Gamma-Convergence for Beginners
Andrea Braides

This book introduces the main concepts of the theory of De Giorgi's Gamma-convergence and gives a description of its main applications to the study of asymptotic variational problems. The content is based on results obtained during thirty years of research. The book is divided into sixteen short chapters, an Introduction, and an Appendix. After explaining how a notion of variational convergence arises naturally from the study of the asymptotic behaviour of variational problems, the Introduction presents a number of examples that show how diversified the applications of this notion may be. The first chapter covers the abstract theory of Gamma-convergence, including its links with lower semicontinuity and relaxation, and the fundamental results on the convergence of minimum problems. The following ten chapters are all set in a one-dimensional framework to illustrate the main issues of convergence without the burden of high-dimensional technicalities. These include variational problems in Sobolev spaces, in particular homogenization theory, limits of discrete systems, segmentation and phase-transition problems, free-discontinuity problems and their approximation, etc. Chapters 12-15 are devoted to problems in a higher-dimensional setting, showing how some one-dimensional reasoning may be extended, if properly formulated, to a more general setting, and how some concepts already introduced can be integrated with vectorial issues. The final chapter introduces the more general and abstract localization methods of Gamma-convergence. All chapters are complemented by a guide to the literature, and a short description of extensions and developments.
Homogenization problems for a general class of integrals are solved by a direct approach. Different homogenization formulas are given, both in an asymptotic form and as a cell problem (in the convex case). These are applied in the study of the asymptotic behaviour of Riemannian metrics and Hamilton-Jacobi equations.

Joseph Dunne’s essay begins by examining the ways in which schooling in modern liberal–democratic societies tend to function as the agent of cultural homogenization and alienation, and thus block liberal–democratic efforts to offer meaningful recognition of local cultures and to promote the skills and dispositions required for participatory democratic citizenship. The danger here, Dunne points out, is that when the homogenizing elements of modern schooling become dominant, they might serve to encourage an ‘insouciant cosmopolitanism that may fail to meet people’s needs for identity (and by this failure help open the door to the very xenophobic nationalism it wishes to repudiate)’. The chapter concludes by reflecting on some possible educational responses that might offer some hopeful ways of addressing such dismal extremes. In particular, he is interested in the educational possibilities offered by a reconfiguration of national identities and state institutions in the emerging European Community in the context of national, cultural, and religious strife that currently besets Northern Ireland. Thus, like Waldron, Dunne sees local cultural identities – be they national, religious, or cultural – as complexly related to, but potentially compatible with, cosmopolitan historical forces.
Europeanization represents something of a paradox: at one level it is impossible to argue that the state has not been ‘Europeanized’ to some degree in various sectors; and on the other hand, there is precious little evidence of ‘Europeanization’. The difference between these two views can be explained by the different meanings of ‘Europeanization’ on which they are based: the first argument is based on the definition of Europeanization as impact of whatever sort on the way in which policies are developed in member states of the European Union (EU); the second argument is far more exacting since it is based on a definition of Europeanization as having a homogenizing impact on specific institutions and practices across a wide range of state activities; to a very large degree then the argument about whether and to what extent ‘Europeanization’ is taking place, depends upon the definition used. This investigation addresses a central theme in much of Vincent Wright’s later comparative work, as well as his work on French politics – the persistence of national differences in the light of wider global as well as European influences on the institutions of individual states. The chapter looks at the expectation of homogenization, and whether or not European administrative systems have converged. The various mechanisms considered through which this convergence could occur are: coercion, imitation, adjustment and polydiffusion.

Pragmatism Against Morality: Ethnicity in the Aztec Empire
R. D. Grillo

In Mesoamerica, conquest, predatory or segmentary expansion, and migration frequently brought together heterogeneous social, cultural, and linguistic populations under a single ruler. In the Aztec (Mexico) empire, ethnic distinctions were made, but little was made of them. Far
from being a proselytizing, normatively mobilizing, moralistic polity, the Aztecs, like other patrimonial societies in Mesoamerica and elsewhere, were principally interested in extraction: ‘little more than a band of pirates’, Eric Wolf called them. Though Aztec rulers were interested in the formation of an identifiably Mexica ruling class, there was no policy of cultural homogenization affecting subject populations: there was no reason for one, nor could it have been easily implemented. Ethnicity was not a significant factor in the organization of inter-city Mesoamerican politics and political relations.

The Global, the Local, and the Disembedded

Chrisanthi Avgerou

in Information Systems and Global Diversity

Published in print: 2003 Published Online: September 2007
DOI: 10.1093/acprof:oso/9780199263424.003.0005
Item type: chapter

This chapter traces the root of diversity confronting information systems innovation in the unfolding processes of globalization. It starts from the concept of globalization as the shrinking of time and distance, which directly implicates ICT. It then explores globalization as a multi-dimensional phenomenon comprising changes in economic, political, and cultural activities. While the extent to which the discernible trends in each of them increase or decrease diversity across the globe may be a matter of debate, it is shown that globalization is much more multifaceted than the notion of global competitive markets, to which information systems studies tend to be restricted, suggest. Taken together, the multiple facets of contemporary globalization reveal a much more variable organizational context. The extent of the variability is confirmed by a look at the current state of the global economy, which is grossly uneven.

Stochastic Homogenization and Energy of Infinite Sets of Points

Xavier Blanc

in Analysis and Stochastics of Growth Processes and Interface Models

Published in print: 2008 Published Online: September 2008
DOI: 10.1093/acprof:oso/9780199239252.003.0004
Item type: chapter

This chapter presents, in a synthetic way, a series of recent works by X. Blanc, C. Le Bris, and P-L. Lions on homogenization of an elliptic partial
differential equation under certain periodic or random assumptions. The coefficients are non-constant but are a stationary random deformation of a periodic set of coefficients; a limit is taken where the period (in d-space) of the periodicity shrinks to zero. The chapter also describes related work on average energies of nonperiodic infinite sets of points.

INTRODUCTION
Andrea Braides

in Gamma-Convergence for Beginners

Published in print: 2002 Published Online: September 2007
Item type: chapter

The idea of a variational convergence is introduced as an equality of upper and lower bounds for families of variational problems. Examples are given that illustrate some of the main applications of Gamma-convergence, starting from the gradient theory of phase transitions, through homogenization and dimension reduction, to limits of atomistic theories. A final section shows how the definition of Gamma-convergence can be deduced from the requirement that it implies the convergence of minimizers be local and stable under continuous perturbations.

*SOME COMMENTS ON VECTORIAL PROBLEMS
Andrea Braides

in Gamma-Convergence for Beginners

Published in print: 2002 Published Online: September 2007
Item type: chapter

This chapter shows that some notions used in a one-dimensional setting can be extended to higher dimensions and vector problems if properly modified. In particular, convexity requirements for lower semicontinuity lead to the notions of quasiconvexity and polyconvexity, and homogenization formulas are proven to hold in a vector setting once the cell-problem formula is discarded, being valid only in a convex setting. New phenomena arise that are not meaningful in one dimension, as the instability of polyconvexity by homogenization and the density of isotropic quadratic functionals in all quadratic forms.
This chapter considers how exotic birds interact with native species, and how they serve to re-shape global biodiversity patterns. Both exotic and native species are distributed unevenly across the environment, such that some areas house more species, and other areas house fewer. The origins of these distributions for exotic and native bird species are undoubtedly very different, yet they share several common features, such as species-area relationships on islands, and latitudinal gradients. The chapter examines whether the same processes produce the same patterns in each set of species, and what this says about the causes of distribution patterns in native species, and also in exotics. It then considers the associations that exotic species forge in their recipient communities through their biotic interactions with native species, including native birds.

The shape of things to come: non-native mammalian predators and the fate of island bird diversity

Julie L. Lockwood, Tim M. Blackburn, Phillip Cassey, and Julian D. Olden

Oceanic islands and their avifaunas provide a wealth of information where changes to diversity across the Holocene have been intensively studied, and birds endemic to islands have been especially vulnerable to human occupancy. However, we still do not know the relative importance of the various different factors that have driven bird extinctions across oceanic islands, or what drives the success or failure of birds that have been introduced to oceanic islands either accidentally or purposefully by humans. This chapter reviews recent research on bird extinctions and invasions on oceanic islands, which indicates that the presence of non-native predatory mammals is a primary cause of both events. These invasions and extinctions have served to re-shape patterns of diversity across entire suites of oceanic islands, leading to biotic homogenization that is predicted to increase into the future.
Unemployment protection and labour market change in Europe: towards ‘triple integration’?
Jochen Clasen and Daniel Clegg

in Regulating the Risk of Unemployment: National Adaptations to Post-Industrial Labour Markets in Europe

The traditional European approach to unemployment protection developed in the context of industrial labour markets, and its key institutional features, ensured a relatively virtuous interaction between the social protection of workers and the promotion of conditions for successful industrial production. After discussing how this complementarity was challenged from the 1970s onwards by deep-seated changes in the profile and functioning of European labour markets, the chapter reviews a number of trends in recent unemployment protection reforms that our suggestive of the gradual emergence of a new model of unemployment support, based on a reworked articulation between economic production and social protection. It introduces the concept of ‘triple integration’ as a framework for the comparative analysis of institutional changes that tend towards the creation of an integrated benefit-and-service system adapted to the profile of economic risks that characterize post-industrial labour markets.

The United Kingdom: towards a single working-age benefit system
Jochen Clasen

The chapter shows that all three process of integration can be identified in the United Kingdom. The declining relevance of the principle of social insurance has led to benefit homogenization within unemployment protection which began in the 1980s. Activation policies were introduced in the 1990s and became increasingly pervasive thereafter. Against the backdrop of stubbornly high numbers of people out of work and in receipt of different types of income transfers, these developments facilitated
policies which have broadened the concept of unemployment. In this still-evolving process of risk ‘re-categorization’, the creation of a single working-age benefit system is now firmly on the political agenda.

N-Scale Model Reduction Theory
Jacob Fish and Zheng Yuan

in Multiscale Methods: Bridging the Scales in Science and Engineering
Published in print: 2009 Published Online: February 2010
DOI: 10.1093/acprof:oso/9780199233854.003.0003
Item type: chapter

A model reduction approach aimed at systematically reducing computational complexity of multiple scale homogenization for nonlinear history-dependent problems is developed. The so-called N-scale model reduction (NMR) approach is based on reformulating a sequence of nonlinear unit cell problems at multiple scales in terms of inelastic deformation modes that a priori satisfy equilibrium equations at multiple scales and thus eliminating the need for costly solution of discretized nonlinear equilibrium. The N-scale model reduction approach is validated on tube crush tests.

On Multiscale Computational Mechanics with Time-Space Homogenization
P. Ladevèze, David Néron, and Jean-Charles Passieux

in Multiscale Methods: Bridging the Scales in Science and Engineering
Published in print: 2009 Published Online: February 2010
DOI: 10.1093/acprof:oso/9780199233854.003.0009
Item type: chapter

The chapter deals with multiple scales in both space and time. First, the state-of-the-art is presented. Then, we discuss a family of computational approaches using time-space homogenization. Emphasis is put on the time aspects.

A Tale of Three Cities
Barbara Czarniawska

Published in print: 2002 Published Online: January 2010
DOI: 10.1093/acprof:oso/9780199252718.001.0001
Item type: book
The term ‘glocalization’ has been coined to indicate that globalization consists of two connected but opposite processes: it homogenizes ideas and practices, but also induces local adaptation and multiplication of differences. City management, with its complexities and international context, offers a paradigmatic example of glocalization. This book is based on fieldwork conducted in three European capitals: Warsaw, Stockholm, and Rome. City management has been conceptualized here as an action net which includes various organizations — municipal, state, private, and voluntary — as well as citizens who organize themselves ad hoc. At the outset of each study, leading politicians and other key figures in each city were asked to list their city's major problems and projects. Comparable projects were then selected for a detailed study in the field. The results revealed a fascinating combination of global influences and local adaptations.

The Plan for the Homogenization of Anatolia
Taner Akçam

in The Young Turks' Crime against Humanity: The Armenian Genocide and Ethnic Cleansing in the Ottoman Empire
Published in print: 2012 Published Online: October 2017
Published Online: Princeton University Press
DOI: 10.23943/princeton/9780691153339.003.0002

This chapter explores the fundamental characteristics of the overall plan for the “homogenization” of Anatolia. Having initially devised and implemented a plan before the First World War to free themselves of non-Turkish elements in the Aegean region, the Committee of Union and Progress (CUP) then, under the cover of war, expanded this plan to include all of Anatolia. The primary goal of this project was a conscious reshaping of the region's demographic character on the basis of its Muslim Turkish population. The two main pillars of this policy, which can be characterized as the government's population and resettlement policy, were as follows: the first entailed the “cleansing” of Anatolia's non-Muslim population; the second was the assimilation of all of Anatolia's non-Turkish Muslim communities.
The Initial Phase of Anti-Armenian Policy
Taner Akçam

in The Young Turks' Crime against Humanity: The Armenian Genocide and Ethnic Cleansing in the Ottoman Empire

Published in print: 2012 Published Online: October 2017
Item type: chapter

Publisher: Princeton University Press
DOI: 10.23943/princeton/9780691153339.003.0005

This chapter looks at how extant Ottoman documents reveal that the Unionist government made clear distinctions in its wartime policies between the Armenians and the empire's other Christian communities. The Greeks, as has been seen, were deported and expelled with brutality, but the Armenians were targeted for outright annihilation. In the decision to exterminate them, the Unionists' overarching objective of homogenizing the population of Anatolia undoubtedly played an important role; however, it would be incorrect to infer a direct line of causation between the two. The available evidence does not indicate that the restructuring of the general population resulted automatically in the annihilation of a particular group. The central question, then, concerns the nature of the relationship between demographic policy and genocide.

The social construction of health risks
Bob Heyman

in Risk, Safety and Clinical Practice: Health care through the lens of risk

Published in print: 2009 Published Online: February 2010
Item type: chapter

Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780198569008.003.02

This chapter locates the starting point for risk-thinking in the categorization of diverse cases as examples of a single uniform entity. This interpretive process involves the simultaneous homogenization of variability within a risk category and differentiation of cases from potentially similar non-cases. For a risk category to become an object of organized management concern, its reality must be consolidated, i.e. become socially recognized and taken for granted. This chapter outlines processes which contribute to risk consolidation, including, among others: the linkage of an adverse outcome category with selected risk factors; focus on the minority who will experience an adverse outcome rather than the majority who will not; threshold setting for the presence of a risk to be recognized as real; entrenchment in service provision and
commercial interests; the accumulation of associated risk imagery; and moralization within a wider societal framework of rights and obligations.

Integration, Social Dynamics, and Strategic Vulnerability

Gurudas Das

in Security and Development in India's Northeast

The chapter focuses on the political dynamics that emerged out of the efforts of the Indian state to integrate the tribal communities inhabiting the northeastern fringe, and the efforts of the ethnic Assamese elites to convert Assam as the nation-province of the Assamese. It explains how the conflict between these two approaches—integration approach of the Indian state and making-Assam-a-nation-province-of-the-Assamese approach of the ethnic Assamese elites—had ultimately led to the dismemberment of Assam, which might be viewed as India’s response towards internal adjustment to counter external security threats. It also narrates the dynamics of the emergence of Naga insurgency in the Naga Hills, considered to be the mother of all insurgent movements developed in the region subsequently that have eventually led to the emergence of state fragility syndrome in the NER.