

Socio-cognitive model of actions for the ecological transition: an extension of Protection Motivation Theory

OBJECTIVES

The Protection Motivation Theory (PMT) [1] has been shown to be particularly relevant for predicting pro-environmental behavioral intentions (PEI) [2]. Its added value lies in the fact that it considers the costs and rewards of both adaptive (sustainable) and maladaptive (unsustainable) behaviors [3]. However, PMT may have been partially inadequate for explaining PEI by keeping predictors at an individual level whereas actions to reduce the risk of climate change may be more understandable as a collective problem, in particular because the risk cannot be solved by an individual on its own [4].

The aim of this study is to **test an extension of the PMT** adapted for **individual and collective PEI**, focusing on individuals' **ability to think of possible alternatives** to the environmental status quo, and their beliefs about the related **costs** and **rewards**.

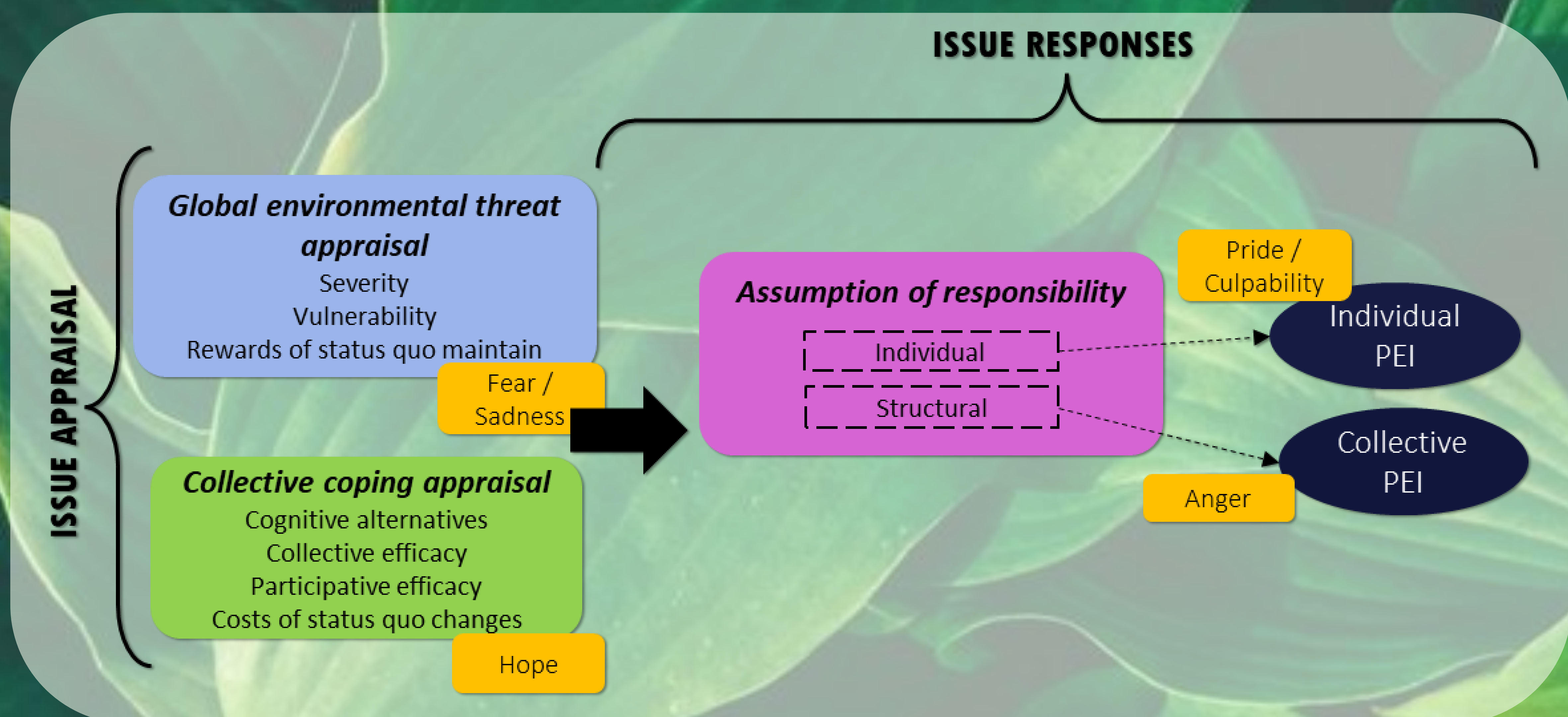
METHODS

Sample. 928 French participants (73% F), 18-84 years old.

Procedure. Participants filled-in a questionnaire online.

Questionnaire :

- **Threat appraisal** (Severity, Vulnerability, Rewards of status quo maintain),
- **Coping appraisal** (Cognitive alternatives, Collective efficacy, Participative efficacy, Costs of status quo changes),
- **Assumptions of responsibility** (Individual, Structural),
- **Emotions** (Fear, Sadness, Hope, Pride, Culpability, Anger)
- **Individual PEI** (private sphere actions, e.g., reduce water use, use second-hand products...)
- **Collective PEI** (e.g., take part in demonstrations, vote, convince friends...)



RESULTS

Summary of model stepwise regression analysis for variables predicting individual and collective PEI.

Predictors	INDIVIDUAL intentions					COLLECTIVE intentions				
	std. beta	p	adj. R ²	F	Δ ²	std. beta	p	adj. R ²	F	Δ ²
Coping Appraisal (Block 1)	Cognitive alternatives	0,14	***	,33						
	Collective efficacy	-0,03				0,03				
	Participative efficacy	0,12	**			0,07				
	Costs of status quo changes	-0,09	**			-0,13	***			
	Hope	0,03				0,04				
Threat Appraisal (Block 2)	Severity	0,07	*	,41	23,49***	,08				
	Vulnerability	0,09	**			0,06	*			
	Rewards of status quo maintain	-0,14	***			-0,17	***			
	Fear	0,10	*			0,12	**			
	Sadness	0,03				0,10	**			
Assumption of responsibility (Block 3 & 4)	Individual	0,10	**	,43	12,82***	,02				
	Pride	0,15	***			-0,02		,51	2,78*	,00
	Guilty	0,01				0,07	*			
	Structural	0,03		,43	1,61	,00				
	Anger	0,04				0,06	*	,52	14,30***	,01

DISCUSSION

While further analyses are being carried out to better identify what differentiate individual and collective PEI, these preliminary findings already offer interesting insights to be further investigated.

Extending the PMT to a more collective level of coping seems relevant for predicting both collective and individual PEI.

Particularly, our data suggests that **cognitive alternatives**, the **perceived costs of changing the status quo for sustainability** and the **perceived benefits of maintaining the unsustainable quo** are **important determinants of individuals' engagement on both individual and collective levels**.

It is thus possible to suppose that these dimensions could be effective levers to obtain pro-environmental spillover effects. Further research will investigate the possible causal link between these dimensions and individual/collective engagement in favor of the environment.

[1] Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *The journal of psychology*, 91(1), 93-114.

[2] Kothe, E. J., Ling, M., North, M., Klas, A., Mullan, B. A., & Novoradovskaya, L. (2019). Protection motivation theory and pro-environmental behaviour: A systematic mapping review. *Australian Journal of Psychology*, 71(4), 411-432

[3] Bockarjova, M., & Steg, L. (2014). Can Protection Motivation Theory predict pro-environmental behavior? Explaining the adoption of electric vehicles in the Netherlands. *Global environmental change*, 28, 276-288.

[4] Fritsche, I., Barth, M., Jugert, P., Masson, T., & Reese, G. (2018). A social identity model of pro-environmental action (SIMPEA). *Psychological Review*, 125(2), 245.