

Explorations in Information Integration Theory

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This special issue contains a selection of papers presented at the fourth Conference on Information Integration Theory and Functional Measurement held in Coimbra, Portugal, on June 12-13, 2013. This conference gathered together more than fifty researchers from the four continents: Africa (Benin, Mozambique, Togo, and Tunisia), America (Canada, Colombia, the United States, and Venezuela), Asia (India, Israel, and Turkey), and Europe (Belgium, France, Germany, Italy, Portugal, Romania, the Netherlands, and the United Kingdom). The studies reported in the papers they presented were applications of Information Integration Theory and Functional Measurement (Anderson, 1996, 2008, 2012, 2013) to very diverse settings, ranging from number assessment from patterns of dots to philosophical considerations about human rights.

In this special issue, the 22 presentations that have been accepted for publication have been grouped together into eight classical domains in psychology: Methodology (one paper), Psychophysics (one paper), Educational Psychology (three papers), Economic Psychology (four papers), Moral Science (four papers), Political Psychology (two papers), Health Psychology (five papers), and Cross-Cultural Psychology (two papers).

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Methodology

In the only one paper in this domain, a paper entitled “Evaluating cognitive models at the group level”, David Weiss, from Los Angeles (California State University), discussed the utility of nested group designs when cognitive models are analyzed at the group level whereas individual differences of interest are present. The use of nested group designs was illustrated with a study testing a multiplicative model of anticipated compliance, in which medical patients were grouped according to the symptoms and prognoses associated with their diseases.

Psychophysics

In the only one paper in this domain, a paper entitled “A Functional Measurement study on averaging numerosity”, Michael D. Tira and his colleagues from Padua reported the findings of two experiments on number assessment from patterns of dots. They showed that the judgment process that underlies number assessment of dot patterns imply an averaging integration model.

Educational Psychology

In the first paper in this section, a paper entitled “The intuitive physics of the equilibrium of the lever and of the hydraulic pressures: Implications for the teaching of elementary physics”, Sergio Cesare Masin and his colleagues from Padua showed that the intuitive-physics law of the lever was multiplicative for all participants while the intuitive-physics law of the hydraulic pressures differed among participants. They suggested that physical laws and corresponding intuitive-physics laws may be only congruent when people have had daily life experience with the respective phenomena.

In the second paper, entitled “Intuitive physics of free fall: An information integration approach to the mass-speed belief”, Michele Vicovaro, also from Padua, showed that lay people have a strong mass-speed belief: They believe that heavier objects fall faster than lighter ones, and that mass and height of release determine speed of fall according to a multiplicative rule.

In the third and last paper in this section, entitled “An information integration study on the intuitive physics of the Newton’s cradle”, Nuno Alexandre De Sá Teixeira and his colleagues from Coimbra reported two studies on Newton’s cradle, a device consisting of a chain of steel balls suspended in alignment. They showed that lay people implement a

sophisticated cognitive model wherein the magnitude of the displacement of the target ball increased in direct proportion with the acceleration of the launcher and in inverse proportion with the number of balls in the chain.

Economic Psychology

In the first paper in this section, a paper entitled “A policy-based weighted averaging model to predict green vehicle market shares”, Olivier Mairesse and his colleagues from Brussels (Vrije Universiteit) reported findings from two empirical studies on the potential shift from intended purchase of conventionally fuelled vehicles to environmentally friendly ones. Their results led them to suggest that the greatest shifts in environmentally vehicle ownership might occur as a result of the combination of reductions of purchase costs with a mix of pricing measures that promote the beneficial effects of operating environmentally friendly vehicles.

In the second paper, entitled “Functional measurement in consumer evaluation of market products”, Stefano Noventa and his colleagues from Padua presented a study applying FM techniques to identify the cognitive rules that underlie the integration of different product attributes and discussed the results of a cluster analysis of consumers’ evaluation of footwear and shoe market.

Finally, two papers reported studies on business ethics. In the third paper in this section, a paper entitled “Legitimacy of executive compensation plans: A preliminary study of French laypersons’ views”, Marco Heimann and his colleagues from Toulouse (Capitole University) reported the findings of a study on the acceptability of senior executive compensation plans. They identified two qualitatively different views that they called: Acceptability mainly depends on extras, and Acceptability mainly depends on base salary.

In the fourth paper, entitled “Portuguese people’s views regarding the legitimacy of bonuses for senior executives in time of global crisis: A preliminary study”, Joana Margarida Sequeira Neto from Oporto (Catholic University) explored and mapped the views of Portuguese laypersons regarding the legitimacy of bonuses for senior executives. She found that the most common positions were that executive bonuses were either never legitimate or not very legitimate.

Moral Science

In the first paper of this section, a paper entitled “Cognitions about friends' opinions in moral information integration”, Wilfried Hommers and his colleague from Würzburg showed how two major theories of moral judgment (Kohlberg's stage theory and Anderson's theory of information integration) can be unified. Results in contrast to expectations from stage theory were found, and their data supported the averaging model of information integration.

In the second paper, entitled “Condoning aggressive behaviour in sport: A comparison between professional handball players, amateur players, and lay people”, Eric Fruchart and his colleague from Arras showed that a majority of lay people considered that violently pushing an opponent during a game was never condonable but that a majority of professional players considered that it is sometimes condonable.

In the third paper, entitled “Young Indians' views on the appropriateness of the death penalty as a function of circumstances of crime: A preliminary study”, Shanmukh Kamble from Darwhad (Karnatak University) and his colleague showed that among all Indians, irrespective of their religious background, support for the death penalty was high, in particular when the crime was rape or homicide, culpability was fully established, and the defendant was a recidivist.

In the last paper, entitled “Resentment, forgiveness and revenge among violent people incarcerated for property offenses”, Ana Cristina Menezes Fonseca from Oporto reported the preliminary findings of a study conducted among incarcerated people, which examined the relationship between lasting resentment, willingness to forgive and willingness to avenge on the one hand, and level of violence (severity of the harm done) on the other hand. She found that more violent offenders did not differ much from other offenders regarding the level of immediate resentment they experience just after having been harmed but they differed from them in the management of this emotion.

Political Psychology

In the first paper in this section, a paper entitled “Venezuelan adults' views on the indivisibility of Human Rights: A preliminary study”, Ana Gabriela Soares Guedez and her colleague from the Institute of Advanced Studies (EPHE, Paris) showed that Venezuelan people considered that enjoying one basic right (e.g., enjoying freedom of speech) was better than enjoying no right at all, and that enjoying two basic rights was better than enjoying just one, but that only the complete enjoyment of four basic rights

(Right to Privacy, Civil Liberties, Equality, and Social Protection) can be considered as full enjoyment of human rights.

In the second paper, entitled “Views regarding national policies about illicit drugs: A pilot study among people living in Bogota”, Wilson López López and his colleagues from Bogota (Pontifical Javeriana University), showed that people in Colombia have at least six very different views regarding the control of soft and hard drugs at the national level, and that public opinion in Bogota seems to be at variance with current public policy regarding the management of the illicit drug issue.

Health Psychology

In the first paper in this section, a paper entitled “A functional measurement approach to the Children’s Anxiety and Pain Scale-CAPS: Contributions to its construct validity”, Joana de Castro Gonçalves and her colleagues from Coimbra provided additional evidence for the construct validity of the CAPS, based on differences in integration patterns and in the relative importance of upper and lower face features found among the CAPS-pain and the CAPS-fear subscales.

In the second paper, entitled “Message framing effects on breastfeeding attitude: A functional measurement experiment”, Esther C. Bakker, from Heerlen (Open University of Netherlands), and her colleague showed that the effect of breastfeeding-promoting messages on women was complex. Gain framed messages yielded a more positive attitude when low impact advantages were presented, whereas loss-framed messages were more effective in high impact health advantages.

The last three papers dealt more specifically with ethical issues. In the third paper, entitled “Judging the acceptability of surrogate motherhood: An exploratory study”, Charlotte Petitfils and her colleague from Toulouse (Jean-Jaures University) showed that a majority of people consider that surrogate motherhood, at best, poses some moral problems, and, in most cases, must be banned; in particular, each time the surrogate mother lacks autonomy, and/or her husband disagrees with the procedure.

In the fourth paper, entitled “Acceptability of adolescents’ abortion: Effect of religious involvement and current legislation on people’s views”, Félix Neto, from Oporto, and his colleague showed that the percentages of people endorsing the always unacceptable position regarding adolescents’ abortion were higher among regular attendees of religious service and among Portuguese participants than among other participants, and that the ways respect for religious tradition and respect for current laws impact on people’s views regarding abortion were independent the one from the other.

In the fifth paper, entitled “The acceptability of physician-assisted suicide as a function of circumstances: A preliminary study of Turkish students’ views”, Asli Bugay, from Ankara (TED University) and her colleagues explored the views of young Turkish people on the acceptability of physician-assisted suicide (PAS) in the case of patients suffering from intractable pain or in a state of complete dependence. They found very contrasted positions. A relative majority of participants expressed the view that, irrespective of circumstances, PAS was never acceptable whereas, for a substantial minority of participants, PAS was practically always acceptable under the circumstances described in the scenarios.

Cross-Cultural Psychology

In the first paper in this section, a paper entitled “The impact of skin tone on perceived facial beauty”, Germano Vera Cruz, from Maputo (Eduardo Mondlane University), and his colleague showed that if skin tone contributed to judgments of beauty, its contribution was much weaker than the contribution of the shape of face. In addition the impact of skin tone on judgment was similar among Mozambicans and among the French.

In the second paper, entitled “Cultural differences in the appraisal of stress”, Bogdan Popa, from Bucarest (private practice), and his colleague reported the findings of a study that examined the form of the relationship between estimated stress level, on the one hand, and situation strain, personal resources and social support, on the other hand, among students from a collectivist culture (Tunisia), and compared the pattern of results with the one already observed among students from an individualistic culture (France).

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