. Results Mediation Model – T3.

Results PROCESS Model 4 (Hayes, 2013) – Catalyzing behavior change in the regular supermarket mediated by personal response efficacy (standardized) at T3.

	B	se	t	p	LLCI	HLCI
DV: Personal response efficacy						
Model summary $F(4, 222) = 3.47$, $p = .009$, $R = .24$, $R^2 = .06$						
Constant	-0.28	0.13	-2.16	.032	-0.53	-0.02
Health, text	0.53	0.19	2.86	.005	0.17	0.90
Health, text + visual	0.58	0.19	3.14	.002	0.22	0.95
Environment, text	0.51	0.18	2.80	.006	0.15	0.87
Environment, text + visual	0.52	0.19	2.79	.006	0.15	0.89
DV: Product choices						
Model summary $F(5, 221) = 1.36$, $p = .240$, $R = .17$, $R^2 = .03$						
Constant	2.89	0.17	17.49	< .001	2.56	3.21
Health, text	-0.28	0.24	-1.16	.247	-0.75	0.19
Health, text + visual	-0.20	0.24	-0.82	.411	-0.67	0.28
Environment, text	-0.10	0.24	-0.43	.669	-0.56	0.36
Environment, text + visual	-0.01	0.24	-0.03	.980	-0.48	0.47
Personal response efficacy	0.20	0.09	2.32	.021	0.03	0.37
Relative direct effect						
Omnibus test direct effect: $F(4, 221) = 0.51$, $p = .731$, $R_{change} = .009$						
Health, text	-0.28	0.24	-1.16	.247	-0.75	0.19
Health, text + visual	-0.20	0.24	-0.82	.411	-0.67	0.28
Environment, text	-0.10	0.24	-0.43	.669	-0.56	0.36
Environment, text + visual	-0.01	0.24	-0.03	.980	-0.48	0.47

Relative indirect effect	B_{boot}	se_{boot}	$LLCI_{boot}$	$HLCI_{boot}$
Health, text	0.11	0.06	0.01	0.23
Health, text + visual	0.12	0.06	0.01	0.26
Environment, text	0.10	0.05	0.01	0.22
Environment, text + visual	0.10	0.06	0.01	0.24

5. The role of personal vs. collective response efficacy

Table S8. Results Moderation Model – T1.

Results of Process Model 1 with personal response efficacy beliefs (standardized) as predictor and product choice in the VR-supermarket as dependent variable and the environmental vs health realm as moderator, at T1

Environmental Realm

Model summary: Model: $F(3, 193) = 3.70$, $p = .013$, $R^2 = .05$

	B	se	t	p	LLCI	HLCI
Constant	6.78	0.15	46.75	< .001	6.50	7.07
Personal Response Efficacy	0.45	0.15	3.07	.002	0.16	0.74
Topic	0.29	0.20	1.44	.153	-0.11	0.68
Interaction	-0.31	0.21	-1.46	.147	-0.72	0.11

Table S9. Results OLS regressions – T1.

Results of two OLS regressions with personal and collective response efficacy (standardized) as predictors and product choice in the VR-supermarket as dependent variable, in the environmental realm and the health realm, at T1

Environmental Realm

Model summary: $F(2, 147) = 6.78$, $p = .002$, $R = .29$, $R^2 = .08$, Adjusted $R^2 = .07$

	B	se	β	t	p	LLCI	HLCI
Constant	6.31	0.15		42.55	< .001	6.02	6.60
Personal Response Efficacy	0.12	0.25	.06	0.47	.640	-0.37	0.60
Collective Response Efficacy	0.56	0.27	.25	2.11	.037	0.03	1.08

Health Realm

Model summary: $F(2, 144) = 10.19$, $p < .001$, $R = .35$, $R^2 = .12$, Adjusted $R^2 = .11$

	B	se	β	t	p	LLCI	HLCI
Constant	6.15	.15		40.89	< .001	5.85	6.48
Personal Response Efficacy	0.61	.19	.30	3.16	.002	0.23	1.00
Collective Response Efficacy	0.16	.19	.08	.83	.460	-0.22	0.53