

too. Indeed, the coral snakes are spectacular in their colouration. In chapter 13, Gadagkar introduces the concept of mimicry using the example of these snakes. He uses research from India and USA to elucidate some of the existing debates in the field and how they have been addressed by researchers. This chapter is followed by one on birds, with an excellent discussion on brood parasitism. This is the phenomenon by which a species uses another to provide care to its offspring, the classic example being the cuckoo. Using extensive research by Nick Davies and Michael Brook on the European reed warblers and their parasites, the common cuckoo, Gadagkar weaves a fascinating story of exploration and adventure, addressing seven different questions pertaining to the cuckoo–reed warbler story.

The transition from non-caring parents to ones that show care, but eventually quarrel with their offspring is a rather smooth one, as Gadagkar describes using the theory of parent–offspring conflict, proposed by Robert Trivers in 1974, and uses stray dogs to show how we can demonstrate this phenomenon in the field. This chapter is a story of the dynamic mother–pup relationships in dogs, based on work done of Manabi Paul for her Ph.D. Gadagkar puts together the story like connecting pieces of a jigsaw puzzle, and the chapter is a pleasure to read, irrespective of whether one is a dog-lover or not.

In the last chapter Gadagkar provides an eloquent criticism of the current academic system that values research based on how expensive it is, creating unnecessary competition for the already limited resources. India is a country that boasts of a rich biodiversity and is home to several unique ecosystems. Much of our biodiversity remains unexplored, and only a few have been explored yet by behavioural biologists. Animal behaviour is a fascinating field of research which does not necessarily require large funding and complicated equipment. Gadagkar, through each and every chapter in this book, highlights how one can carry out cutting-edge research on diverse taxa and explore the fascinating world of animals through in-depth explorations of their behaviour, using simple methods, with nothing but a notebook, pen and passion. The most expensive equipment in many of the cases described in this book would have been a pair of binoculars or a camera, and today, a smartphone can suffice for much of the documentation required in the field.

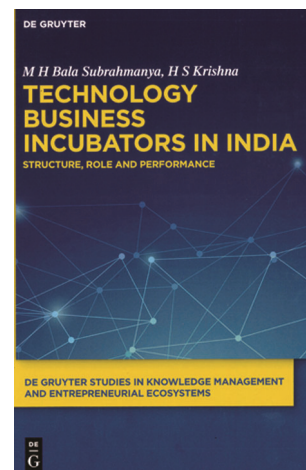
Many of the research questions described in the book are those that a child might ask, and can be addressed using the rigour of science. Gadagkar uses many examples of research carried out in India, alongside those carried out in the Global North, and this is done on purpose – to highlight how world-class research can be carried out in a country where funding is low. Every researcher need not join the race for funding; some can follow their passion and be leaders in their own right. The last chapter is my personal favourite in this book, as a teacher as well as a scientist.

I have been sharing each of the chapters with my students, friends and colleagues as they were published as standalone articles in *Resonance*. This book is a must have for every teacher and student of biology, and has the special privilege of being extremely readable for anyone interested in science. One can use the wisdom of this book to observe animals (and plants) in one's own garden, and we can, in principle, have a scientist in every home. I urge everyone to pick a copy of this book, or download the freely available e-book and share it widely, especially with young people, who might be enthused to look around themselves and enjoy nature with the thirst of a scientist. Someday we might have a generation of scientists leading India in the field of animal behaviour, revealing to the world nuances of the private lives of the many species living around us.

Note: I would like to declare that Prof. Raghavendra Gadagkar was my Ph.D. supervisor and this book has reference to some of the work I carried out during my Ph.D. Moreover, a chapter in the book is based on work from my current research group at IISER Kolkata. I have, nevertheless, tried my best to provide an objective review of the book, from the perspective of an ethologist, a teacher and a general reader.

ANINDITA BHADRA

*Indian Institutes of Science Education and Research Kolkata,
Mohanpur,
Nadia 741 246, India
e-mail: abhadra@iiserkol.ac.in*



Technology Business Incubators in India: Structure, Role and Performance. M. H. Bala Subrahmanya and H. S. Krishna. Walter de Gruyter GmbH, Berlin/Boston, 2021. xiii + 154 pages. Price: €86,95.

This book deals with technology business incubators (TBIs) in India which is an important and emergent research topic. The authors need to be commended on undertaking research on a topic that is challenging.

The book examines the currently prevalent structure of TBIs in India, their role and finally evaluates their performance. The presence and functioning of TBIs in India is important in the context of the country adopting the ‘Atmanirbhar Bharat’ policy. The book is timely and examines the current state of affairs by analysing sixty-five TBIs in Bengaluru, Hyderabad and Chennai, which are three of the important hubs that nurture entrepreneurship in India.

The book is divided into seven chapters. The salient feature of the first chapter is the origin and current status of TBIs in India (as of 2020). It also describes the current policies followed for TBI promotion in the country.

The second chapter summarizes, clarifies and analyses a vast body of literature that exists on ‘technology business incubation’. The authors have exhaustively reviewed the literature, giving the readers a glimpse of the prior art of innovation and entrepreneurship. This chapter also includes details of the origin of the TBI concept, TBI models currently prevalent in the world, their typology and functions. It provides a comprehensive conceptual framework for studying TBIs taking into consideration the entire start-up journey based on the three complementary frameworks,

namely real options, social network and resource-based theories. The information provided in this chapter will serve as an important source for future innovation researchers.

The third chapter describes research objectives, the process of sample selection and methods of data analyses adopted in the study. The book lists four research objectives. For the purpose of this study, the authors have categorized TBIs into institute-promoted and industry-promoted, and have compared them based on their focus, objectives and nature of services; sectors they function in, size and ownership; inputs (like proportion of personnel devoted to research and development (R&D), investments on R&D expenditure) and outputs (like number of patents filed, new products/services introduced, and sales revenue generated by the start-ups).

Chapter 4 includes differences between institute-promoted and industry-promoted TBIs. The major findings in this chapter are that institute-promoted TBIs are Government-promoted. They have come up in institutions and are of recent origin. They are usually early-stage TBIs primarily focused on the technology sector. They have multiple objectives such as entrepreneurship generation, ecosystem development and innovation commercialization to name a few, and they are more internal dynamics-oriented. The CEOs of the institute-promoted TBIs have relatively little industry/start-up experience. In contrast, industry-promoted TBIs are the result of an initiative of the private sector and are stage-agnostic. They focus on both technology and non-technology sectors. They have revenue generation as their key objective. The CEOs of the industry-pro-

moted TBIs have more industry/start-up experience.

Analyses of the applications received by the TBIs, occupancy rate and graduation rate of start-ups in TBIs are dealt with in chapter 5. The most important findings are the characteristics and work experience of the CEOs of TBIs, which are important determinants of the applications received. The graduation of start-ups is influenced by their achievement of self-sustainability/growth and the corporate funding received. All CEOs of the TBIs under study had science, technology, engineering and mathematics (STEM) background. Their highest educational qualifications varied from graduation to doctorate degree.

Chapter 6 deals with the R&D contribution performance of the TBIs. Chapter 7 provides a summary and conclusions of the study.

Some of the most important lacunae in the Indian innovation ecosystem as found in this study are as follows. The already existing TBIs are not fully utilized. Many TBIs in general account for a low application-to-seat ratio, as well as occupancy to seat ratio across the three hubs studied. This implies that the overall number of high-quality start-up proposals is yet to emerge in a big way. Secondly, although every TBI can generate new products/services over time, on an average, the patent application submission accounted for hardly 6% of new products/services generated. This implies lack of adequate novelty and innovativeness in the newly developed products/services. It also means that most of the products/services offered by the incubated start-ups may be new to Indian markets, but not to the industry in the global context. Thirdly, corporate sponsor-

ship, infrastructure and highly successful exit of start-ups influence patent application submission. This result brings to the forefront the importance of the university–industry–Government collaboration (triple helix) model for a vibrant innovation ecosystem in India.

To conclude, this book provides the much needed source of information for researchers and policy makers in the areas of entrepreneurship and innovation ecosystem. It is a pioneering work in Indian context. Its primary contribution is to enhance our understanding of the existing national innovation ecosystem in India. It indicates what needs to be focused upon for the country to move forward and provides suggestions for the same. Secondly, the conceptualization and measurement tools in the appendices are unique contributions to this field of study. Future researchers can build on the framework and the tools provided. Thirdly, the authors have pithily summarized important information through tables. Especially Table 2.1 on the typology of TBIs is informative and unique. Another salient feature is Table 3.1, which provides latest updated information (as of 2020) on state-wise distribution of TBIs compiled from four authoritative sources. The ‘triple helix’ (or the new ‘quadruple helix’) is another emerging research area in India. This book can act as a precursor for such India-centric studies.

SANTHI PERUMAL

*Institute of Management Technology,
35 KM Milestone,
Mouza Dorli, Katol Road,
Nagpur 441 502, India
e-mail: sperumal@imtnag.ac.in*