

beryllium clusters by Heaven, Merrit and Bondybey. They point out that the binding energy for  $\text{Be}_2$  is  $930 \text{ cm}^{-1}$  and that for the heavier  $\text{Mg}_2$  is less than half at  $430 \text{ cm}^{-1}$ . These can be compared to the covalently bound  $\text{Li}_2$  having binding energy of  $8517 \text{ cm}^{-1}$ , and the van der Waals dimer  $\text{Ne}_2$  with a binding energy of  $29 \text{ cm}^{-1}$ . More interestingly, the optimum internuclear distance in  $\text{Be}_2$  ( $2.54 \text{ \AA}$ ) is shorter than that found in  $\text{Li}_2$  ( $2.67 \text{ \AA}$ ). Of course, chemists do not worry much about metal clusters, and if not, a 'beryllium bond' may have been defined to highlight the uniqueness in its interaction in comparison to magnesium (van der Waals) and lithium (covalent). The internuclear distance in  $\text{Ne}_2$  and  $\text{Mg}_2$  is closer to the sum of their van der Waals radii. Aguado and Farrold discuss melting and freezing of metal clusters. Another fascinating fact from their review: The melting point of Au clusters ( $\text{Au}_n$ ) decreases with the size and it could be liquid-like if  $n$  is small. Indeed, there are molecular clusters which behave either like liquid or solid, and benzene clusters are a good example. Theoretical predictions of their behaviour is probably still in its infancy.

Multidimensional spectroscopy has been developed in all spectral ranges beyond the traditional radiofrequency NMR spectroscopy. Wright reviews the recent progress in multiresonant coherent multidimensional spectroscopy. Min *et al.* review imaging techniques based on coherent, nonlinear optical spectroscopy. He and Marguet outline results from fluorescence correlation spectroscopy used to detect nanodomains in living cell membrane. Digman and Gratton review 'lessons in fluctuation correlation spectroscopy'. While these reviews are about the ever-expanding advances in analytical and spectroscopic techniques, Sanchez-Ruiz discusses the importance of the 'classical' differential scanning calorimetry in probing free-energy surfaces. Molecular biophysics is an important area in physical chemistry today and nearly half the articles in this volume are related to this area. In particular, amyloid fibrils which are involved in neurodegenerative and other diseases are the focus of two reviews. Tycko reviews the solid-state NMR studies on their structure, and Straub and Thirumalai review a molecular theory of their formation.

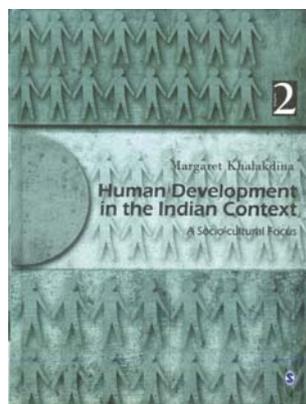
Each of the reviews ends with useful summary points and future issues. The 30 reviews collected in this volume point

to the wide-ranging interests in physical chemistry today. Chemistry is considered the molecular science and clearly physical chemistry is concerned with molecular-level understanding of nature. Whether it is the abundance of CO in the universe, or the molecular theory of amyloid fibril formation, this volume covers it. Indeed, this volume should be in the library of every academic institution involved in teaching and research.

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**Human Development in the Indian Context: A Socio-Cultural Focus, Vol. II.**

Margaret Khalakdina, New Delhi, Sage Publications India Pvt Ltd, B1/I-1, Mohan Cooperative Industrial Area, Mathura Road, New Delhi 110 044. 2011. xxxv + 402 pp. Price: Rs 795.

In this book, the author presents the concept of socialization in alternative paradigms. She writes based on an extensive literature review from various disciplines and presents the material in an exclusive yet cohesive manner. The perception of inherent processes from alternative para-

digms gives a completely new view and brings to fore issues so far subliminal and concealed.

The process of socialization in the final analysis moves toward an understanding of self and identity. This in turn leads to further vicissitudes in the psychological, economic, social, demographic, political and other fields of human relevance. The author places the emphasis thus on the process of socialization which occurs right from the neonatal stage. The spiritual and cultural values imprint in the social values acquired and these in turn influence other actions as well as are influenced by cognitive, environmental and psychological factors.

Other important impacts are through the processes of globalization and technological advances which have led to and are leading to several key changes in family structure and perceptions of awareness of the self. With the tremendous changes taking place in social structures, in family, relationships and other social institutions like marriage, it is only natural that the traditional processes of socialization undergo changes and bring fundamental shifts in the way people acculturate themselves. Acculturation, assimilation, amalgamation, integration, adaptation and various other mechanisms are intricately braided into the socialization process. The author traces these and many other influences on the socialization process and overall human development, especially with reference to the Indian context.

The initial chapters set the tone for the keener aspects of the process of socialization, the key players and the interactions between them and the dominating features influencing an individual throughout his/her lifetime. In the first chapter the anthropological derivations of the socialization process and the validity of trying to find similarities among societies in the framework of changing emphasis on socialization concepts are discussed. In the Indian setting various factors such as caste, ethnicity, religion, education, occupation, etc. impact the socializer. The interactive process in socialization regarding the individual and mature adult underlines the cognitive reconstruction of the socio-emotional environment monitored by innate phylogenetic characteristics and epigenetic rules of internal motivation. This modifies constructs of the received messages according to the verbal and nonverbal

## BOOK REVIEWS

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feedback and directs or is directed to expected modes of behaviour. The self-energy flow is toward adjustment or maladjustment. The author draws on Freud's psycho-dynamic approach to explain the process in interactions. The entire process utilizes the idea of changes in knowledge, which is continuously additive and provides a generic updated frame of reference for understanding. The chapter further gives an overview of the different frames of socialization and the theoretical concepts which include psychoanalytical, behavioural, the cultural-ecological and topological models.

The actors in the socialization process are those who nurture and those nurtured. The outcomes are the products of the interactions. The author discusses in the second chapter the locus of power where the male plays the instrumental role in making decisions, asserting his hierarchical position in the family and lineage, and the female plays the expressive role. Tasks are prescribed and proscribed. In the Indian context, the author weighs the changes exuded by urbanization and modern milieus which have affected the structures of family networks. The author talking about the Indian context, gives simplistic definitions of the Purusharthas to describe the effects of religion on social structure and social relationships. She talks about philosophical belief system, alternative approaches like Ayurveda, which have abiding relationship to some supreme being or values. The author also freely cites Freudian stages applied in the Indian context – this exercise however seems out of place although several stalwarts in the psychological field have studied our society and personality structures in the context of psychoanalysis.

The third chapter is on 'engendering the female'. The psychological dimensions of the female in her varied roles are vast – her alignment with values of modernization creates familial conflicts, but again has more autonomous emotional assertion. The Indian societal fabric is stretching over the generations to accommodate diverse changes and assimilating in the process newer perceptions of male and female and their transforming attitudes. The several organizations for the empowerment of women in different parts of the country give an impetus to the developing socio-economic status of women through literacy, skill-based training, and access to facilities, etc.

Such self efforts contribute to a gain in power and equity.

According to the author, development takes place in the psychological domain, in the social history and in the individual's socio-cultural context. The differing psychological make-up leads to different formations through various circumstances leading to the unique characters and personalities. Due to lack of sufficient empirical data in this context, the author has theorized that psychological keenness has led to competence based on abilities of decision-making, and that the affect and effect of nurturers are important inferences in reinforcing certain competencies and in deflecting many others. The normative sex-role prescriptions have ingrained the identity in the social set-up and in the socio-religious norms. Longer bonding, dependent relationship, in-family therapy and others speak of a complex matrix. Critical development happens through these traditional sieves and later through the mobile outcomes.

By far the most important aspect of an individual's development is the culture to which she belongs. Culture is not a one-time occurrence but almost an archetype, a generic origin in the phylogenetic traits that all individuals share. Empirical evidence in this context too is insufficient to substantiate the occurrence of systematic and continuous behaviour. The cultural apparatus also articulates the standard of living and quality of life dominating the ethos of the Indian in the specific ecology. Goals are oriented to life-affirming values of humanism and asceticism, and the family despite distension still being the nucleus for the continuation of the human race and the primary transmitter of cultural norms. The 'I' domain versus the 'others-before-I' domain offers a clear perspective of the cultural force, according to the author.

The Hindu idea of development is considered more a flow from one stage to another rather than discrete steps to be followed in a linear fashion. The life cycle is seen as a sequence, as an interaction of generations, on a bed of '*desa-kaala-srama-guna*'. Physical, physiological, social, psychological, cognitive development, learning, perceptual processes and thought patterns are governed by the nature and nurture. As one moves through the different stages of life, various markers are met and the individual truly proceeds toward maturity.

These significant domains provide a holistic nurture toward self-awareness and a sense of identity.

In the final chapter the author envisions a future focus. Indigenous sources, innovative data, economic and political influences, dynamically changing lifestyles, challenging scientific and technological influences, incorporation of Indian philosophical and socio-psychological constructs are at the helm of the discussion in this book regarding the socialization process. There is a need for an interdisciplinary view of concepts to present a holistic view. The overlapping concepts of psychology, sociology and anthropology can be fused to form constructs which can be significant markers for the social processes so that different areas can be accessed easily.

The author speaks about a need for examining the Indian context through a lens other than the dominant Western frameworks. Contextually oriented research focuses on keen issues like economic deprivation, and deprivation in the psychological capacities could even provide an understanding of opportunities, resilience, cognitive potential and others. Breaking the disciplinary barriers would lead to an opening of the pool of academic, social, cultural, economic, political and psychological resources.

This book definitely offers a fresh reading, adopting an inclusive method. The author draws heavily from psychoanalytic and other Western-oriented theories, and cites these ideas to understand the Indian context and psychological milieu. Much of the psychological literature cited has been gathered from previous decades and less of contemporary studies is consulted. One would also expect that since she refers to the 'Indian context' some examples are also drawn from the rest of India and she did not rely exclusively on the North Indian setting. Though we might ask what the final goal of the research work presented in the book is, the author definitely succeeds in effectively compiling diverse ideas and attempting to present a socio-cultural focus.

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