

The causal flow in the physical self structure

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Introduction

A main concern in the hierarchical physical self-concept models is the determination of the direction of causal flow between higher and lower factors. For methodological reasons, theoretical and empirical accounts did not provide evident support for top-down, bottom-up, or reciprocal effects (Brown, 1998; Fox, 1990; Marsh and Redmayne, 1994). Marsh & Yeung (1998) emphasized that causal flow corresponded only to the horizontal-effects model. However their study was based on two-time comparison and such hypotheses requires evaluating longitudinal data. In this perspective, the present study based on idiographic approach aimed to investigate the causal flow in the physical self-hierarchy, using a more methodologically relevant way for self-perceptions time series.

Method

Twelve participants completed twice a day, during a three-month period, a short inventory (PSI-6, Ninot et al., 2001) measuring 6 subjective dimensions related to global self-esteem and physical self. Statistical analyses were performed on individual time series. Cross-correlational analyses were performed for all pairs of series in the model. The diffusion process is revealed by a maximum in the cross-correlation function, at a lag different from zero. Note also that the sign of the lag allows indicating the direction of the diffusion process. Results: The peak-finding algorithm applied to each cross-correlation function showed that the maximum of the function was always located at lag zero.

Conclusion

Results demonstrated that influence between dimensions is immediate at least in regards to our scale of observation. As such, they do not allow determining the direction of the causal flow. Further researches need to be pursued taking into account more repeated measurements or controlled external impact that would be expected diffusion of changes in self-perceptions.