

The Philosophy Of Sustainable Design

A former college president offers a framework for sustainability on campus, describing initiatives that range from renewable energy to a revamped curriculum to sustainable investment. Colleges and universities offer our best hope for raising awareness about the climate crisis and the other environmental threats. But most college and university administrations need guidance on the path to sustainability. In *The Nine Elements of a Sustainable Campus*, Mitchell Thomashow, a former college president, provides just that. Drawing on his experiences at Unity College in Maine, he identifies nine elements for a sustainability agenda: energy, food, and materials (aspects of infrastructure); governance, investment, and wellness (aspects of community); and curriculum, interpretation, and aesthetics (aspects of learning). He then describes how Unity put these elements into practice. Connecting his experiences to broader concerns, Thomashow links the campus to the planet, reminding us that local efforts, taken together, can have a global impact.

You're overseeing a large-scale project, but you're not an engineering or construction specialist, and so you need an overview of the related sustainability concerns and processes. To introduce you to the main issues, experts from the fields of engineering, planning, public health, environmental design, architecture, and landscape architecture review current sustainable large-scale

projects, the roles team members hold, and design approaches, including alternative development and financing structures. They also discuss the challenges and opportunities of sustainability within infrastructural systems, such as those for energy, water, and waste, so that you know what's possible. And best of all, they present here for the first time the Zofnass Environmental Evaluation Methodology guidelines, which will help you and your team improve infrastructure design, engineering, and construction.

Does going green change the face of design or only its content? The first book to outline principles for the aesthetics of sustainable design, *The Shape of Green* argues that beauty is inherent to sustainability, for how things look and feel is as important as how they're made. In addition to examining what makes something attractive or emotionally pleasing, Hosey connects these questions with practical design challenges. Can the shape of a car make it more aerodynamic and more attractive at the same time? Could buildings be constructed of porous materials that simultaneously clean the air and soothe the skin? Can cities become verdant, productive landscapes instead of wastelands of concrete? Drawing from a wealth of scientific research, Hosey demonstrates that form and image can enhance conservation, comfort, and community at every scale of design, from products to buildings to cities. Fully embracing the principles of ecology could revolutionize every aspect of design, in substance and in style. Aesthetic attraction isn't a superficial concern — it's an environmental imperative. Beauty could save the planet.

Design for Sustainable Change explores how design thinking and design-led entrepreneurship can address the issue of sustainability. It discusses the ways in which design thinking is evolving and being applied to a much wider spectrum of social and environmental issues, beyond its traditional professional territory. The result is designers themselves evolving, and developing greater design mindfulness in relation to what they do and how they do it. This book looks at design thinking as a methodology which, by its nature, considers issues of sustainability, but which does not necessarily seek to define itself in those terms. It explores the gradual extension of this methodology into the larger marketplace and the commercial and social implications of such an extension.

The Sustainable Tall Building: A Design Primer is an accessible and highly illustrated guide, which primes those involved in the design and research of tall buildings to dramatically improve their performance. Using a mixture of original research and analysis, best-practice design thinking and a detailed look at exemplar case studies, author Philip Oldfield takes the reader through the architectural ideas, engineering strategies and cutting-edge technologies that are available to the tall building design team. The book takes a global perspective, examining high-rise design in different climates, cultures and contexts. It considers common functions such as high-rise housing and offices, to more radical designs such as vertical farming and vertical cemeteries. Innovation is provided by examining not only the environmental performance of tall buildings but also

their social sustainability, guiding the reader through strategies to create successful communities at height. The book starts by critically appraising the sustainability of tall building architecture past and present, before demonstrating innovative ways for future tall buildings to be designed. These include themes such as climatically responsive architecture, siting a tall building in the city, zero-carbon towers, skygardens and community spaces at height, sustainable structural systems and novel façades. In doing so, the book provides essential reading for architects, engineers, consultants, developers, researchers and students engaged with sustainable design and high-rise architecture.

Marketing Green Building Services: Strategies for Success presents all the information key decision-makers need to respond to the fast-growing market for green buildings, design and construction services and products. Completely updated, revised and expanded from the author's previous works, this book is the one resource you need to succeed in the green building marketplace. With a sound grounding in contemporary marketing theory and practice, the book assembles hard-to-find information to assist executives and partners in design and construction firms in crafting competitive strategies that build on their firm's strengths, while shoring up their weaknesses. Since most design and construction firms specialize in particular market sectors, the book systematically examines the important market segments for green buildings. It also presents key business case justifications for green buildings that help architects, engineers and builders to understand client

motivations and respond to them with appropriate marketing tactics and communications strategies. The book examines how the green building market is adopting certain new products and design approaches, information that will help manufacturers and product sales teams to craft appropriate marketing strategies. The book also helps owners and developers understand the green building business case and to find out what other leading-edge firms and projects have learned - how to market and sell green buildings and green developments in a highly competitive marketplace. Now in its third edition, this book provides the ideal and only reference to the physical basis of architectural design. Fully updated and expanded throughout, the book provides the data required for architects to design buildings that will maintain the users comfort in a variety of conditions, with minimal reliance on energy intensive methods like air conditioning. This is not a 'how to' book but answers the question why. It equips the reader with the tools to realize the full potential of the good intentions of sustainable, bioclimatic design. All sections have been revised and updated for this third edition including all the most relevant developments affecting heat, light and sound controls. The book responds to the need of understanding beyond 'rules of thumb'.

Why do we readily dispose of some things, whereas we keep and maintain others for years, despite their obvious wear and tear? Can a greater understanding of aesthetic value lead to a more strategic and sustainable approach to product design? *Aesthetic Sustainability: Product Design and Sustainable Usage* offers guidelines for ways

to reduce, rethink, and reform consumption. Its focus on aesthetics adds a new dimension to the creation, as well as the consumption, of sustainable products. The chapters offer innovative ways of working with expressional durability in the design process. Aesthetic Sustainability: Product Design and Sustainable Usage is related to emotional durability in the sense that the focus is on the psychological and sensuous bond between subject and object. But the subject–object connection is based on more than emotions: aesthetically sustainable objects continuously add nourishment to human life. This book explores the difference between sentimental value and aesthetic value, and it offers suggestions for operational approaches that can be implemented in the design process to increase aesthetic sustainability. This book also offers a thorough presentation of aesthetics, focusing on the correlation between the philosophical approach to the aesthetic experience and the durable design experience. The book is of interest to students and scholars working in the fields of design, arts, the humanities and social sciences; additionally, it will speak to designers and other professionals with an interest in sustainability and aesthetic value.

The combined challenges of health, comfort, climate change and energy security cross the boundaries of traditional building disciplines. This authoritative collection, focusing mostly on energy and ventilation, provides the current and next generation of building engineering professionals with what they need to work closely with many disciplines to meet these challenges. A Handbook of Sustainable Building Engineering covers: how to design, engineer and monitor a building in a manner that minimises the emissions of

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greenhouse gases; how to adapt the environment, fabric and services of existing and new buildings to climate change; how to improve the environment in and around buildings to provide better health, comfort, security and productivity; and provides crucial expertise on monitoring the performance of buildings once they are occupied. The authors explain the principles behind built environment engineering, and offer practical guidance through international case studies.

As a cultivated form of invention, product design is a deeply human phenomenon that enables us to shape, modify and alter the world around us – for better or worse. The recent emergence of the sustainability imperative in product design compels us to recalibrate the parameters of good design in an unsustainable age. Written by designers, for designers, the Routledge Handbook of Sustainable Product Design presents the first systematic overview of the burgeoning field of sustainable product design. Brimming with intelligent viewpoints, critical propositions, practical examples and rich theoretical analyses, this book provides an essential point of reference for scholars and practitioners at the intersection of product design and sustainability. The book takes readers to the depth of our engagements with the designed world to advance the social and ecological purpose of product design as a critical twenty-first-century practice. Comprising 35 chapters across 6 thematic parts, the book's contributors include the most significant international thinkers in this dynamic and evolving field.

The Philosophy of Design is an introduction to the fundamental philosophical issues raised by the contemporary practice of design. The first book to systematically examine design from the perspective of contemporary philosophy, it offers a broad perspective, ranging across key philosophical areas such as aesthetics, epistemology, metaphysics and ethics. The first part of the book explores central issues about

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the nature of design and its products, and the rationality of design methods. A central theme is that Modernist ideas, such as those offered by Loos and Gropius, provide important responses to these philosophical issues. In the second part of the book, these Modernist ideas serve as touchstones in the exploration of key issues for design, including: the place of aesthetics in design; design's relation to personal expression; the meaning of function; and design's relation to consumerism. The social responsibility of designers, and the impact of design practice on ethical reasoning are also discussed. Written in an accessible style, *The Philosophy of Design* presents a new perspective on design and a provocative reassessment of the Modernist legacy. It will engage students and designers with current philosophical debates, helping them to bring into clearer focus the meaning of contemporary design, and its unique challenges and possibilities.

The author outlines the major ideas and issues that have emerged in the growing movement of green architecture and sustainable design over the last thirty years. The book asks individuals to understand how the philosophy of sustainable design can affect their own work.

Written for students and practitioners in the fields of architecture and interior design, our new *Architecture Brief Sustainable Design* provides a concise overview of all the techniques available for reducing the energy footprint of structures and spaces. With clear, simple language and a practical "can-do" approach, author David Bergman covers everything from the profession's ethical responsibility, to design structures and spaces that sustain our natural resources, to specific considerations such as rainwater harvesting, graywater recycling, passive heating techniques, solar orientation, green roofs, wind energy, daylighting, indoor air quality, material evaluation and specification, and how to

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work with green building certification programs.

Emotionally Durable Design presents counterpoints to our 'throwaway society' by developing powerful design tools, methods and frameworks that build resilience into relationships between people and things. The book takes us beyond the sustainable design field's established focus on energy and materials, to engage the underlying psychological phenomena that shape patterns of consumption and waste. In fluid and accessible writing, the author asks: why do we discard products that still work? He then moves forward to define strategies for the design of products that people want to keep for longer. Along the way we are introduced to over twenty examples of emotional durability in smart phones, shoes, chairs, clocks, teacups, toasters, boats and other material experiences. Emotionally Durable Design transcends the prevailing doom and gloom rhetoric of sustainability discourse, to pioneer a more hopeful, meaningful and resilient form of material culture. This second edition features pull-out quotes, illustrated product examples, a running glossary and comprehensive stand firsts; this book can be read cover to cover, or dipped in-and-out of. It is a daring call to arms for professional designers, educators, researchers and students from in a range of disciplines from product design to architecture; framing an alternative genre of design that reduces the consumption and waste of resources by increasing the durability of relationships between people and things.

This book discusses the most significant ways in which design has been applied to sustainability challenges using an evolutionary perspective. It puts forward an innovation framework that is capable of coherently integrating multiple design for sustainability (DfS) approaches developed so far. It is now widely understood that design can and must play a crucial role in the societal transformations towards

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sustainability. Design can in fact act as a catalyst to trigger and support innovation, and can help to shape the world at different levels: from materials to products, product–service systems, social organisations and socio-technical systems. This book offers a unique perspective on how DfS has evolved in the past decades across these innovation levels, and provides insights on its promising and necessary future development directions. For design scholars, this book will trigger and feed the academic debate on the evolution of DfS and its next research frontiers. For design educators, the book can be used as a supporting tool to design courses and programmes on DfS. For bachelor's and master's level design, engineering and management students, the book can be a general resource to provide an understanding of the historical evolution of DfS. For design practitioners and businesses, the book offers a rich set of practical examples, design methods and tools to apply the various DfS approaches in practice, and an innovation framework which can be used as a tool to support change in organisations that aim to integrate DfS in their strategy and processes. This volume presents 25 essays on the philosophy of design. With contributions originating from philosophy and design research, and from product design to architecture, it gives a rich spectrum of state of the art research and brings together studies on philosophical topics in which design plays a key role and design research to which philosophy contributes. Coverage zooms in on specific and more well-known design disciplines but also includes less-studied disciplines, such as graphic design, interior architecture and exhibition design. In addition, contributors take up traditional philosophical issues, such as epistemology, politics, phenomenology and philosophy of science. Some essays cover philosophical issues that emerge in design, for instance what design can do in addressing societal problems, while other essays analyze

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main-stream philosophical issues in which design is part of the argument, as for instance abduction and aesthetics. Readers will discover new research with insightful analyses of design research, design thinking and the specificity of design. Overall, this comprehensive overview of an emerging topic in philosophy will be of great interest to researchers and students.

In this age of eco-bling where sustainability becomes yet another ill-defined buzz word and people rush to fix their unsuspecting buildings, with green technology badges such as wind turbines, not all such additions are as green as they first appear. This book highlights more realistic and cost effective approaches to going 'green' by showcasing 'eco-minimalism' - a good-housekeeping approach to ecological building design and specification, concentrating on less glaringly obvious strategies such as insulation, draught-proofing and the use of healthy materials. This book exposes the pitfalls of 'greenwashing' in an immediate, visually-arresting and authoritative way. The intention is to present basic tenets in a quickfire, highly accessible format not just for architects, other construction professionals and related students but everyone who cares about the sustainability of our built environment.

Reintroducing Materials for Sustainable Design provides instrumental theory and practical guidance to bring materials back into a central role in the design process and education. To create designs

that are sustainable and respond to current environmental, economic and cultural concerns, practitioners and educators require a clear framework for materials use in design and product manufacturing. While much has been written about sustainable design over the last two decades, outlining systems of sustainability and product criteria, to design for material circularity requires a detailed understanding of the physical matter that constitutes products. Designers must not just know of materials but know how to manipulate them and work with them creatively. This book responds to the gap by offering a way to acquire the material knowledge necessary to design physical objects for sustainability. It reinforces the key role and responsibility of designers and encourages designers to take back control over the ideation and manufacturing process. Finally, it discusses the educational practice involved and the potential implications for design education following implementation, addressing didactics, facilities and expertise. This guide is a must-read for designers, educators and researchers engaged in sustainable product design and materials.

Sustainability is a powerful force that is fundamentally reshaping humanity's relationship to the natural world and is ushering in the Age of Integration. The move from well-intentioned environmental friendliness to the higher bar of

integral sustainability and regenerative design demands a new type of design professional, one that is deeply collaborative, ethically grounded, empathically connected and technologically empowered. As a response, this book argues for a great leap forward in design education: from an individualistic and competitive model casually focused on greening; to a new approach defined by an integral consciousness, shaped by the values of inclusivity and cooperation, and implemented by a series of integrative behaviors including: an ethically infused design brief a co-creative design process on-going value engineering pre-emptive engineering design validation through simulation on-line enabled integrated learning the use of well vetted rating systems. This book contains the integral frameworks, whole system change methodologies and intrinsic values that will assist professors and their students in an authentic and effective pursuit of design education for a sustainable future.

To increasing numbers of people, sustainability is the key challenge of the twenty-first century. In the many fields where it is a goal, persistent problems obstruct the efforts of those trying to make a difference. The task of this book is to provide an overview of the current state of philosophy in the context of what philosophy is, could be or should be – in relation to sustainability and the human future on Earth. The book is conceived as a contribution to the

UN Decade of Education for Sustainable Development, helping to link work on philosophy and sustainability. Critiquing Sustainability, Changing Philosophy focusses on the importance of philosophical work to the formation and effectiveness of global civil society and social movements for sustainability in the context of the Anthropocene age of the Earth. It takes a transdisciplinary systems approach that challenges philosophy and concludes by proposing a greatly enhanced role for philosophy in contributing to global public reason for sustainability. This book will be of interest to philosophers, sustainability practitioners and thinkers, policy makers and all those engaged in the global movement for sustainability.

Designed for use in engineering design courses, and as a reference for industry professionals learning sustainable design concepts and practical methods, Sustainability in Engineering Design focuses on designers as the driving force behind sustainable products. This book introduces sustainability concepts and explains the application of sustainable methods to the engineering design process. The book also covers important design topics such as project and team management, client management, performance prediction, and the social and environmental effects of sustainable engineering design. These concepts and methods are supported with a wealth of worked examples, discussion

questions, and primary case studies to aid comprehension. Applies research-based methods to achieve real-world results for rapidly evolving industry trends Focuses on design engineers as the starting point of creating sustainable design Provides practical methods and design tools to guide engineering designers in creating sustainably designed and engineering products Incorporates all aspects of sustainable engineering design, including the material selection, production, and marketing of products Includes cutting-edge sustainable design model case studies based on the authors' own research and experiences

This collection of essays, written by an international group of scholars, provides a more critical and creative contemporary practice of “sustainability.” The book sets this practice free from its reductive interpretations and applies a more thoughtful environmental ethics to the current and emerging technologies that dominate our lives.

Contributions by prominent scholars examining the intersections of environmental philosophy and philosophy of technology. Environmental philosophy and philosophy of technology have taken divergent paths despite their common interest in examining human modification of the natural world. Yet philosophers from each field have a lot to contribute to the other. Environmental issues inevitably involve technologies, and technologies inevitably have

environmental impacts. In this book, prominent scholars from both fields illuminate the intersections of environmental philosophy and philosophy of technology, offering the beginnings of a rich new hybrid discourse. All the contributors share the intuition that technology and the environment overlap in ways that are relevant in both philosophical and practical terms. They consider such issues as the limits of technological interventions in the natural world, whether a concern for the environment can be designed into things, how consumerism relates us to artifacts and environments, and how food and animal agriculture raise questions about both culture and nature. They discuss, among other topics, the pessimism and dystopianism shared by environmentalists, environmental philosophers, and philosophers of technology; the ethics of geoengineering and climate change; the biological analogy at the heart of industrial ecology; green products and sustainable design; and agriculture as a bridge between technology and the environment. Contributors Braden Allenby, Raymond Anthony, Philip Brey, J. Baird Callicott, Brett Clark, Wyatt Galusky, Ryan Gunderson, Benjamin Hale, Clare Heyward, Don Idhe, Mark Sagoff, Julian Savulescu, Paul B. Thompson, Ibo van de Poel, Zhang Wei, Kyle Powys Whyte

Illustrates the Global Relevance of SustainabilityApplicable to roads, bridges, and other

elements of the infrastructure, *Green Building with Concrete: Sustainable Design and Construction, Second Edition* provides an overview of all available information on the role of concrete in green building. A handbook offering viewpoints from worldwide experts

Current debates on sustainability are building on a problematic assumption that technological advancement is a desired phenomenon, creating positive change in human organizations. This transdisciplinary book develops a new way to conceptualize and examine technology, and outlines feasible alternatives for sustainability beyond technology.

Sustainable Design for the Built Environment marks the transition of sustainable design from a specialty service to the mainstream approach for creating a healthy and resilient built environment. This groundbreaking and transformative approach introduces sustainable design in a clear, concise, easy-to-read format. This book takes the reader deep into the foundations of sustainable design, and creates a holistic and integrative approach addressing the social, cultural, ecological, and aesthetic aspects in addition to the typical performance-driven goals. The first section of the book is themed around the origins, principles, and frameworks of sustainable design aimed at inspiring a deeper, broader, and more inclusive view of sustainability. The second section examines strategies such as biophilia and biomimicry, adaptation and resilience, health and well-being. The third section examines the application of sustainability principles from

the global, urban, district, building, and human scale, illustrating how a systems thinking approach allows sustainable design to span the context of time, space, and varied perspectives. This textbook is intended to inspire a new vision for the future that unites human activity with natural processes to form a regenerative, coevolutionary model for sustainable design. By allowing the reader an insightful look into the history, motivations, and values of sustainable design, they begin to see sustainable design, not only as a way to deliver green buildings, but as a comprehensive and transformative meta-framework that is so needed in every sector of society. Supported by extensive online resources including videos and PowerPoints for each chapter, this book will be essential reading for students of sustainability and sustainable design.

Filling a gap in existing literature on sustainable design, this new guide introduces and illustrates sustainable design principles through detailed case studies of sustainable buildings in Europe, North America and Australia. The guide will provide the reader with a deeper understanding of the design issues involved in delivering sustainable buildings, and giving detailed description of the process of integrating principles into practice. Approximately one hundred case studies of sixty buildings, ranging from small dwellings to large commercial buildings, and drawn from a range of countries, demonstrate best current practice. The sections of the book are divided into design issues relating to sustainable development, including site and ecology, community and culture, health, materials,

energy and water. With over 400 illustrations, this highly visual guide will be an invaluable reference to all those concerned with architecture and sustainability issues. There are no more respected voices in the environmental movement than these authors, true counselors on the direction of twenty-first-century business. With hundreds of thousands of books sold worldwide, they have set the agenda for rational, ecologically sound industrial development. In this inspiring book they define a superior & sustainable form of capitalism based on a system that radically raises the productivity of nature's dwindling resources. *Natural Capitalism* shows how cutting-edge businesses are increasing their earnings, boosting growth, reducing costs, enhancing competitiveness, & restoring the earth by harnessing a new design mentality. The authors offer dozens of examples of businesses that are making fourfold or even tenfold gains in efficiency, from self-heating & self-cooling buildings to 200-miles-per-gallon cars, while ensuring that workers aren't downsized out of their jobs. This practical blueprint shows how making resources more productive will create the next industrial revolution

Design and Spirituality examines the philosophical context of our current situation and its implications for design. It explores how modernity and our constricted notions of progress have contributed to today's crisis of values, and argues for a re-establishment and re-affirmation of self-transcending priorities, together with an ethos of moderation and sufficiency. A wide range of topics are covered, including material culture and

spiritual teachings; sustainability and the spiritual perspective; traditional and indigenous knowledge; technology and spirituality; notions of meaningful design; and how particular material things can have deeper, symbolic significance. There are also reflections on areas such as the language of design; busyness and its relationship to wisdom; design and social disparity; and traditional sacred practices. While not avoiding issues that are controversial, and sometimes hard-hitting, *Design and Spirituality* gets to the heart of the key issues affecting us today and presents them in a highly readable and accessible format. The author is a leading thinker in the field and he presents his arguments in a manner that invites the reader to reflect and think about where we are going, why we are going there and what really matters.

This 4-colour practical guide explores how the design of interior spaces impacts wellbeing. In the built environment, this topic is generally overlooked, even though it is one of the most important topics in sustainable building. This book will enable project teams to understand how specific decisions about sustainable design and materials can be implemented on a day to day basis. Each Part ends by placing each issue into context, exploring how it is a part of sustainable design and includes practical examples. This book raises awareness of the impact interior environments have on wellbeing, and provide details and guidance on how to immediately apply the knowledge in this book to short and long term projects. It also quantifies the impacts in financial and other value terms, making this book

immediately useful in a designer's day-to-day work.

Tackles resource scarcity and sustainability and describes how everyday objects from chairs to cars and factories are being redesigned to sustain and promote life.

The environment.

Written for architects and the design and construction team, this is a comprehensive guide to an integrated design process to create more sustainable buildings. The book is organized in a sequence similar to that employed by conventional design, so that it can be utilized as a real-world guide. Learning how to shift into the mindset essential to implementing integrated design, readers will explore into such processes as systems thinking, appreciative inquiry, non-hierarchical leadership, holistic mapping, and linear versus integrated architectural design progression. Multiple case studies are incorporated to provide concrete examples of successful integrated design implementation.

A manifesto for a radically different philosophy and practice of manufacture and environmentalism "Reduce, reuse, recycle" urge environmentalists; in other words, do more with less in order to minimize damage. But as this provocative, visionary book argues, this approach perpetuates a one-way, "cradle to grave" manufacturing model that dates to the Industrial Revolution and casts off as much as 90 percent of the materials it uses as waste, much of it toxic. Why not challenge the notion that human industry must inevitably damage the natural world? In fact, why not take nature itself as our model? A tree produces thousands of blossoms in order to create

another tree, yet we do not consider its abundance wasteful but safe, beautiful, and highly effective; hence, "waste equals food" is the first principle the book sets forth. Products might be designed so that, after their useful life, they provide nourishment for something new—either as "biological nutrients" that safely re-enter the environment or as "technical nutrients" that circulate within closed-loop industrial cycles, without being "downcycled" into low-grade uses (as most "recyclables" now are). Elaborating their principles from experience (re)designing everything from carpeting to corporate campuses, William McDonough and Michael Braungart make an exciting and viable case for change. Whether it is the effects of climate change, the avalanche of electronic and plastic waste or the substandard living and working conditions of billions of our fellow global citizens, our ability to deal with unsustainability will define the twenty-first century. Given that most consumption is mediated through products and services, the critical question for designers is: How can we radically reshape these into tools for sustainable living? As a guide and reference text, *Product Design and Sustainability* provides design students, practitioners and educators with the breadth and depth needed to integrate the most appropriate sustainable strategies into their practice. It establishes the principles that underpin sustainability and introduces a diverse range of social, economic and environmental design responses and tools available to designers. The numerous real-world examples illustrate how these strategies play out in different product sectors and reinforce the view that

sustainability is the most positive opportunity and creative challenge facing designers today. This book: delivers a comprehensive guide to the principles of sustainability and how they apply to product design that can readily be integrated into curricula and design practice reveals many of the issues specific product sectors are facing, and provides the depth and breadth needed for formulating and developing sustainable design strategies to address these issues empowers and inspires designers to engage with sustainability through its many examples and insightful interviews with practitioners is fully illustrated with over 300 photographs, graphs and diagrams and supported by chapter summaries, annotated further reading suggestions, and a glossary.

A series of essays about sustainable design by internationally acclaimed architect and green warrior, Jason F. McLennan

A forward looking book on sustainable design that describes problems and then, by providing a different way to conceptualise design and development, leads on to examples of regenerative solutions. Its aim is to move the discussion away from doing less, but still detracting from our ecological capital, to positively contributing and adding to this capital. This book offers a hopeful response to the often frightening changes and challenges we face; arguing that we can actively create a positive and abundant future through mindful, contributive engagement that is rooted in a living systems based worldview. Concepts and practices such as Regenerative Development, Biophilic Design,

Biomimicry, Permaculture and Positive Development are explored through interviews and case studies from the built environment to try and answer questions such as: 'How can projects focus on creating a positive ecological footprint and contribute to community?'; How can we as practitioners restore and enrich the relationships in our projects?; and 'How does design focus hope and create a positive legacy?'

Synergistic Design of Sustainable Built Environments introduces and illustrates a novel systems approach that fosters both design excellence and a leap toward a more biocentric (ecologically sustainable) design paradigm. The book provides a deeper understanding of the theories and principles of biocentric design and offers detailed descriptions of the synergistic design process of integrating theories and principles into practice. It also presents extensive thermal and visual built environment design strategies, along with qualitative and quantitative information that designers can use to generate feasible solutions in response to varying climate and occupant comfort. Features: Examines the principles and practices of the synergistic design (a fusion of anthropocentric and biocentric) of sustainable built environments and how they relate to practical applications. Presents climatic data and its analysis along with sun-path diagrams for numerous cities to aid in the design of sustainable built environments in multiple regional contexts. Includes numerous case studies of sustainable built environments in varying climatic zones. Explains how renewable energy (solar, wind, biomass, geothermal, hydro, fuel cells) can be successfully integrated in the built

environment. This forward-thinking and highly illustrated book will be an invaluable reference to all those concerned with sustainable built environments and related architectural issues.

This volume presents the discipline's best thinking on sustainability in written, drawn, and built form, drawing on over fifteen years of peer-reviewed essays and national design awards published by the Association of Collegiate Schools of Architecture (ACSA). Providing a primer on sustainability, useful to teachers and students alike, the selected essays address a broad range of issues. Combined with design projects that highlight issues holistically, they promote an understanding of the principles of sustainability and further the integration of sustainable methods into architectural projects. Using essays that alternately revise and clarify twentieth century architectural thinking, *The Green Braid* places sustainability at the centre of excellent architectural design. No other volume addresses sustainability within the context of architectural history, theory, pedagogy and design, making this book an ideal source for architects in framing their practices, and therefore their architectural production, in a sustainable manner.

For science to remain a legitimate and trustworthy source of knowledge, society will have to engage in the collective processes of knowledge co-production, which not only includes science, but also other types of knowledge. This process of change has to include a new commitment to knowledge creation and transmission and its role in a plural society. This book proposes to consider new ways in which science can be used to

sustain our planet and enrich our lives. It helps to release and reactivate social responsibility within contemporary science and technology. It reviews critically relevant cases of contemporary scientific practice within the Cartesian paradigm, relabelled as 'innovation research', promoted as essential for the progress and well-being of humanity, and characterised by high capital investment, centralised control of funding and quality, exclusive expertise, and a reductionism that is philosophical as well as methodological. This is an accessible and relevant book for scholars in Science and Technology Studies, History and Philosophy of Science, and Science, Engineering and Technology Ethics. Providing an array of concrete examples, it supports scientists, engineers and technical experts, as well as policy-makers and other non-technical professionals working with science and technology to re-direct their approach to global problems, in a more integrative, self-reflective and humble direction.

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