



Interoceptive awareness does not predict political orientation: Evidence from Italian Voters

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Abstract

Research exploring a link between political ideology and interoception has produced contrasting results. We administered the Multi-Dimensional Assessment of Interoceptive Awareness (MAIA-2) to a sample of Italian individuals to provide further insight into the field. Our results do not support the existence of a link between political ideology and interoception. These findings contribute to the current debate on the predictive role of interoception in political orientation.

Keywords: Interoceptive awareness, MAIA-2, political orientation, negative results

Introduction

The term interoception encompasses a broad range of bodily signals or sensations, some of which indicate the necessity to fulfil some physiological needs, such as hunger or thirst.

A growing body of literature, drawing from studies conducted in both healthy humans and clinical populations (Palmer and Tsakiris, 2018; Cazzato et al., 2022; Vicario et al., 2020) suggests that changes in interoceptive states may be influenced and/or influence various cognitive and affective processes. For instance, there is evidence indicating that appetite can impact moral decision-making (Vicario et al., 2018; Brown et al., 2020), aesthetic perception (Cazzato et al., 2022), generosity (Kerry et al., 2019), time perception (Vicario et al., 2019) and visuo-spatial attention (Tian et al., 2011).

Other researchers have conducted studies to examine the predictive significance of various aspects of interoception (Garfinkel et al., 2015). These aspects include interoceptive sensitivity, which is the self-evaluation of subjective interoception typically measured through questionnaires, and interoceptive accuracy, which is the objective capability to monitor internal states, usually assessed through standard behavioral tests. These measures resulted particularly important for cognitive and affective processing, as well as social cognition. For example, Grynberg and Pollatos (2015) have shown the role of interoceptive accuracy in empathy for pain. The results showed that higher interoceptive accuracy was associated with higher empathy for pain, both in terms of cognitive (pain estimation) and affective (arousal and compassion) components. The authors suggested that interoceptive accuracy may facilitate empathy for pain by enhancing the awareness and resonance of one's own and others' bodily



states. Moreover, people with higher interoceptive sensitivity are more altruistic (Piech et al., 2017). Finally, the recent article by Ruisch and colleagues (2022) enriches the literature in the field by offering intriguing insights into a potential predictive role of interoception on individuals' political orientation. The authors found evidence that interoceptive sensitivity, as measured by heartbeat detection method, might predict a stronger inclination towards political liberalism (as opposed to conservatism). However, this association between liberalism and interoception was observed in the American sample, with no significant results in the Dutch sample (Ruisch et al., 2022). Interestingly, a higher degree of attunement to internal states was reported among more conservative individuals when measuring interoceptive sensitivity by mean of two subscales namely "Noticing" and "Emotional Awareness", of the Multi-Dimensional Assessment of Interoceptive Awareness (MAIA-2) (Mehling et al., 2018).

Here we aim to broaden the existing research to include the Italian population, thereby providing further insights into this contentious field of study. Utilizing the self-assessment MAIA-2 test (Mehling et al., 2018), we examined the interoceptive awareness of participants, categorizing them as right-wing voters, left-wing voters, and non-voters.

Method

Participants

We conducted a study on a sample of 220 young Italian participants (73 males, mean age = 25.13, standard deviation = 5.55) to investigate any differences in interoceptive accuracy between left-wing (N=99) and right-wing (N=40) political orientations. We also included a sample of 73 non-voting individuals in the analysis. We excluded 8 participants who identified as having a central political orientation, allowing us to categorize the participants into three distinct groups: left-wing, right-wing, and non-voters. Participants were recruited via social networks (e.g., Instagram, Facebook, Twitter) and tested through an online platform (Google Forms). The participants were all from Sicily, a region in southern Italy. Written informed consent was obtained from all participants, and the study was approved by the local ethics committee. All methods were performed in accordance with the relevant guidelines and regulations.

Instruments

To explore interoceptive awareness, we administered the MAIA-2 (Mehling et al., 2012), which allows an accurate assessment of the individual body awareness about different dimensions such as (i) *Noticing*, awareness of unpleasant, pleasant, and neutral bodily sensations; (ii) *Not-Distracting*, difficulty ignoring or distracting from feelings of pain or discomfort; (iii) *Not-Worrying*, do not worry about sensations of pain or discomfort; (iv) *Attention Regulation*, attention to bodily sensations; (v) *Emotional Awareness*, awareness of the connection between bodily sensations and emotional states; (vi) *Self-Regulation*, regulate emotional suffering by paying attention to bodily sensations; (vii) *Body Listening*, active body listening; (viii) *Trusting*, body as safe and reliable. The MAIA-2 test is composed by a total of 32 items, on a Likert-Scale from 0 (Not at all) to 5 (Totally).



Procedure

All participants were asked to declare their political orientation by choosing from the following options: far left, left, centre-left, centre, centre-right, right, far right, no voter. The data from *far left*, *left*, *centre-left* sub-categories were combined to form the left-wing orientation category, while the data from *centre-right*, *right*, *far right* sub-categories were collapsed to create the right-wing category. The category of “no voters” was selected by participants who were either disinterested in voting and/or lacked a clear idea of their political orientation (i.e., undecided). Subsequently, participants were invited to complete the MAIA-2 test to assess their body awareness.

Data Analysis

To explore any relation between the MAIA-2 scores and political orientation, Statistical test will be decided depending on data (normal vs not normal) distribution. Data analysis was performed using Statistica software, version 8.0, StatSoft, Inc., Tulsa, USA. The p-value of significance was set at 0.05.

Results

As the data resulted not normally distributed (*Shapiro-Wilk*, p -value < 0.05) we decided to apply no parametric analysis for multiple comparisons for independent samples (i.e., Kruskal-Wallis test). P-level was furthermore corrected for the number of comparisons (Bonferroni correction). Therefore, the p-level of significance is < 0.0062 (i.e., $0.05/8$ comparisons).

Overall, we found no significant between groups (left voters, right voters, no voters) differences. Details are reported in the table 1.

	MAIA-2 Tot score	Noticing	Not Distracting	No worrying	Attention regulation	Emotional awareness	Self- regulation	Body listening	Trusting
<i>H</i>	0.569	2.463	5.619	0.399	1.160	1.451	0.159	0.461	2.44
p-level	0.752	0.291	0.060	0.818	0.559	0.483	0.923	0.794	0.295

Table 1. Overview of statistical (median test) group comparisons for the different subscales of MAIA-2.

No significant results were also found when applying no parametric correlation analysis (Spearman’s rank correlation). Please see table 2 for the complete set of results.

	MAIA-2 Tot score	Noticing	Not Distracting	No worrying	Attention regulation	Emotional awareness	Self- regulation	Body listening	Trusting
<i>Rho</i>	-0.050	-.083	0.026	0.037	-0.001	-0.093	0.061	0.098	0.139
<i>p-level</i>	0.487	0.287	0.693	0.583	0.986	0.167	0.361	0.147	0.038

Table 2. Overview of correlation analyses between age and respective mean scores for different subscales of MAIA-2.



Discussion

Previous studies (e.g., Caprara et al. 1999; 2006) on Italian politics have addressed the role of individual traits. Our aim is to investigate a possible relationship between political orientation and interoceptive awareness, in line with earlier investigations in American and Dutch participants.

Overall, our results did not find significant difference for all the examined subtests when comparing left- and right-wing individuals with no voters. This result is in line with the evidence of no significant results in Dutch individuals (Ruisch et al., 2022)

In contemporary United States, the terms “left”, and “right” are often progressivism and conservatism, respectively (Carlisle, 2019). Considering this interpretation of political orientation, the evidence of no significant results provided in our study contrasts with the finding reported by Ruisch et al. (2022) in their pilot study, which indicates a greater tuning to internal states and processes in more conservative American individuals.

However, this discrepancy in result may be attributed to several differences between our investigation and this pilot study. First, variation in sample size of the methods employed for data collection could contributed to the contrasting findings.

Our study involved a larger number of participants, and we administered the full set of MAIA-2 subscales. Moreover, the participants of our study were tested via online platform. This represents an additional variable that could help to explaining the different pattern of result, as in the pilot study of Ruisch et al. (2022) participants were tested in person.

Ruisch et al. (2022) attributed the divergent results between their studies in the Netherlands (Study 1) and the United States (Study 2) to differences in the sociopolitical landscapes of the two countries. While we cannot dismiss this possibility, our observation of groups difference of our Italian participants supports this hypothesis. It's important to note that Italy shares a multi-party-political system with the Netherlands, making it closer in political structure compared to the United States. This is further supported by the fact that approximately 34.5% of our participants, categorized into left- and right-wing groups, identified themselves with center-left or center-right political affiliations.

Nevertheless, distinctions exist between Italy and the Netherlands in terms of political culture and party systems, with Italy exhibiting a more fragmented and fluid political landscape. Consequently, it is plausible that other variables, beyond the political structure, influenced our results. Notably, one limitation of our research is the absence of a power analysis to determine the appropriate sample size. Nonetheless, our sample size aligns with that of the study that inspired our work (Ruisch et al., 2022).

Competing interests

All authors declare no competing interests.



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Data availability Statement

Data are available at the following URL address:
https://www.researchgate.net/publication/366568512_Gut_politics

Author contributions

Conceptualization: C.L., C.M.V.; methodology, C.L., C.M.V.; formal analysis, C.M.V.; investigation, C.M.V. writing original draft preparation, C.M.V. writing review and editing, C.L., C.M.V.; All authors have read and agreed to the published version of the manuscript.

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