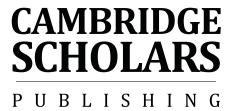
Indian Geography in the 21st Century

Indian Geography in the 21st Century: The Young Geographers Agenda

Edited by

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Indian Geography in the 21st Century: The Young Geographers Agenda, Edited by Ravi S. Singh

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In the memory of Bernhard Varenius (1622-1650 CE), a genius geographer who died young.

* * * *

Dedicated to the spirit of the deans and doyens of Indian Geography.

* * * *

For the future generation of Indian geographers.

VIEWS ON THE BOOK

"Past intellectual trajectories and knowledge productions require both, a sense of historical embeddedness of the discipline and a constant questioning and reassessing the constructs therein. Agendas and visions have to be continuously questioned and changed, reconfigured and renegotiated and the onus rests primarily on the younger generation of the scholars. The present book is an important contribution towards this responsibility. The critical questioning of some of the established concepts and practices in terms of theory and methods is the highlight of the book. In doing so, there is a desire to be creative and bring in what can be termed as 'insiders' view'. The book is a refreshing break from some of the the past writings in the discipline'.

—Saraswati Raju,

Professor, Jawaharlal Nehru University, India

"It is refreshing to see the awakening, concerns and marching of young geographers in India those involved in making and creating geography as beautiful lifeways in the contemporary era of global humanism and crosscultural understanding. This book presents a radiant path for realization and action, illustrated with various ways and forms of current practices in contemporary geography".

-Rana P.B. Singh,

Professor of Cultural Geography, Banaras Hindu University, India

"No other discipline represents the project of modernity better than geography in India. It flourished with spatial and regional planning, and continues to excel in positivism and applications of remotely sensed data with the aid of Geographical Information System. At the same time, Indian geography reflects age-old and deep-rooted hierarchies that ail Indian social milieu. Age hierarchy – or geriatric rule - supersedes metropolitan dominance and gender disparities and disempowers innovative approaches in the name of respect for experience. By encouraging a set of younger geographers to think about their discipline, and by bringing their work together within its covers, Ravi S. Singh has done a service to Indian geography. I hope that this book will begin a reflexive engagement with

geography, without which we cannot set the agenda for the future of the discipline."

—Kuntala Lahiri-Dutt,

Fellow, The Australian National University

"....While editing essays, Ravi S. Singh, one of the dynamic young Indian geographers and also a keen observer of the transformation of Indian geography, has not only proceeded with conceptual rigour but also with deep understanding of diverse and complex Indian geographies. Indian Geography has to be considered as multi-dimensional and multi-sectoral. The editor has brilliantly integrated different fields of Indian geography. This volume provides a timely resource on present geographical practices and potential solutions for developing and sustaining high quality geographical education systems in India. It includes the main element of a roadmap to improve India's geography education in response to the demand of growing economic liberalization and rapidly changing Indian societies. These papers are essential readings for both students and teachers of geography in India. The volume offers sustainable educational capabilities to various cross-sections of Indian Geography."

—R.B. Singh,

Vice-Chair: IGU Commission on Biogeography & Biodiversity, Secretary General: NAGI, &

Member, IUGG-IGU Joint National Committee, INSA

"The volume attempts to bring to the fore ideas being grappled by young and mid-career geographers from key institutions in India. Such interdisciplinary approach helps to situate key arguments about the existing status of geography into perspective. The thematic exposition provides ample scope for a balanced approach towards issues that plague the future existence of geography in India. The eternal conundrum of 'space' versus 'region', the ever deepening divide between 'physical' and 'human' and the constant poaching of themes 'geographical' by all others to pass it off as 'environmental' demands critical debates. Defining the future agenda is possible only by going beyond the stranglehold of past 'personalities' and ideas and attempting a critical assessment of the state of Indian geography."

—M. Satish Kumar,

Coordinator India Initiative School of Geography, Archaeology & Palaeoecology Queen's University Belfast, United Kingdom

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PREFACE

The 21st century is the beginning of a new world in which 'reality' is passé and 'realities' of multiple possibilities are accepted norm. In academe too it needs open-hearted welcome, acceptance and adoption without any sort of prejudiced reservation. Disciplinary water-tight compartmentalization similarly is passé. Under the sway of emerging approach to knowledge creation, disciplinary boundaries tend to collapse; at best disciplines provide simply the context and orientation. The overarching and all embracing stretch of the virtual world rejects the age related superiority/inferiority. It seems again that edge of age over ability is passé as the present era is of ageless concepts. Schwartzberg (1983/2009) and Mukerji (1992/2009) openly acknowledged how the (undue) dominance of old geographers by virtue of their sheer seniority is taking its toll in India. No wonder, then, that younger professionals do not get their due place (both in informal interactions and formal academic space) and encouragement to express their minds. There are end numbers of instances of even snubbing a new idea by age-old and tested technique of posing the rotten remarks like, "Is it geographical? What is geographical in it?" Above all, the ultimate important issue is the professionally correct stand and creative line of action. No matter, whether that is of a seniormost or a professional beginner. If a discipline has to exist with full-life and academic vigour, youngsters will have to be given their space, opportunity and required support. It is the time to acknowledge many turns that were perhaps not even imagined before they actually happened.

If the youth is being given chance in other walks of life, e.g. sports and politics, what is wrong in adopting the same in academics? The same is needed in academics too where youngsters' ideas are rubbished not because they lack substance but they are said by someone who is not "enough old". Does it not lead to ask a natural question, "Is wisdom a function of age?" The academe, especially Indian Geography, will have to do away with the *Yayati* principle (of the ancient Indian tradition) that gives edge to experience over ability and adult age over youth. If we take journalists' voice representing the people, Mrinal Pande, the Editor of *Hindustan* (a Hindi daily), titled one of her articles as *Kripaya anen den unhen aage!* ("Please let them come forward"). Her advocacy of the youth therein, indicates required attitudinal change towards them, and speaks

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scores about the change in the offing (cf. Pande 2007). That also reflects faith in youngsters' ability in making things happen and also an assurance that the future is in worthy hands. It is already happening in the West where younger academics continue to contribute the most in the recent debates. Such examples are in geography as much as other disciplines. Noble ideas have universal adoption and there is no reason why such a thing can not happen in Indian Geography.

But, so far, it has not happened. On top of that there are a variety of valid limitations which together disallow space to young professionals to freely/liberally express their ideas on the past, the present and the future. Whereas the matter of fact is they are the ones who have to face the near future. Hence, it is crucially relevant to know their views. Ron Johnston (1985, 25) observation, "Future of geography depends on its future practitioners", the source of inspiration for the present work, is perfect statement clarifying the need and the value of thoughts of younger professionals. That explains the worthiness of this book. A total number of sixteen contributors belonging to different institutions located in various corners of India have written this book jointly. It need to be mentioned explicitly that the purpose of the book is neither to present a review of the works nor to present a progress report as such, all contributors try to raise issues aiming at the future scenario. This book could have been authored singularly but was not done so purposefully. Seeking the future of an academic discipline is not an individual enterprise and therefore impossible singularly. After all how a discipline should be or ought to be is matter of collective vision of those who will take the same into the future. Positive criticism is incomplete as long as not complemented with a future agenda. And, the future agenda again should not be high-pedestaled and merely prescriptive. Rather it needs to be practice-able in a sustainable manner to ameliorate Indian geography from its blamed, rightly to a great extent, status for being copy of "westernised" to clear identity of its own. Such statement(s) of action can come from younger generation of practising professional geographers who, as refereed earlier, have to the take the Indian geography into future.

Dealing with present and the past is common while looking into future is rare. Recently, I did an anthology *Indian Geography: Perspectives, concerns and Issues* (Rawat Publications, Jaipur/New Delhi, 2009) with the sole purpose to bring together scattered previous works on Indian Geography so that emerging ideas from past works are read as interconnected train of thoughts. In this book should be read as a sequel to that which looks into future in the backdrop of an assessment of the past and present feats of academic achievement. Respective contributors have

not assessed the individual makers of modern Indian Geography instead their academic ideas pertaining to the works considered in individual essays. Thus, this volume is an attempt to establish dialogue between the past, present and future Indian geography. Honestly speaking there has been clear lacking of such dialogues.

This book begins with an introductory chapter subtitled "envisioning the future Indian geography". Rest of the essays are organised into five parts which are not equal either in terms of consisting chapters or their length. In away it is a reflection of prevalent lopsidedness within the discipline as in practice in India. Part I, "The Contextual Orientation", has three essays, by Ravi S. Singh, A.P. Mishra and R.K. Maiti, which in a way provide a background to the following discussions. In part II, "Reshaping Geography Education", the included three essays by Sarfaraz Alam, Yemuna Sunny and P.K. Ryngnga, respectively, look at the state of geography education and also delve into the ways of "reshaping". Part III "Resurrecting Physical Geography" too comprises of three essays. These essays, authored by Sudip Dev. L.N. Satpati and N.C. Jana, though examine issues with reference to different sub-fields, "resurrecting" of physical geography by bringing it closer to human and society. The following part IV "Retrieving Human Geography" is the largest part of the book with eight essays by Taruna Bansal, Sohel Firdos, Ravi S. Singh, Aparajita Chattopadhyay, Archana K. Roy, Vijaya P. Khairkar, Arun K. Singh and Bikramaditya Kumar Choudhary, respectively. They all seek to "retrieve" respective sub-fields. Emerging ideas in different essays in an edited volume often are left unattended and they are thus lost for sure! We did not want it happen with the present one and therefore a separate part V: "The Summum Bonum" is included. It has the concluding essay, titled "Designing a working agenda for the 21st Century", that attempts an interlinking of thoughts emerging from the preceding essays. At the end, an appendix is provided which contains the select events and publications. It is perhaps the first attempt of its kind and part of an ongoing work. Hence, it is quite likely that many deserving entries have not found place. I would be glad to receive and acknowledge any such information, by learned readers, which improves this list.

I can not claim the book in your hand to be all-inclusive, neither in terms of themes and sub-themes covered nor the issues on agenda outlined and discussed, as no attempt is complete and conclusive. Yet the success lies in the relevance and strength of the central objective, how honestly are they pursued and how do they contribute to the advancement of the discipline concerned; and, that way to the greater body of knowledge. That would be decided by the readers and reviewers. The earnest wish of all

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contributing authors is to see this book contributing to the dialogue, particularly among the young geographers, for which Indian Geography has shown a very low-appetite.

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Honestly speaking, the idea of doing a volume exclusively by young geographers, who have recently made their entry in academia as professional geographers and shall play pivotal role in unmaking/remaking of the Indian Geography in coming decades, came to my mind while reading the Future of Geography edited by Prof. R.J. Johnston—one of the leading prolific international geographers. As mentioned in the preface, his comment that "future of geography depends on its future practitioners" became the guiding idea to imagine and work on this book. Hence, my first indebtness is towards him though we have never met in person. It would have simply not been possible to do this work if the ready support from contributing authors were not received. Their thoughts and concerns have ultimately shaped the book as the readers find. If this book is able to get good response, the credit goes simply to all of them. It is my privilege to thankfully acknowledge all the contributors to the present book. I also take this opportunity to appreciate the cooperation extended by many colleagues who could finally not contribute for one reason or the other.

In my school days, my basic interest lied in (Hindi) literature and history owing especially to my father—an avid literature-lover—who had studied literature and history at the university. The credit of turning me to, geography goes to my first geography teacher (Late) Dr. K.N. Upadhyay, and my interest towards geographical thought to my teachers and academic mentors (Late) Prof. Aijazuddin Ahmad and Prof. Rana P.B. Singh. I bow my head to them in reverence as words can not convey my obligation to them. In my professional life, interactions with seniors like Prof. K.R. Dikshit (Pune), Prof. Kashi N. Singh (Varanasi), Prof. M.H. Oureshi (Delhi), Prof. H.N. Sharma (Guwahati), Prof. Saraswati Raju (New Delhi), Dr. Kuntala Lahiri-Dutt (Canberra), Dr. R.B. Singh (Secretary General: National Association of Geographers India, NAGI, Delhi), and Dr. M. Satish Kumar (Belfast); contemporaries like Dr. Anu Kapur (Delhi), my colleagues at the Banaras Hindu University Prof. Rana P.B. Singh, Prof. P.R. Sharma, Deepayanji, Arunji, Sarfarazji, Bikram, and Aparajita (formerly at our department and now with IIPS, Mumbai) have been gratifying learning experience. I would like to give additional and special thanks to Dr. Arun K. Singh and Dr. Sarfaraz Alam who helped me in the editing of two essays of this volume.

Books are springs of ideas which play direct role in the thought formation. My adda for relishing the multi-disciplinary pabulum is "Harmony"—the bookshop at the famous Asi Ghat of Varanasi—always accessible courtesy the ever-smiling proprietor friend Mr. Rakesh Singh, I acknowledge my indebtness to him. My thanks are due to our departmental library in-charge Mr. Abhishek Kumar (SPA), and Mr. Chhabi Nath Ram and Mr. Vinod Kumar Yadav of the National Geographical Society of India for generously providing ready assistance. I need to acknowledge the help from Mr. Ram Kumar Tiwari, research scholar at our department, for redrawing a few illustrations used in this book. I express my gratefulness to my parents Shri Birendra Prasad Singh and Smt. Shanti Singh who have always been the source of my moral strength. It is my sincere duty to express my gratitude to Cambridge Scholars Publishing, CSP for showing interest in this project. I am personally thankful to Carol Koulikourdi, Amanda Millar, and Soucin Yip-Sou, at the CSP, who provided every help and extended ready support at every stage to get this book published in the present form in a very short period of time. My wife Dr. Pratibha Singh and son Abhisht Adityam deserve special thanks for bearing with me while the editorial work of this book was on. Success of the book is a joint achievement of we all contributors; whilst the moral responsibility of all commissions and omissions, if any, rests with me.

> Ravi S. Singh Banaras Hindu University Varanasi

- "Future of geography depends on its future practitioners".

 —Ron Johnston in *The Future of Geography* (1985, 25)

CHAPTER ONE

INTRODUCTION: ENVISIONING THE FUTURE INDIAN GEOGRAPHY

RAVI S. SINGH, BANARAS HINDU UNIVERSITY

You can see things; and, say 'why?' But I dream things that never were; and I say 'why not?'

—George Bernard Shaw (1856-1950) in *Back to Methuselah* (1921)

Introduction

A group of scholars believe that "promoting innovation and Exciting Geography is essential component for the future success of the subject" (http://econgeog.misc.lit u.ac.jp/icgg/statement icgg.html). The promotion of innovativeness could not be thought of in the absence of "criticality" and thus "questioning" becomes imperative. In other words, "new" takes shape in the womb of "old"; however, questioning the old is a necessary process for the birth of new, and acceptance and promotion of the new nurtures that. Simultaneously, accepting the non-conventional or new is equally necessary (of course, a well considered demarcation of challenging the conventional would be needed in certain specific instances, e.g. the conventional signs and symbols used in the making of maps?). That is how innovation is inculcated and imbued. Both, discarding of the part of "old" that becomes redundant and accepting the "new" are acts of courage and matter of vision. Most of the works we know harp on the present taking the past as the resource. Musings on future have been overlooked by and large. Gradually, a new trend is shaping in Indian Geography—basic and critical issues which used to be the matter of informal backdoor gossips are being brought to formal discussions in the class rooms and corridors and also in academic space(s). Previously, discussing such matters was generally the privilege of the honourable "seniors" during their conversations and occasionally in their addresses. While a few appraisals by overseas' "Indianist" geographers were creative in orientation, A.B. Mukerji (1991/2009) showed the mirror to an identity called Indian Geography which one may like to call blasphemous in terms of its content. tone and pitch. This unfolding of major lacunas "ailing" Indian Geography is worthily followed by a few other attempts (cf. Ravi Singh, ed. 2009). Criticism without alternative ideas create vacuum. Following this idiom, the present book, done by young geographers in India, is a humble step forward in this direction. The purpose of this chapter is to present an interlinking introduction to the seventeen main essays, in selfintrospectory mode of discussion, organised into five parts and the central idea of 21st century agenda of Indian Geography running across. The present chapter discusses the future vision in five main sections to follow: do way with the *Yayati* principle, the contextual orientation, education matters, envisioning future physical geography, and rebuilding human geography.

Do Away With the Yayati Principle

All that is achieved by a society do not form the tradition. A tradition is conscious construction by the concerned society. Naturally that can not be fixed for all the times to come. Accordingly, we find changing traditions over time as much as by space. Academic traditions too undergo the similar process. Emergence of criticality in the field of geography, during the last leg of the 20th century in the Western scholarship, proved to be a conformed change and also attested greater role of young scholars in turning the *Kālacakra* (literally the "time-wheel") on. Interpretation of the past and envisioning the future is a prerogative of the present generation. Hence, questioning past practices should not be taken as malicious and illintended; though, in practice both criticism and praise are taken personally. Criticism (and praise too) in any intellectual or academic dialogue is of the ideas not individuals per se. We all know science is the craft of making impossible imagination come true. That is how science never believes in the "eternity of ideas" rather treats knowledge as partial and tentative, and keeps on improving what we know. These beliefs in the scientific world have ensured vibrancy in all sciences and made them highly spirited.

If we take pride in calling our discipline "scientific", we need not claim for a "spurious science" tag, merely for a "high image" in the society or ensuring (better) grants for our departments or funding of our research proposals, as already indicated by some (cf. Lahiri-Dutt 2005/2009).

Instead we should look forward to inculcate, encourage, practice and promote the scientific temper which is objective, rationale and progressive in its basic nature. While reviewing an edited volume, K.R. Dikshit did not appear happy with the "uncritical" lot among young geographers which engages in admiring the seniors and reminded them to follow the spirit of science, "Let us remember, a critical assessment is far more rewarding than an uncritical acceptance of every thing that the elders do (Dikshit 2002, 112). In this spirit, the elders are expected to take younger geographers and their ideas in a constructive spirit and treat their imagination as creative instead of rubbishing away as immature, impossible, and utopian. Students of geography know at least about Bernhard Varenius (1622-150 CE) who exemplifies the generation of young geographers. He is credited with "distinguishing between general and special geography; and, the mutual dependence of these approaches". He was a futurist par excellence with quite a clear conception of the nature and purpose of future geography (cf. Dickinson 1969; James 1972, 124-126). Faiths in the young voices have been expressed in many contexts even before the onset of the present century. Indian Geography too awaits expression of such a faith in young geographers. After all, how long we can continue with the Yayati syndrome and deny the youth its due. Indian society, badly suffering from the Yayati syndrome, appears emerging out of this regressive problem. And, the upcoming results have also been encouraging. It is not only the young (cricket) team India which have made the nation proud during last few years with its historic achievements; rather it is happening all around—the information technology sector, business, and also the Indian politics which had least scope for representation by youth at the upper level. In addition to the re-elected young parliamentarians, the entry of a good number of youth as the firsttimers in Lok Sabha is an expression of faith by the political parties and also the people in the youth. As far as qualification and competency is concerned, they are surely better than many of their seniors when they were vouth.

So, hoping the same happen in academic disciplines in India, particularly in geography in the present case, is in every sense genuine and justified. It is not to say that young geographers have not been getting opportunity to work and publish research results. Often than not their work is published with their research supervisor, in case of a student, or seniors, in case they are employed. After all we all know the credibility of a tenured, called permanent in Indian parlance; faculty member gets a smoother passage of article/paper in the publication pipeline. As, generally, the quality of paper and significance of ideas become of secondary importance and the

person's status becomes primary. It is one of the issues concerning the professional ethics and morality. Such a situation is indication of lacking transparency and non-adherence to standard professional practices which Schwartzberg (1983/2009) referred to. Honestly speaking, the problem still persists. The West has been able to come out of it to a large extent; it seems the developing countries like ours however will take time.

The Contextual Orientation

You can not argue with someone who denies the first principles.

—Anonymous

No endeavour is without a context. Hence, interpreting the context is as much essential as the endeavours. The following portion of the book begins with the introductory part I entitled "Contextual Orientation". As it is self-explanatory, its motive is to provide a comprehensive background for the discussions to follow in other sections consisting of essays on different themes. Though, the tradition of critical appraisal of the progress taking place in Indian Geography has been rather feeble, yet one can now refer to over a hundred of writings of different genre available. They contain statements, generally of the seniors, on the content and purpose of Indian Geography. Chapter 2 is an effort to elaborate Indian Geography's trajectory, in somewhat different fashion. Instead of presenting a general narrative of the evolutionary history, emerging critical points through the battery of musings are projected. General impression is we have "progressed" considerably during a span of over last eight decades forgetting the fact that this word means not merely "growth"-of institutions, students' enrolment, employment and teachers, books and journals published, professional academic bodies, doctorates in the subject, funding, computers and other equipments, etc.—it carries more important value-loaded meaning involving quality. After all, in spite of these numerical achievements, there is a sense of loss we inherit from the immediate past century. Critics and the concerned feel aggrieved. The loss inherited is immense and varied too attest the works known till date. Worrying truth is, in general, we do not seem interested in the recovery of the loss incurred and identified well. Not knowing the ailment is forgivable but what to say about not taking care even after being informed of that clearly! The second part of this chapter looks for the emerging directions in the present 21st century.

The following Chapter 3 could be read as continuation of the debate introduced in the preceding chapter. Mishra sees the contemporary

geography as "a discipline which deals with the emerging regional spatial dynamics". He well impresses that such a regional dynamics is thrusting up new from of inequalities and injustices which can not be satisfactorily addressed through development strategies in the conventional mode of investigation and research. It enfolds new issues, forces and processes which open up various possibilities for the subject and its practitioners. The need is to radicalise geography, believes the author and argues for "a search of politics... (to)...support and develop in tandem with progressive and emancipatory political commitment". He too expresses faith in "creativity" for the future geography as shown explicitly by Kapur (2004). The geographers are urged to reorient own research work towards ensuring justice to the people and their welfare. That kind of commitment to people's agenda holds the key to raise the status of geography in the developing societies in the near future.

Hindrance in the growth of geography in its basic unified form camouflages its true nature and makes its identity enigmatic (cf. Singh 2008) which is responsible for a confused public image and failure in attracting and retaining talents in higher studies and research. Maiti offers a different orientation in Chapter 4. He argues for resolving and integrating, what he calls "conflicting ideas", essential to upgrade geographic research and enhance geographers' academic status and intellectual esteem and recognition. Based on the his personal experience in working on different themes, this chapter presents discussion on evolution of the methodological philosophy and the present trends, nature of present researches, potential future research in the postmodern context, and the possibility of coherence through cognitive approach is assessed with a few examples from empirical researches.

Reshaping Geography Education

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...geography is first of all knowledge gained...
—Carl Ortwin Sauer (1889-1975) in 'The Education of a Geographer' (1956)
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The underlying importance of education primarily lies in the fact that it has direct and strong implications for individual advancement. And, in turn, it has immense prospect for the realization of a society's amazing potential and aspirations for economic and technological development. Geography for its direct utilitarian value has been one of the integral elements in the education of a person and also to all human inquiry (cf. McDougall 2000). At many occasions the issue of geography education in India has been addressed. Most of them address the problems at tertiary

education level. School education automatically gets neglected. One will have to admit that majority of us have not taken the pain of taking a dip deeper in the water. The sickness reported and solutions prescribed hence prove to be quite general and shallow. Cosmetic treatments do not cleanse the system to make that healthy. And, that is what has happened to geography education in India.

In this backdrop, the part II seeks to bring together thoughts of a few concerned young geographers who feel the need of revamping geography education. The modern school geography as taught contemporarily owes to the British educational system through which it got implanted in India on the European rather the British pattern. Thus, "flourished" the subject since the British period but for a reported decline in the early 1950s. The onset of 21st century has not shown good signs, thinks Alam, in the following Chapter 6 which addresses the state of school geography in India. This paper concentrates on the geography praxis in the upper primary and lower secondary school curricula. It is organised into four main sections. The first presents a brief account of evolution of geography as a school subject. In the next section the recent trends in school geography in India are analysed followed by a scrutiny of the present status and concerns. These discussions lead to identification of the future agenda for young geographers "towards the strengthening the place of geography in school curricula". The author rightly underlines the need of reflecting the rapidly changing world in school geography curricula and urges young geographers to develop an understanding of the "politics behind the curriculum construction".

Text books are very crucial when it is the matter of imparting education especially at school level. While what a text book should contain and what not could be a contested issue on several grounds, role of reading in learning is acknowledged by all. Hence it is essential to make them appealing so that children read them with interest. The issue of text books so far has been treated at shallow level. Sunny in Chapter 5 with a non-conventional approach goes deeper into the problem. She examines text books, especially looking into how geography texts deal with the relationship of human-nature, through her experiences in the course of some workshops and reviews of geography school textbooks. Her essay is organised into three sections. The first of them is a "reflection on the rich enhancement of literature and how text book traditions depart from those". The second examines some nuances of human-nature relations as portrayed in school geography text books. And, the last section is devoted to scan text books of Eklavya—a voluntary organisation working in the

field of school education—created on the basis of pedagogic and social science critiques of existing practices in schools.

Over the years, many positive changes have been noticed in Indian Geography but they tend to be higher education oriented, precisely speaking university-centric. Since the (undergraduate and postgraduate) degree colleges, in terms of the structure of Indian education, are part of higher education; they have benefited from the changes implemented through the University Grants Commission. Otherwise, in practice, to a great extent their position continues to be peripheral and inferior too compared to the universities. The next chapter in this part continues with the spirit of preceding two chapters and also addresses new issues. Central concern with school geography in Chapter 7 marks the continuity and the inserted context of higher education makes the addition to that. The actual focus is on the continuing gaps between geography education in schools and institutions of higher learning. Ryngnga tries to analyse, the prime position of geography in primeval days of its emergence, hallmarks of Indian Geography, quality in school education, "rejuvenation" of the subject at higher level, job market for geography graduates, awareness regarding geography's relevance and potential, and strategies to strengthen school geography, in brief. The last line of her conclusion is a positive note, "...there is hope not just that geography will grow in prominence, but that the students and faculties at Indian colleges and universities will be increasingly enriched by what the discipline can contribute to their institutions' intellectual life and pedagogic mission". Well, this remark could be used to begin an altogether new debate!

Resurrecting Physical Geography

If we do not find anything pleasant, at least we shall find some thing new.
—Voltaire (1694-1778) in *Candide* (1759)

Physical geography—constituted basically by geomorphology, climatology, and biogeography—is fizzling out in Indian Geography should be taken now not merely as caution rather as a hazard hanging around to become disaster! Except in the specialized journals like Indian Journal of Geomorphology, feeble and sporadic frequency of research works is testimony to further slumping down of the state and status of physical geography. One should therefore be not surprised to see a regressive pull in this broader and significant field of geography. Pushing physical geography towards the dark corner is complained and bringing it back into curriculum prominently as it used to be is suggested by many. But for

A.B. Mukerji perhaps no body else has taken the pain of looking into the problem beyond indicating and suggesting some generalities. Negation by senior and senior-most non-physical geographers is capable enough of relegating it to oblivion and is truly termed as "catastrophic". His prophecy "negligence of physical geography will lead to the final collapse of geography in India" (cf. Mukerji 1992/2009) may prove to be right. However, it can not be allowed to happen. Right at this point, will it not be a worthy question to ask that what has been the role of Indian physical geographers in this relegation process? Did the kind of physical geographies we have doing connect to the society and social purpose, etc.? Jog's (2008, 28) remark summarizes the current craze for a technique and unfound genuine dedication for the problem investigated, "The techniques and tools of research gain importance ... at times one wonders if the original topic of research is getting camouflaged in the description of these tools and techniques". To protect our propriety over the territory of physical environment-society interface, we will have to resurrect physical geography. Validity of Mukerji's points is unquestionable and awaits response from physical geographers working in India. The three chapters (8, 9, and 10) constituting the part three offer some ways to achieve this higher goal.

Chapter 8 is very spirited essay dealing with micro-geomorphology. Dey has used innovative personal experiential mode of explaining. He analyses and discusses current geomorphic issues and learning geomorphology, search for new dimension in landform science, geomorphic studies in different micro-regional environments, technical applications: some recent works, and planning for the journey towards the dream destination. In the last section, he urges to reach the current international level target despite a few negativities acting as hurdles. Our aim should be finding out the way(s) to rise above the barriers. That will enable us to produce better works in geomorphology and make us worthy claimant of prestige, higher status and laurels at international level in the future. "Let us dream and work for the brighter future of landform science in India".

Significance of water in a civilisation needs no elaboration. Studies on water from geographical perspective need to be done considering complimentary dimensions: physical environment and the social context. Geology and climatology can benefit our understanding of the nature of water availability; while the social context will provide with demand-supply issues dependant on prevailing water related practices—use/misuse, storage/wastage, and also conservation. In a modern society, the role of state too is seen important as it is the strongest player in policy