

**INDIGENOUS KNOWLEDGE:
AN EPISTEMOLOGICAL EXPLORATION CENTERED ON
THE SANTHAL BUILT-FORM**

By

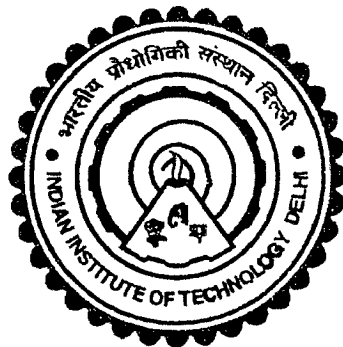
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Submitted

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Doctor of Philosophy

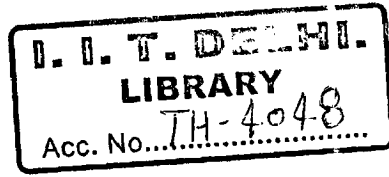
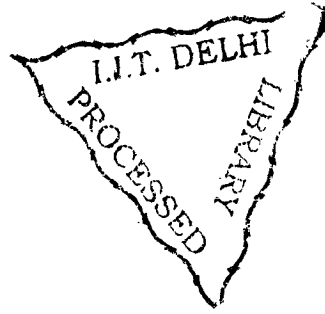
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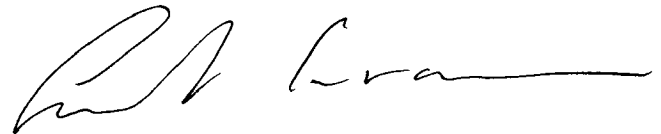


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Certificate

This is to certify that the thesis titled '**Indigenous knowledge: An epistemological exploration centered on the Santhal Built-form**', being submitted by Satarupa Dutta Majumder to the Indian Institute of Technology, New Delhi, for the award of the degree of **Doctor of Philosophy**, is a record of bonafide research carried out by her under my guidance and supervision.

The results contained in this thesis have not been submitted to any other university or Institute for the award of a degree or diploma.



Date : 10 November, 2010
Place : IITD, New Delhi

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ABSTRACT

The thesis examines the significance of indigenous knowing / being through an exploration of the epistemology of the Santhals, who are the largest group of the *Mundari / Kherwari* subfamily of the Austro-Asiatic (AA) language speaking family inhabiting the Chota Nagpur Plateau of Eastern India since very early times. It approaches indigenous knowledge (IK) through the case of the Santhal built-form enquiring into its very nature, construction and acquisition. Contexted against the biospheric crisis and influenced by post-development thought the thesis also links sustainability with indigenous knowledge systems utilizing the systemic approach based on the principles of entropy and nonlinear dynamics (Sachs 1992, 1999 ; Escobar 1995, 2000 ; Gudeman, 1986, 1990, 2001; Ingold 1995, 2000 ; Bateson 1972, 1979, 1987; Prigogine 1977, 1978, 1984, 1987).

The basic theoretical presumption is that *indigenous knowledge systems are not primitive, irrational or pre-logical*. As indigenous paradigms of knowing / being they are inherently more ecologically sustainable. Since the material culture of any human community reflects its symbolic or cognitive aspects, the thesis has assumed that a contextual analysis of the Santhal built-form / dwelling will throw light on the nature and formation of their knowledge system. Accordingly, the major research questions of the thesis, revolving around the exact nature, characteristics, mode of construction /perpetuation and ecological sustainability of this knowledge, are taken up in the context of Santhal conceptualization/ experience of space, place-

sense, place-making and identity-formation since built-form or dwelling is intrinsic to the place-sense of a community.

The thesis provides a brief ethno-history of the Santhals primarily based on the District Gazetteers and related secondary sources. This background exploration attempts to locate the Santhals in time and space and thus properly situates the present epistemological exploration. This necessitates an assessment of the various processes – pre-Colonial, Colonial and post-Colonial - that might have impacted the Santhal knowledge system, and a delineation of geographical / ecological characteristics of the Santhal habitat within the broader Chota Nagpur terrain of the Colonial and free Indian state.

The thesis handles the research questions outlined above through an approach which is oriented around two main axes :

- i) an empirical field study of the different aspects of the Santhal knowledge system focused on the built-form* and the fabricated domain in general
- ii) the development of a theoretical framework* which explains both the mode of indigenous knowledge construction and its inherent sustainability.

The overall theoretical orientation of the thesis is postmodernist in attempting to explore and create space for alternative rationalities or subjective realities. Its approach is interdisciplinary bearing a practice/embodied orientation and discursive nature.

The *empirical field study* conducted in several villages in and around Santiniketan in the Birbhum district of West Bengal, a number of villages in the Dumka district of Jharkhand and a few villages in and around Silda area in the West Midnapore district of West Bengal,

primarily centered on the homestead and extended into other aspects of the fabricated domain as well. The built-form was conceptualized not just as material culture or an artefact but a *place* as well. *Based on the field observation, the Santhal act of building and dwelling was seen to exist as a dynamic, evolving, multidimensional semiotic formation. The complex interconnected, enmeshed set of beliefs, practices and skills (bps), converging on the built-form appeared* as a subset of a larger knowledge pool pertaining to other realms of life. *Just as Santhal activity alternates between the technical and the symbolic, the associated knowledge also alternates between the procedural and the propositional.*

Field research also brought out the inherent *inclusivity* of the *indigenous knowledge system*. The thesis further examines this in the broad cultural landscape and the patterns/interrelationships that exist amongst the Santhal house, the village-setup, the ecology and the wider cosmological connotations. *Based on critical comparisons between the landscape, built-form and artefact - the thesis dismantles the social- natural as well as the nature-culture boundaries towards a more fundamental /organic reconceptualization and inclusive/unequivocal redefinition of indigenous (Santhal) knowledge system as an ecosocial or ecosemiotic continuum showing varying degrees of fabrication / constructedness. Based on field research, the thesis posits that not only the material culture (built-form, artefacts or consumables) of an indigenous group but the whole of its cognized spatio-materiality should be considered part of its knowledge system.* It highlights that the local environment /landscape, the built-form, the artefacts, the consumables do not comprise well-demarcated aspects or domains of Santhal existence but represent a continuum that emerges in different degrees through their *environmental behavior / resource appropriation*. The thesis

also posits that the Santhal *community /sociality, with its distinctive identity, is integral to the generation/ maintenance of this continuum.*

The field research supports *the notion of embodied cognition - and the closely related concepts of distributed and situated cognition - and therefore a grounded socio-cognitive framework of knowledge construction for the Santhals.* In this the thesis specifically draws from the emerging notion of embodied cognition as found in the work of scholars like Hutchins (1995), Clark (1994,1997, 2001), Varela (1991), Lakoff and Johnson (1999) etc. The *practice - or action-* oriented theoretical positions of Bourdieu (1972), Berger and Luckmann (1967), Giddens (1984) and in more recent times Escobar, Descola, Ingold , Gudeman etc have also influenced the thesis research. Based on these influences, the construction and perpetuation of knowledge is explained as a collaborative, contextual/situated, embodied meaning-making enterprise. The framework emphasizes the *meaning making* aspect of such a system, as well as its *ongoing dialectics* and *ecological structuring.*

The *theoretical model developed to analyze the inherent ecological sustainability of the Santhal knowledge system* falls broadly within the fold of the *systems / sociocybernetic* approach as pioneered by Bateson (1972, 1979. 1987, 1991) since the Macy Conferences. Following up on this, the thesis takes up Prigogine's *far-from-equilibrium systems model* as the most appropriate model for analyzing the Santhal knowledge system in view of its open, energy-processing ecosocial character (1977, 1978, 1984, 1987, 1997). *This far-from-equilibrium model helps to gain a systemic perspective into the ecological sustainability of the Santhal knowledge system, through establishing a dynamic, evolving, self-organizing and emergent epistemology for it .* Through the systemic sustainability analysis of the Santhal

knowledge system, the thesis highlights *that entropy has a very paradoxical character and it contributes positively only within a specific range*. It indicates that though nonlinear open ecosocial systems tend to become more ordered and differentiated with increasing entropy production, they are prone to chaos as well, if the entropy is not kept within reins. There is a narrow systemic space where order is not accompanied by chaos, and stability by stagnancy. This is the *healthy range* within which the entropy should operate *if the ecosocial system has to remain vibrant, ordered, dynamic and yet stable and sustainable*. If the entropy production dips below this range the ecosocial system will stagnate, and if it exceeds the range unsustainability and chaos are unavoidable. The Santhal knowledge system achieves sustainability by being located within this systemic range.

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