

Roda Mushkat, *Killing the Proverbial Two Birds with One Stone: New Ways to Expand the Comparative Law Methodological Repertoire and Enhance the Effectiveness of Inter-Jurisdictional Environmental Governance Regimes*
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KILLING THE PROVERBIAL TWO BIRDS WITH
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COMPARATIVE LAW METHODOLOGICAL
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ENVIRONMENTAL GOVERNANCE REGIMES

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Comparative legal analysis, which was once deemed to be an esoteric and peripheral academic and professional activity, has significantly grown in scope and sophistication. However, its progress has not manifested itself equally across the board. Comparative law still lacks a solid methodological foundation and does not systematically address this gap by borrowing appropriate tools from other disciplines. There is no dearth of predominantly qualitative social science techniques that are suitable for the task. Some are more robust than others but, as the dissection of the Southern China governance regime for combating transboundary pollution illustrates, recourse to even the most rudimentary ones may yield valuable insights.

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I. INTRODUCTION

Comparative law occupies a respectable, but arguably not prominent place in the wide and diverse legal space. It has developed steadily, rather than in leaps and bounds. There is substantial, yet not voluminous literature on the subject.¹ Two

¹ See in particular, BERNHARD GROSSFELD, *THE STRENGTH AND WEAKNESS OF COMPARATIVE LAW* (Tony Weir trans., 1990) [hereinafter GROSSFELD]; BASIL S. MARKESINIS, *FOREIGN LAW AND COMPARATIVE METHODOLOGY* (1997); UGO MATTEI, *COMPARATIVE LAW AND ECONOMICS* (1997); KONRAD ZWEIGERT & HEIN KOTZ, *INTRODUCTION TO COMPARATIVE LAW* (Tony Weir trans., 3d ed. 1998) [hereinafter ZWEIGERT & KOTZ]; *COMPARATIVE LAW IN GLOBAL PERSPECTIVE: ESSAYS IN CELEBRATION OF THE FIFTIETH ANNIVERSARY OF THE FOUNDING OF THE SOAS LAW DEPARTMENT* (Ian Edge ed., 2000) [hereinafter *COMPARATIVE LAW IN GLOBAL PERSPECTIVE: ESSAYS IN CELEBRATION OF THE FIFTIETH ANNIVERSARY OF THE FOUNDING OF THE SOAS LAW DEPARTMENT*]; VIVIAN GROSSWALD CURRAN, *COMPARATIVE LAW: AN INTRODUCTION* (2002); *COMPARATIVE LAW IN THE 21ST CENTURY* (Andrew Harding & Esin Orucu eds., 2002) [hereinafter *COMPARATIVE LAW IN THE 21ST CENTURY*]; *COMPARATIVE LEGAL STUDIES: TRADITIONS AND TRANSITIONS* (Pierre Legrand & Roderick Munday eds., 2003) [hereinafter *COMPARATIVE LEGAL STUDIES: TRADITIONS AND TRANSITIONS*]; ESIN ORUCU, *THE ENIGMA OF COMPARATIVE LAW: VARIATIONS ON A THEME FOR THE TWENTY-FIRST CENTURY* (2004) [hereinafter ORUCU]; *EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW* (Mark Van Hoecke ed., 2004) [hereinafter *EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW*]; WERNER F. MENSKI, *COMPARATIVE LAW IN A GLOBAL CONTEXT: THE LEGAL SYSTEMS OF ASIA AND AFRICA* (2d ed. 2006); *THE OXFORD HANDBOOK OF COMPARATIVE LAW* (Mathias Reimann & Reinhard Zimmermann eds., 2006); *ELGAR ENCYCLOPEDIA OF COMPARATIVE LAW* (Jan M. Smits ed., 2006); PETER DE CRUZ, *COMPARATIVE LAW IN A CHANGING WORLD* (3d ed., 2007) [hereinafter DE CRUZ]; *FOUNDATIONS OF COMPARATIVE LAW: METHODS AND TYPOLOGIES* (William E. Butler, O.V. Kresin & Iu. S. Shemshuchenko eds., 2011) [hereinafter *FOUNDATIONS OF COMPARATIVE LAW: METHODS AND TYPOLOGIES*]; *PRACTICE AND THEORY IN COMPARATIVE LAW* (Maurice Adams & Jacco Bomhoff eds., 2012); *METHODS OF COMPARATIVE LAW* (Pier G. Monateri ed., 2012).

leading journals, one American² and one European,³ dominate the field, which otherwise receives moderate attention in periodicals primarily devoted to international law.⁴ International law is also extensively taught at academic institutions throughout the world, whereas comparative law offerings are available on a much more modest scale. This may reflect the fact that thorough knowledge of two or more jurisdictions is a scarce commodity and that relatively limited opportunities present themselves to apply it in practical contexts.⁵

This is not to imply that the comparative law project is not an ambitious or worthwhile one. It is rightly, albeit selectively, regarded as strategic,⁶ and it may even be argued that, in some respects, the current phase in the evolution of legal studies qualifies as the era of comparative law.⁷ With the exception of its international counterpart, no other sub-discipline is as closely associated with the powerful phenomenon of globalisation in its manifold forms as comparative law. The corollary is that it is increasingly viewed as an essential element of the foundation of the legal system, rather than an intellectual luxury: if comparative law did not exist, it would have to have been invented.⁸

This branch of law is not an isolated fragment, detached from its counterparts. Close and productive relationships exist across the entire legal space, and particularly noteworthy are those with common law (notably in the Commonwealth context), critical legal studies (broadly defined), European law, jurisprudence, legal anthropology, law and economics, law and society, legal

² AMERICAN JOURNAL OF COMPARATIVE LAW.

³ JOURNAL OF COMPARATIVE LAW.

⁴ E.g., AMERICAN JOURNAL OF INTERNATIONAL LAW and the EUROPEAN JOURNAL OF INTERNATIONAL LAW.

⁵ *But see* THE USE OF COMPARATIVE LAW BY COURTS (Ulrich Drobnig & Sief van Erp eds., 1998); Glenn H. Patrick, *Comparative Law and Legal Practice: On Removing the Borders* 75 TUL. L. REV. 977 (2001); BASIL S. MARKESINIS, *COMPARATIVE LAW IN THE COURTROOM AND CLASSROOM* (2003); *COMPARATIVE LAW BEFORE THE COURTS* (Guy Canivet, Mads Andenas & Duncan Fairgrieve eds., 2004).

⁶ *See* T. Koopmans, *Comparative Law and the Courts* 45 INT'L & COMP. L.Q. 545, 555-56 (1996).

⁷ *See id.*

⁸ Hugh J. Ault & Mary A. Glendon, *The Importance of Comparative Law in Legal Education: United States—Goals and Methods of Legal Comparison*, in *LAW IN THE UNITED STATES OF AMERICA IN SOCIAL AND TECHNOLOGICAL REVOLUTION: REPORTS FROM THE UNITED STATES OF AMERICA ON TOPICS OF MAJOR CONCERN AS ESTABLISHED FOR THE IX CONGRESS OF THE INTERNATIONAL ACADEMY OF INTERNATIONAL LAW* 67, 69 (John N. Hazard & Wenceslas J. Wagner eds., 1974).

history, private international law and public international law.⁹ These relationships are mutually reinforcing, with comparative law often acting as a catalyst for the broadening and deepening of the scope of analytical and practical inquiry in overlapping areas.¹⁰

This is not merely a matter of conceptual cross-fertilisation and professional relevance in the narrow sense of the term. The flow of legal ideas across borders, within a comparative framework, has led to further intellectual enrichment and has underpinned constructive legal system redesign.¹¹ The expression “transplants”¹² succinctly captures the positive essence of this intricate process, which also invokes images of “implantation . . . infiltration, infusion, transposition, emulation, engulfment, grafting, re-potting, cross-pollination, digestion, salad bowl and melting pot”¹³ (and, on the negative side, “contamination, legal irritants, collective colonisation, competition of legal systems, hyphenated-law and layered-law”).¹⁴

While a degree of opaqueness is unavoidable in such a dynamic and fluid analytical domain, comparative law can also be said to be marked by greater definitional and functional coherence than occasionally asserted.¹⁵ Definitions abound, but they do not materially vary, and time-honoured ones (e.g., “[t]he words suggest an intellectual activity with law as its object and comparison as its process”)¹⁶ provoke no discord. By the same token, no challenges are posed to the view that comparative law serves a number of essential functions, some more readily discerned (e.g., contribution to academic and practical knowledge, law reform, legislative endeavour, interpretation of national rules of law, legal education, systematic unification of law and regional integration) than others (e.g., reduction of national prejudices, enhancement of cross-cultural understanding and encouragement of critical thinking).¹⁷

At the same time, as noted earlier, the study of comparative law is impeded by certain tangible constraints, stemming from a lack of intellectual and concrete exposure, that may not be easy to circumvent, except in some regional milieus (e.g.,

⁹ See ZWEIGERT & KOTZ, *supra* note 1, at 6-12; Esin Orucu, *Unde Venit, Quo Tendit Comparative Law*, in *COMPARATIVE LAW IN THE 21ST CENTURY*, *supra* note 1, at 2-6 [hereinafter Esin].

¹⁰ See Esin, *supra* note 9.

¹¹ See *id.* at 6-13.

¹² See *id.* at 7.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ See, e.g., George A. Berman et al., *Comparative Law: Problems and Prospects*, 26 AM. U. INT'L. L. REV. 935 (2011).

¹⁶ ZWEIGERT & KOTZ, *supra* note 1, at 2.

¹⁷ *Id.* at 13-28.

the Commonwealth in the past and the European Union at present) where there is a strong incentive to overcome them on practical grounds. The dynamism and fluidity of the field also impart a measure of unevenness to the development process. Some areas attract more attention than others, a pattern which leads to gaps and imbalances. These are identified and addressed, but at a pace and in a form that reflect the prevailing constraints and the nature of the intellectual enterprise.¹⁸

The difficulties faced when seeking to master the tools and facts necessary to engage in an effective juxtaposition of legal realities across different jurisdictions should not be underestimated. The corollary is that comparative inquiry often does not extend beyond the examination of a system other than the one deemed primary for those involved in the task. Strictly speaking, this type of investigation entails the dissection of foreign law, and lacks a salient comparative dimension. Even when the latter is visible, so much groundwork must be undertaken that limited scope is left for activities beyond data gathering, organisation of information and drawing concrete insights.

The theoretical and methodological foundation (the former may be regarded as a component of the latter, but it is convenient to draw a distinction between the two) is not as robust as the descriptive one. This is simply because so many resources, including time, end up being channelled into base-building and related efforts. It does exist, and is by no means insubstantial, but it leaves ample room for further exploration. The aim of the present paper is to take stock of what has been achieved on this front and to suggest how progress could be sustained by incorporating additional ideas from the social sciences. The Southern China experience in the environmental regulatory realm, involving persistently severe transboundary pollution across the Hong Kong-Guangdong province space, is selectively relied upon for illustrative purposes.

The study consists of three key sections. The first provides a broad survey of the principal methodological approaches relied upon in the field of comparative legal inquiry. The second attempts to establish a case for expanding the toolkit employed by students of the law, who venture beyond well-defined jurisdictional boundaries, by borrowing relevant ideas and practices from academic disciplines

¹⁸ To see how the issues highlighted here are explored, directly and indirectly, see GROSSFELD, *supra* note 1; ORUCU, *supra* note 1, at 203-16; see also Andrew Harding, *Comparative Law: A Neglected Discipline?*, in COMPARATIVE LAW IN GLOBAL PERSPECTIVE: ESSAYS IN CELEBRATION OF THE FIFTIETH ANNIVERSARY OF THE FOUNDING OF THE SOAS LAW DEPARTMENT, *supra* note 1, at 101; Arthur T. von Mehren, *An Academic Tradition for Comparative Law?*, 19 AM. J. COMP. L. 624 (1971); Otto Kahn-Freund, *On Uses and Misuses of Comparative Law*, 37 MOD. L. REV. 1 (1974).

with a longer tradition of dissecting fundamentally different socio-political systems. The third seeks to buttress this case through examples reflecting patterns observed in confronting ecological challenges in a specific, institutionally complex cross-border context. A brief conclusion ties the three strands together.

II. SNAPSHOT OF CURRENT RESEARCH STRATEGIES

Impressions to the contrary aside, there is a methodological element in virtually every deliberate learning endeavour geared towards the acquisition of knowledge, formally or informally, qualitatively or quantitatively. Even the choice of a question to address, and the appropriate procedures to employ in studying it, are steps that merit systematic consideration.¹⁹ Indeed, the relationship between question and method, referred to as the question-method connection,²⁰ is by no means simple and cannot be dealt with in a matter-of-fact fashion.²¹ The fit between the two needs to be satisfactory because “different questions require different methods to answer them.”²²

The specification of the goals of a project designed to shed light on an issue of an academic and/or policy interest is another regular feature of scientific inquiry.²³ The goals vary, although a certain core may be delineated (e.g., identifying general patterns and relationships, testing and refining theories, making predictions, interpreting culturally or historically significant phenomena, exploring diversity, giving voice and advancing new theories).²⁴ Again, there is a connection between goals and methods, with the former determining, albeit not exclusively, the latter.²⁵

The seemingly straightforward, but in practice challenging, progression from a general idea potentially to be examined to a detailed scrutiny also entails methodological endeavours. In ‘hard’ academic disciplines, this includes operationalisation and measurement.²⁶ In ‘soft’ ones, conceptualisation, which involves the creation of a ‘conceptual order’, whereby concepts are subjected to ongoing clarification, needs to be undertaken.²⁷ Structuring concepts, or

¹⁹ See KEITH F. PUNCH, INTRODUCTION TO SOCIAL RESEARCH: QUANTITATIVE AND QUALITATIVE APPROACHES 19-22 (2d ed. 2005).

²⁰ See *id.*

²¹ See *id.*

²² *Id.* at 19.

²³ See CHARLES C. RAGIN & LISA M. AMOROSO, CONSTRUCTING SOCIAL RESEARCH 33-56 (2d ed. 2011) [hereinafter RAGIN & AMOROSO].

²⁴ See *id.* at 35-50.

²⁵ See *id.* at 50-55.

²⁶ See EARL R. BABBIE, THE BASICS OF SOCIAL RESEARCH 128-66 (5th ed. 2011) [hereinafter BABBIE].

²⁷ See *id.* at 139-40.

establishing such an order, *inter alia* through concept extension (i.e., stating empirical coverage) and intension (i.e., capturing essence), is a systematic activity.²⁸ Beyond conceptualisation, in the technical sense of the term, a clear roadmap of the entire research process, the multistage path to be pursued, is required.²⁹ Choosing a question that is to be the focus of the investigation constitutes the point of departure and is typically followed by additional steps, spelled out *ex ante* rather than becoming apparent *ex post*.³⁰ In advanced empirical work, not common in the field of comparative law, this often means carefully outlining the envisaged interaction between ideas and evidence (“[i]deas help social researchers make sense of evidence, and researchers use evidence to extend, revise and test ideas”).³¹

These elementary but essential methodological procedures are adopted, in one form or another, in virtually every comparative legal study. As indicated earlier, definitional issues, which are an integral part of a broader conceptual agenda, have been accorded ample attention, albeit perhaps progressively less so, given that the foundation building phase of the evolution of this academic field is largely over. That is true of goal specification as well, also highlighted previously, which has been treated as a task that cannot be predicated on the assumption that the relevance of comparative law is so obvious that no further elaboration is called for.

No illustrations have been provided above for the choice of a research question and the mapping out of the whole process of empirical inquiry, but they are readily available. For example, in one of the first comprehensive surveys of the field, recycled a number of times, a wide array of pertinent topics, general and specific, have been identified together with the underlying rationale.³² In the same rich source, there is an equally thorough discussion of the interrelated steps that comprise a broad-based comparative law research project, from inception to conclusion.³³

A more focused and resource-intensive methodological exercise, one that lies at the heart of the academic comparative law enterprise, is the classification of legal systems in accordance with predetermined criteria.³⁴ This is not a purely

²⁸ See GARY GOERTZ, *SOCIAL SCIENCE CONCEPTS: A USER'S GUIDE* 69-94 (2006).

²⁹ See RAGIN & AMOROSO, *supra* note 23, at 57-78.

³⁰ See *id.* at 28.

³¹ See *id.* at 57.

³² See ZWEIGERT & KOTZ, *supra* note 1, at 63-708.

³³ See *id.* at 32-47; See also Peter Leyland, *Oppositions and Fragmentations: In Search of a Formula for Comparative Analysis?*, in *COMPARATIVE LAW IN THE 21ST CENTURY*, *supra* note 1, at 211; Juha Karhu, *How to Make Comparable Things: Legal Engineering at the Service of Comparative Law*, in *EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW*, *supra* note 1, at 79.

³⁴ See, e.g., DE CRUZ, *supra* note 1, at 32-44.

descriptive and mechanistic process, but an undertaking with solid analytical and (potentially) technical underpinnings.³⁵ The systematic reduction of a rich institutional tapestry to a handful of salient patterns produces economically structured configurations that “are valuable because they are formed from interpretable combinations of values of theoretically or substantively relevant variables which characterize the members of a general class”.³⁶ They may best be “understood as a form of social scientific shorthand”.³⁷ In some cases, a single classificatory scheme may effectively and parsimoniously “replace an entire system of variables and interrelations”.³⁸

It should be emphasized that the classification of legal systems has evolved into a methodologically-inspired pursuit, as distinct from merely an organized one. For instance, in a recent sweeping examination of prevailing patterns, the criteria employed for this purpose (the historical background and development of the system; its characteristic, or typical, mode of thought; its distinctive institutions; the types of legal sources it acknowledges and its treatment of these; and its ideology) have clearly been laid out and applied in a transparent fashion.³⁹ Those yardsticks, in conjunction with relevant theoretical perspectives, have also been relied upon to ascertain whether, and to what extent, diversity is diminishing and convergence is taking place in the era of globalisation.⁴⁰

Another recurring methodological theme in the comparative law literature is the importance of the distinction between macro and micro-theory and the imperative of maintaining a proper balance between the two.⁴¹ The former focuses on “large, aggregate entities of society or even whole societies”⁴² (which equates to legal systems). The latter addresses “issues of social life at the level of individuals and small groups”⁴³ (and their equivalent in the legal domain). Some scholars “prefer to

³⁵ See generally KENNETH D. BAILEY, *TYPOLOGIES AND TAXONOMIES: AN INTRODUCTION TO CLASSIFICATION TECHNIQUES* (1994).

³⁶ CHARLES C. RAGIN, *THE COMPARATIVE METHOD: MOVING BEYOND QUANTITATIVE AND QUALITATIVE STRATEGIES* 149 (1987) [hereinafter CHARLES].

³⁷ *Id.* at 49.

³⁸ *Id.*

³⁹ See DE CRUZ, *supra* note 1, at 37-43; See also L.A. Luts, *Typologies of Modern Legal Systems of the World*, in *FOUNDATIONS OF COMPARATIVE LAW: METHODS AND TYPOLOGIES*, *supra* note 1, at 36.

⁴⁰ See DE CRUZ, *supra* note 1, at 43, 493-524.

⁴¹ See, e.g., William Twining, *Comparative Law and Legal Theory: The Country and Western Tradition*, in *COMPARATIVE LAW IN GLOBAL PERSPECTIVE: ESSAYS IN CELEBRATION OF THE FIFTIETH ANNIVERSARY OF THE FOUNDING OF THE SOAS LAW DEPARTMENT*, *supra* note 1, at 21 [hereinafter Twining].

⁴² BABBIE, *supra* note 26, at 35.

⁴³ *Id.*

limit *macro-theory* to the study of whole societies”.⁴⁴ When this approach is followed, “the intermediate level between macro and micro theory is called *meso-theory*”.⁴⁵ This notion is extensively encountered in writings on the subject, whether or not it is explicitly articulated.⁴⁶ Indeed, “[c]omparative legal studies [essentially] revolve around two themes: the exposition of families of legal systems and the juxtaposition of (mostly private law) rules”.⁴⁷ This proposition “reflects the distinction between macro- and micro-comparative studies”.⁴⁸ The two “are sometimes treated as . . . distinct enterprises, but any serious comparatist knows that there are many inter-related levels of comparison and that most work has to proceed on a number of levels that cannot be kept artificially separate”.⁴⁹ The overlap notwithstanding, “it is useful to distinguish the two types because in practice they often have quite different objectives and are presented to different audiences”.⁵⁰

The macro, or *Grand Systems*, perspective remains the theorist’s first port of call, so to speak, despite at times being “dismissed as grandiose or unscholarly or too vague to be worthy of sustained scholarly or theoretical attention”.⁵¹ It is not disputed that “[t]here are indeed examples of muddled taxonomies or very general treatments that deserve such strictures”.⁵² Nevertheless, it is thought that “there are good reasons for taking seriously the enterprise of constructing total pictures”.⁵³ While the micro variant continues to occupy a considerably larger portion of the comparative law space, particularly in the Anglo-Saxon world,⁵⁴ the macro challenge is faced more rigorously than in the past and there may have been a modest shift towards what may favourably be portrayed as meso-level theory.⁵⁵

In a more philosophical vein, but not one devoid of methodological substance, intricate epistemological issues have systematically been explored.⁵⁶ This is an intellectually challenging undertaking that requires elaborate yet precise answers to

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ See, e.g., Twining, *supra* note 41.

⁴⁷ Pierre Legrand, *Comparative Legal Studies and the Commitment to Theory*, 58 MOD. L. REV. 262 (1995).

⁴⁸ Twining, *supra* note 41, at 31.

⁴⁹ *Id.* at 47.

⁵⁰ *Id.*

⁵¹ *Id.* at 32.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ See *id.* at 33.

⁵⁵ See, e.g., Andrew Harding, *Comparative Public Law: Some Lessons from Southeast Asia*, in COMPARATIVE LAW IN THE 21ST CENTURY, *supra* note 1, at 249.

⁵⁶ See, e.g., EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW, *supra* note 1.

certain questions. First, “what kind of knowledge do we need for carrying out comparative research?”⁵⁷ Second, “how, and to what extent, may we find it?”⁵⁸ Third, “what kind of new insights may follow from such research?”⁵⁹ To the degree that these and similar questions are being effectively grappled with, there is some scope for an assessment that is at the positive end of the evaluative continuum: “Comparative law is without doubt the most promising part of modern jurisprudence”.⁶⁰ However, the “half full, half empty glass” analogy keeps on resurfacing in a manner that suggests that this view is not broadly shared, at least elsewhere in the legal space: “Comparatists like to wail about the state of their discipline. To read contemporary legal literature is, therefore, to witness pitiful series of testimonials about the alienation of the comparatist. The discipline of comparative law, it seems, is marginalized in a number of ways.”⁶¹

The explanations for this predicament offered here have been centred on constraints stemming from the supply of skills (lack of familiarity with more than one legal system), relatively limited practical potential and sheer complexity of the subject. Alternative, and more critical, accounts highlight the still not entirely satisfactory progress on the methodological front, including its methodological component. According to scholars who adopt this stance, notwithstanding the considerable headway made, comparative law continues to display “a lack of methodological reflection and theoretical foundation”.⁶²

This may be an overly harsh verdict and one no longer wholly valid, but it identifies an area where gaps have arguably narrowed without materially shrinking. There may generally be greater awareness of the problem than previously, yet this has not fully been reflected in research strategies pursued and stock of knowledge built. Methodological insights derived from other academic disciplines, notably the social sciences, may productively be employed in an effort to gradually remedy this situation.

⁵⁷ Mark Van Hoecke, *Deep Level Comparative Law*, in *EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW*, *supra* note 1, at 165.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ Bernhard Grossfeld, *Comparatists and Languages*, in *COMPARATIVE LEGAL STUDIES: TRADITIONS AND TRANSITIONS*, *supra* note 1, at 154.

⁶¹ Mitchel de S.-O.-L'E. Lasser, *The Question of Understanding*, in *COMPARATIVE LEGAL STUDIES: TRADITIONS AND TRANSITIONS*, *supra* note 1, at 197.

⁶² Ugo Mattei & Mathias Reimann, *Introduction*, 46 *AM. J. INT'L L.* 597 (1998).

III. THE CASE FOR LOOKING SELECTIVELY ELSEWHERE FOR INSPIRATION

The benefits of a salient methodological (again, including theoretical) orientation are increasingly, but not universally, recognized by comparative law scholars.⁶³ Some of the sceptics exhibit naïve epistemological optimism and others show strong epistemological pessimism.⁶⁴ The former argue that their craft may fruitfully be pursued without deep methodological consciousness and the latter assert that comparing, let alone harmonizing, different legal systems poses insurmountable difficulties (“[l]aw is seen as the product of a legal culture or legal ‘*mentalité*’, which, also remarkably, always seems to coincide with the (entire) population living on the territory of a national legal system;”⁶⁵ the corollary is that “[f]oreigners . . . never will be able to understand ‘really’ foreign law, because of cultural differences”⁶⁶). Both propositions are believed to have little merit and the quest for methodological enlightenment has gained—not lost—momentum.⁶⁷

In social science territory, manifestations of disregard and hesitation have been few and far between. Rather, the centrality of the comparative research enterprise has consistently been emphasized and the drive to enhance its scope has encountered no serious resistance. Scholars in the field characteristically embark on their surveys of developments in this domain of scientific inquiry with vigorous assertions such as that “people compare as easily as they breathe, making continuous value judgments over which product to buy, which clothes to wear, which foods to read, or which course of action to choose.”⁶⁸ Then, they often proceed to equate all social research with the comparative type because the former, as it entails a search for understanding and explaining different social patterns, cannot be pursued “without previous reflections on similarities and dissimilarities underlying the variation.”⁶⁹

Comparative social research is a more diverse and multi-level undertaking than its legal counterpart. The terms “cross-cultural” and “cross-national” are often invoked in this context in order to highlight the significance of macro-style

⁶³ See EPISTEMOLOGY AND METHODOLOGY OF COMPARATIVE LAW, *supra* note 1, at 172-74.

⁶⁴ See *id.*

⁶⁵ *Id.* at 172.

⁶⁶ *Id.*

⁶⁷ See *id.* at 172-74.

⁶⁸ TIM MAY, SOCIAL RESEARCH: ISSUES, METHODS AND PROCESS 243 (4th ed. 2011) [hereinafter MAY]; See also DANIELE CARAMANI, INTRODUCTION TO THE COMPARATIVE METHOD WITH BOOLEAN ALGEBRA (2009).

⁶⁹ Else Oyen, *The Imperfection of Comparisons*, in COMPARATIVE METHODOLOGY: THEORY AND PRACTICE IN INTERNATIONAL SOCIAL RESEARCH 1, 4 (Else Oyen ed., 1990) [hereinafter Oyen].

comparisons between cultures and nations⁷⁰ and the deep historical roots and continuity of this scholarly activity (“States, kingdoms and principalities have been compared for approximately 2,500 years”).⁷¹ However, ample attention is also accorded to comparisons between international institutions, sub-cultures, regional/local entities, organisations, groups, individuals, and an array of policies and practices.⁷²

Expectations to the contrary aside, globalisation (defined as an “intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa”⁷³) has not dampened interest in comparative social research. This is notwithstanding the acceleration in cross-border convergence, coupled with de-traditionalisation, or the loosening of long-established human bonds, at all levels of social behaviour.⁷⁴ This pattern has been attributed to the complexities and uncertainties stemming from globalisation/de-traditionalisation, reactions to the trend (notably in the form of a resurgence of nationalism), domestic fragmentation (heightening the need for intra-societal, as distinct from inter-societal, comparison) and challenges emanating from the intricacies of emerging modes of global-local interaction (with nation States encroached upon “from above” by supranational institutions and “from below” by increasingly empowered domestic constituencies).⁷⁵

Globalisation/de-traditionalisation has not left comparative social research entirely intact. At the margin, it has induced a shift towards methodological cosmopolitanism that “transcends . . . the dualisms between global and local, national and international, and us and them through new forms of conceptual and empirical analysis”.⁷⁶ Notably, a view has tentatively emerged that “national organisation as a structuring principle of societal and political action can no longer serve as the orienting reference point for the social scientific observer”.⁷⁷ However, this partial adjustment of the theoretical lens has not fundamentally affected the determined quest for robust tools to dissect variations in the human landscape.

⁷⁰ See MAY, *supra* note 68, at 242.

⁷¹ Karl W. Deutsch, *Prologue: Achievements and Challenges in 2000 Years of Comparative Research*, in *COMPARATIVE POLICY RESEARCH: LEARNING FROM EXPERIENCE* 5 (Meinolf Dierkes, Hans N. Weiler & Ariane Berthoin Antal eds., 1987).

⁷² See MAY, *supra* note 68, at 243.

⁷³ ANTHONY GIDDENS, *THE CONSEQUENCES OF MODERNITY* 64 (1991).

⁷⁴ See MAY, *supra* note 68, at 244-47.

⁷⁵ See *id.*

⁷⁶ *Id.* at 247.

⁷⁷ Ulrich Beck & Natan Sznaider, *Unpacking Cosmopolitanism for the Social Sciences: A Research Agenda*, 57 *BRIT. J. SOC.* 1, 4 (2006).

Indeed, it may have enhanced it by sharpening the distinction between endogenous (peculiar to the country/unit which is being studied) and exogenous (general in scope, or not peculiar to a specific country/unit, such as international capital) factors and systematically exploring the role of the latter in social processes.⁷⁸ A relevant example is the recent empirical examination of the impact of different social mediation mechanisms, or national and regional institutional configurations, on the variation in sub-national responses to global forces (an external influence) in the formulation and implementation of spatial strategies geared towards promoting applied science.⁷⁹

Globalisation/de-traditionalisation has not diminished (methodological) concern for appropriateness and equivalence in comparative social research.⁸⁰ Scholars in the field continue to acknowledge that what is appropriate for one cultural milieu is not necessarily appropriate for another.⁸¹ By the same token, they consistently seek to maintain meaning-equivalence, remaining sensitive to the fact that despite a partial cross-national convergence in behavioural patterns, meanings still vary considerably between cultures.⁸² This is reflected, *inter alia*, in the manner research instruments (e.g., questionnaires) are designed and employed.⁸³

This is not to imply that scholars engaged in systematic social comparison have pursued their scientific agenda in an entirely cohesive fashion. Within a large analytical space of this type, a degree of intellectual divergence is inevitable. One active participant in the debates regarding the optimal research strategy to follow has thus grouped the prolific contributors into distinct categories, such as comparatists, methodological nationalists, purists, totalists and (even) ignorants.⁸⁴ However, movement along multiple paths has not materially impeded the systematic quest for versatile tools of comparative social inquiry.

From early stages of its evolution to the present, this forward drive has been marked by a high level of conceptual rigour. Nearly half a century ago, a basic distinction was drawn between social comparisons whose purpose is to show similarities and those whose purpose is to show differences.⁸⁵ A two-dimensional

⁷⁸ See MAY, *supra* note 68, at 251.

⁷⁹ See generally TIM MAY & BETH PERRY, *SOCIAL RESEARCH AND REFLEXIVITY: CONTENT, CONSEQUENCES AND CONTEXT* (2011).

⁸⁰ See *id.* at 262-66.

⁸¹ See *id.* at 262.

⁸² See *id.* at 262-66.

⁸³ See *id.* at 262.

⁸⁴ See generally Oyen, *supra* note 69.

⁸⁵ See Allen D. Grimshaw, *Comparative Sociology: In What Ways Different from Other Sociologies?*, in *COMPARATIVE SOCIAL RESEARCH: METHODOLOGICAL PROBLEMS AND STRATEGIES* 8,

typology was created by dividing such scholarly endeavours into those that treat the units observed (e.g., cultural configurations) as entities and those that treat their characteristics as sets of constraints on human behaviour.⁸⁶ This classification has produced four distinct groupings: studies that identify universals, those that demonstrate generality of propositions, those that emphasize differences between the units observed, and those that specify time-space coordinates of propositions.⁸⁷

Considerable analytical resources were devoted for some period of time to refining this typology and further exploring its four components.⁸⁸ Particular attention was accorded to the extent to which the degree of social differentiation (a characteristic of the units observed) can effectively account for variation in social behaviour, although without ruling out other potential influences.⁸⁹ This led to the development of additional, more elaborate classification schemes, laying the foundation for the methodical examination of a broad array of specific issues within a well-rounded conceptual framework geared towards culturally far-reaching and multi-level comparative inquiry.⁹⁰

Task-oriented typology construction has subsequently given way to systematic theory building/testing and formulation of strategies to address measurement problems.⁹¹ The first step has entailed a shift of focus from regarding historically anchored observations as exclusively linked to the units actually observed, to viewing them as manifestations of general phenomena, free of unique spatio-temporal parameters (e.g., converting a statement such as "Hitler was a charismatic leader who came to power in Germany as a result of a crisis" into "crises give rise to charismatic leadership").⁹² This requires the substitution of variables (e.g., charismatic leadership) for proper names of the units observed (e.g., Hitler).⁹³

The theory building/testing efforts have, from the outset, been elaborate in nature. They involve careful dissection of issues such as appropriate research designs,⁹⁴ challenges faced in studying hierarchically distinct relationships (i.e., where the risk arises of equating the effects of variables observable only at the system level with

10 (Michael Armer & Allen D. Grimshaw eds., 1973) [hereinafter *COMPARATIVE SOCIAL RESEARCH: METHODOLOGICAL PROBLEMS AND STRATEGIES*].

⁸⁶ See *id.* at 8-10.

⁸⁷ See *id.*

⁸⁸ See *id.* at 10-11.

⁸⁹ See *id.*

⁹⁰ See *generally id.*

⁹¹ ADAM PRZEWORSKI & HENRY TEUNE, *THE LOGIC OF COMPARATIVE SOCIAL INQUIRY* (1970) [hereinafter *PRZEWORSKI & TEUNE*] (providing an initial impetus).

⁹² *Id.* at 24.

⁹³ See *id.* at 24-30.

⁹⁴ See *id.* at 31-46.

those aggregated from within-system observations)⁹⁵ and demands stemming from the need to fully adhere to procedures relied upon in formulating theories when methodically undertaking social comparisons. This elaboration may be attributed to number of technical reasons, but particularly in light of the idiographic features of the culturally and historically diverse material explored in such circumstances.⁹⁶

Questions of measurement have also been broadly and rigorously addressed from the point at which comparative social research began its modern evolution. Problems such as the language of comparison,⁹⁷ direct and inferred measurement,⁹⁸ and equivalent measurement across systems⁹⁹ have consistently been grappled with in a comprehensive and systematic fashion. Especially close attention has been accorded to the latter, or the difficulties inherent in establishing the equivalence of measurement instruments across the entire highly differentiated social landscape.¹⁰⁰

This concern initially reflected the traditional preoccupation with quantification, but the scope has subsequently widened to encompass the qualitative dimension. That has not merely manifested itself in acknowledgement of the salience of the latter. Specific methods, including those highly sophisticated in nature, have been developed to handle it in a reliable and transparent manner. Qualitative Comparative Analysis (“QCA”) is one that stands out for its intricate attributes and versatility, including in the practical sense of the term, as has been amply demonstrated.¹⁰¹

⁹⁵ See *id.* at 47-73.

⁹⁶ See *id.* at 74-87.

⁹⁷ See *id.* at 92-94.

⁹⁸ See *id.* at 94-106.

⁹⁹ See *id.* at 106-10.

¹⁰⁰ See *id.* at 113-31.

¹⁰¹ See generally CHARLES, *supra* note 36; RAGIN & AMOROSO, *supra* note 23, at 111-61; ISSUES AND ALTERNATIVES IN COMPARATIVE SOCIAL RESEARCH (Charles C. Ragin ed., 1991); CHARLES C. RAGIN, FUZZY-SET SOCIAL SCIENCE 57-61 (2000); Benoit Rihoux, *Qualitative Analysis (QCA) and Related Systematic Comparative Methods: Recent Advances and Remaining Challenges for Social Research*, 21 INT’L J. COMP. SOC. 679 (2006); INNOVATIVE COMPARATIVE METHODS FOR POLICY ANALYSIS (Benoit Rihoux & Heike Grimm eds., 2006); METHOD AND SUBSTANCE IN MACRO-COMPARATIVE ANALYSIS (Lane Kenworthy & Alexander Hicks eds., 2008); CHARLES C. RAGIN, REDESIGNING SOCIAL INQUIRY: FUZZY SETS AND BEYOND 109-46 (2008) [hereinafter RAGIN, REDESIGNING SOCIAL INQUIRY: FUZZY SETS AND BEYOND]; THE SAGE HANDBOOK OF CASE-BASED METHODS (David Byrne & Charles C. Ragin eds., 2009); CONFIGURATIONAL COMPARATIVE METHODS: COMPARATIVE QUALITATIVE ANALYSIS (QCA) AND RELATED TECHNIQUES (Benoit Rihoux & Charles C. Ragin eds., 2009) [hereinafter CONFIGURATIONAL COMPARATIVE METHODS: COMPARATIVE QUALITATIVE ANALYSIS (QCA) AND RELATED

QCA is a tool designed to provide a more solid basis for drawing causal inferences in situations in which only a small number of cases is available. This is often the predicament faced in the human services (education, medicine, nursing, psychology and social work), where caregivers/professionals are typically responsible for just a handful of service recipients at any given time. However, in macro settings such as those dissected by economists, geographers, historians, legal scholars, political scientists and sociologists, small samples are also a prominent feature of the research environment. QCA entails a degree of quantitative manipulation, particularly when it assumes the form of the Configurational Comparative Method (“CCM”), but in macro-oriented disciplines, with the possible exception of economics, it generally employs qualitative case studies as its principal inputs.¹⁰²

Another relevant example, devoid of any quantitative enhancements, is Constant Comparative Analysis (“CMA”), an inductive investigative strategy (rather than a technique in the strict sense of the term), originally embraced for purposes of grounded theory building. However, it is currently employed more broadly, in a manner that requires scholars engaged in analytically-focused data gathering to examine one piece of information and compare it to all other bits that are either different or similar, a process expected to facilitate the task of unravelling patterns of social convergence and divergence.¹⁰³

Less elaborately specified, yet logically structured, procedures or strategies have been developed for handling macro-level situations characterized by the prevalence of soft data not readily amenable to manipulation by means of inelastic methods that need to be strictly adhered to. The comparative study of institutions (“formal and informal rules, regulations, norms, and understandings that constrain and

TECHNIQUES]; Bruce Kogut, *Qualitative Comparative Analysis of Social Science Data*, in THE OXFORD HANDBOOK OF INSTITUTIONAL ANALYSIS 139 (Glen Morgan et al. eds., 2010) [hereinafter THE OXFORD HANDBOOK OF INSTITUTIONAL ANALYSIS]; CARSTEN Q. SCHMEIDER & CLAUDIUS WAGEMANN, SET-THEORETIC METHODS FOR SOCIAL SCIENCES: A GUIDE TO QUALITATIVE COMPARATIVE ANALYSIS (2012); MATTHEW LANGE, COMPARATIVE-HISTORICAL METHODS (2013).

¹⁰² See generally RAGIN, REDESIGNING SOCIAL INQUIRY: FUZZY SETS AND BEYOND, *supra* note 101; CONFIGURATIONAL COMPARATIVE METHODS: COMPARATIVE QUALITATIVE ANALYSIS (QCA) AND RELATED TECHNIQUES, *supra* note 101.

¹⁰³ See generally Barney G. Glaser, *The Constant Comparative Method of Qualitative Analysis*, 12 SOC. PROBS. 436 (1965); BARNEY G. GLASER & ANSELM L. STRAUSS, THE DISCOVERY OF GROUNDED THEORY: STRATEGIES FOR QUALITATIVE RESEARCH (1967); JULIET M. CORBIN & ANSELM L. STRAUSS, BASICS OF QUALITATIVE RESEARCH: GROUNDED THEORY PROCEDURES AND TECHNIQUES (3d ed. 2008).

enable behaviour”)¹⁰⁴ is an interesting case in point because of the role played by economic researchers, known for their penchant for stylized models and statistical hypothesis testing.¹⁰⁵

Institutions are not easy to come to grips with, conceptually and technically. Nevertheless, economists have systematically endeavoured to determine how the dynamics, forms and outcomes of economic organisation (e.g., firm, market and network) are influenced by other social institutions (including legal systems) and with what consequences for economic performance (in terms of yardsticks such as employment, growth, inequality and innovation).¹⁰⁶ This goal has been pursued across the entire social space in a theoretically inspired and methodologically thorough fashion, without extensive reliance on parsimonious models and sophisticated quantitative techniques.¹⁰⁷

While still evolving, from a methodological perspective, the exploration of social commonalities and social diversity is thus a more encompassing and a more solid enterprise than the examination of similar patterns in the legal domain. It offers a wide-ranging framework for pursuing comparative inquiry, consisting of sound elements that provide a detailed blueprint for careful theory building/testing, devising an array of flexible investigative strategies and implementing a precisely delineated research agenda.¹⁰⁸ Its merits stem from the coherence and scope of the overall system, and the effectiveness and interconnectedness of the component parts.¹⁰⁹ This is a potentially rich source of ideas for students of comparative law,

¹⁰⁴ Glenn Morgan et al., *Introduction*, in *THE OXFORD HANDBOOK OF INSTITUTIONAL ANALYSIS*, *supra* note 101, at 1, 2.

¹⁰⁵ *See generally id.*

¹⁰⁶ *See generally id.*

¹⁰⁷ *See generally id.*

¹⁰⁸ *See generally* PRZEWORSKI & TEUNE, *supra* note 91; *COMPARATIVE SOCIAL RESEARCH: METHODOLOGICAL PROBLEMS AND STRATEGIES*, *supra* note 85; MAY, *supra* note 68, at 243-67; RAGIN & AMOROSO, *supra* note 23, at 111-61; *COMPARATIVE RESEARCH METHODS* (Donald P. Warwick & Samuel Osherson eds., 1973) [hereinafter *COMPARATIVE RESEARCH METHODS*]; NEIL J. SMELSER, *COMPARATIVE METHODS IN THE SOCIAL SCIENCES* (1976) [hereinafter *SMELSER*]; B. GUY PETERS, *COMPARATIVE POLITICS: THEORY AND METHOD* (1998) [hereinafter *PETERS*]; *COMPARATIVE HISTORICAL ANALYSIS IN THE SOCIAL SCIENCES* (James Mahoney & Dietrich Rueschemeyer eds., 2003) [hereinafter *COMPARATIVE HISTORICAL ANALYSIS IN THE SOCIAL SCIENCES*].

¹⁰⁹ *See generally* PRZEWORSKI & TUENE, *supra* note 91; *COMPARATIVE SOCIAL RESEARCH: METHODOLOGICAL PROBLEMS AND STRATEGIES*, *supra* note 85; *COMPARATIVE RESEARCH METHODS*, *supra* note 108; *SMELSER*, *supra* note 108; *PETERS*, *supra* note 108; *COMPARATIVE HISTORICAL ANALYSIS IN THE SOCIAL SCIENCES*, *supra* note 108; MAY, *supra* note 68, at 243-67; RAGIN & AMOROSO, *supra* note 23, at 111-61.

as the Southern China experience in the environmental regulatory realm selectively illustrates.

IV. RECONFIGURING THE MANAGEMENT OF TRANSBOUNDARY POLLUTION IN HONG KONG/GUANGDONG PROVINCE

A. General Backdrop

Economically and politically, Hong Kong and Guangdong province, or the Pearl River Delta (“PRD”) area (an emerging megalopolis), constitute the heart of the Southern China region. This is a geographic sphere best known for its outward-looking disposition and productive dynamism.¹¹⁰ However, there is a negative side to this otherwise impressive picture, attributable to relentless and uncontrolled economic expansion. Air and water pollution is at dangerous, rather than merely uncomfortable, levels and the policy responses to the problem are believed to not be commensurate with the challenge it poses.¹¹¹ The institutional mechanisms underpinning them are also thought to be rather fragile.¹¹²

¹¹⁰ See generally YUN-WING SUNG, *THE CHINA-HONG KONG CONNECTION: THE KEY TO CHINA’S OPEN DOOR POLICY* (1991) [hereinafter *THE CHINA-HONG KONG CONNECTION*]; Ronald Findlay & Stanislaw Wellisz, *Five Small Open Economies: Hong Kong*, in *FIVE SMALL OPEN ECONOMIES: A WORLD BANK COMPARATIVE STUDY* 16 (Ronald Findlay & Stanislaw Wellisz eds., 1993) [hereinafter Findlay & Wellisz]; CHINA AND THE ASIAN PACIFIC ECONOMY (Joseph C.H. Chai, Yak-yeow Hueh & Clement A. Tisdell eds., 1997) [hereinafter *CHINA AND THE ASIAN PACIFIC ECONOMY*]; DAVID R. MEYER, *HONG KONG AS A GLOBAL METROPOLIS* (2000) [hereinafter MEYER]; CHINA’S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE (Tung X. Bui et al. eds., 2003) [hereinafter CHINA’S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE]; Robert C. Feenstra & Gordon H. Hanson, *Intermediaries in Entrepôt Trade: Hong Kong Re-exports of Chinese Goods*, 13 *J. ECON. & MGMT. STRATEGY* 3 (2004) [hereinafter Feenstra & Hanson]; YUN-WING SUNG, *THE EMERGENCE OF GREATER CHINA: THE ECONOMIC INTEGRATION OF MAINLAND CHINA, TAIWAN AND HONG KONG* (2005) [hereinafter *THE EMERGENCE OF GREATER CHINA: THE ECONOMIC INTEGRATION OF MAINLAND CHINA, TAIWAN AND HONG KONG*]; CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION (Lok Sang Ho & Robert Ash eds., 2006) [hereinafter *CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION*]; KU-WAI LI, *THE HONG KONG ECONOMY: RECOVERY AND RESTRUCTURING* (2006) [hereinafter LI]; STEPHEN CHIU & TAI-LOK LUI, *HONG KONG: BECOMING A GLOBAL CHINESE CITY* (2009) [hereinafter CHIU & LUI]; HONG YU, *ECONOMIC DEVELOPMENT AND INEQUALITY IN CHINA: THE CASE OF GUANGDONG* (2011) [hereinafter YU].

¹¹¹ See generally Miron Mushkat & Roda Mushkat, *The Political Economy of Hong Kong’s Transboundary Pollution: The Challenge of Effective Governance*, 9 *J. INT’L TRADE & POL’Y* 175 [hereinafter *The Political Economy of Hong Kong’s Transboundary Pollution*]; Miron Mushkat & Roda Mushkat, *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia:*

The opening up of the previously closed Chinese economy to foreign trade and investment in 1978, coupled with the introduction of an array of market-friendly domestic reforms, has furnished Hong Kong with yet another opportunity to reshape its economic structure and move further along the value-added chain. The former British colony, transformed in 1997 into a highly autonomous special administrative region (“SAR”) of the People’s Republic of China (“PRC”),¹¹³ and has proceeded to resolutely capitalize on this fundamental recalibration of politico-economic strategy by swiftly shifting its labour-intensive manufacturing base to Guangdong province and reinventing itself as a leading international centre for the provision of intermediary services, or a veritable global metropolis.¹¹⁴

Guangdong province has greatly benefited from the cross-border infusion of capital-financial, human, physical and technological.¹¹⁵ It has experienced far-reaching internationalisation, with spillovers to the entire coastal region, which has extended beyond the economic domain and has manifested itself in realms of human activity other than trade and investment (e.g., the socio-cultural sphere).¹¹⁶ Elaborate conceptual schemes (e.g., competitive liberalisation hypothesis, cyclical viewpoint, domestic-global linkage element, East Asian developmental State model, neoliberal framework, network capital notion, political bargaining construct and regulatory perspective) have been employed to shed light on the Hong Kong-

The Case of Transboundary Pollution in Hong Kong, in EAST ASIAN ECONOMIC INTEGRATION: LAW, TRADE AND FINANCE 49 (Ross P. Buckley, Richard Weixing Hu & Douglas W. Arner eds., 2011) [hereinafter *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*].

¹¹² See generally *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹¹³ See generally RODA MUSHKAT, ONE COUNTRY, TWO INTERNATIONAL LEGAL PERSONALITIES: THE CASE OF HONG KONG (1997) [hereinafter MUSHKAT]; YASH GHAI, HONG KONG NEW CONSTITUTIONAL ORDER: THE RESUMPTION OF CHINESE SOVEREIGNTY AND THE BASIC LAW (2d ed. 1999) [hereinafter GHAI].

¹¹⁴ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110; CHINA AND THE ASIAN PACIFIC ECONOMY, *supra* note 110; MEYER, *supra* note 110; CHINA’S ECONOMIC POWERHOUSE, *supra* note 110; Feenstra & Hanson, *supra* note 110; THE EMERGENCE OF GREATER CHINA, *supra* note 110; CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION, *supra* note 110; LI, *supra* note 110; CHIU & LUI, *supra* note 110; YU, *supra* note 110.

¹¹⁵ See generally CHINA’S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE, *supra* note 110; YU, *supra* note 110.

¹¹⁶ See generally CHINA’S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE, *supra* note 110; YU, *supra* note 110.

driven dynamics of the transition from an autarkic configuration to genuinely open system architecture.¹¹⁷

Hong Kong's tangible gains from this particular relationship have been equally substantial. It has imported goods from its northern neighbour and has distributed/re-exported them, with extensive participation by burgeoning local service industries (e.g., communications, logistics, marketing and transportation; modest processing has also taken place), to numerous final destinations across the world, earning a healthy spread in the course of this activity (charges imposed for services such as customs, freight and insurance have typically had a domestic element as well).¹¹⁸

Intermediation via outward processing has been another lucrative middleman function.¹¹⁹ This has commonly entailed the purchase of raw materials on the world market, their initial processing in Hong Kong or elsewhere-if more convenient, exportation of the unfinished goods for further processing across the border, and their importation back to Hong Kong for purposes of distribution to the final destination.¹²⁰ Hong Kong intermediaries have enjoyed a distinct advantage as middlemen in this space because of physical (vicinity to Guangdong province) and socio-cultural factors (same attitudinal makeup, dialect/language and productive links to the vast Chinese diaspora).¹²¹

Direct investment and trade facilitation provided the initial impetus for the development of large-scale cross-border intermediation, which has subsequently evolved into a multidimensional activity involving a broad range of economically valuable middleman functions, notably that of a financier.¹²² Interestingly, the

¹¹⁷ See generally DAVID ZWEIG, INTERNATIONALIZING CHINA: DOMESTIC INTERESTS AND GLOBAL LINKAGES (2002); CHINA'S REFORMS AND INTERNATIONAL POLITICAL ECONOMY (David Zweig & Chen Zhimin eds., 2007).

¹¹⁸ See generally THE CHINA HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110; Feenstra & Hanson, *supra* note 110; LI, *supra* note 110.

¹¹⁹ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110, Findlay & Wellisz, *supra* note 110; Feenstra & Hanson, *supra* note 110; LI, *supra* note 110.

¹²⁰ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110; Feenstra & Hanson, *supra* note 110; LI, *supra* note 110.

¹²¹ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110; Feenstra & Hanson, *supra* note 110; LI, *supra* note 110; MEYER, *supra* note 110; THE EMERGENCE OF GREATER CHINA: THE ECONOMIC INTEGRATION OF MAINLAND CHINA, TAIWAN AND HONG KONG, *supra* note 110; CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION, *supra* note 110; CHIU & LUI, *supra* note 110.

¹²² See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110; Feenstra & Hanson, *supra* note 110; LI, *supra* note 110; MEYER, *supra* note

progressive opening up of Guangdong province and the surrounding areas has increased, rather than diminished, China's reliance on Hong Kong intermediaries, a pattern attributed to a number of influences, particularly size (whereby growth becomes self-reinforcing because it is accompanied by economies of scale/agglomeration) and product heterogeneity (which leads to higher search costs and thus greater demand for middleman services).¹²³

The Hong Kong-Guangdong nexus has significantly expanded geographically and operationally. It now constitutes the functional nerve centre of a wide territorial domain conceptualized as Greater China, which encompasses Hong Kong-Guangdong (Greater Hong Kong) as its core, Greater Southeast China (Hong Kong, Taiwan and the mainland's southeast coastal provinces; Guangdong, Fujian, Jiangsu, Zhejiang and Shanghai) as its inner layer, and the Greater China/Chinese economic area (Hong Kong, Taiwan and the mainland) as its outer layer.¹²⁴

The mutually beneficial bilateral relationship underpinning this dynamic has not been without adverse consequences. On the Guangdong side, income and wealth inequality, both within the province and in a countrywide context, has markedly escalated.¹²⁵ The same problem has manifested itself on the southern side of the border, although there, the principal focus has more narrowly been on the specific difficulties experienced by unskilled workers in the course of fast-paced de-

110; THE EMERGENCE OF GREATER CHINA: THE ECONOMIC INTEGRATION OF MAINLAND CHINA, TAIWAN AND HONG KONG, *supra* note 110; CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION, *supra* note 110; CHIU & LUI, *supra* note 110; Y.C. Jao, *Hong Kong as a Financial Centre for Greater China*, in CHINA AND THE ASIAN PACIFIC ECONOMY, *supra* note 110, at 44; Y.C. Jao, *Hong Kong as a Financial Centre of China and the World*, in CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION, *supra* note 110, at 121; Y.C. Jao, *The Rise of Hong Kong as a Financial Centre*, 19 ASIAN SURV. 674 (1979); Y.C. Jao, *Hong Kong as a Regional Financial Centre: Evolution and Prospects*, in HONG KONG: DILEMMAS OF GROWTH 161 (Leung Chi-keung et al. eds., 1980); THE HONG KONG FINANCIAL SYSTEM (Richard Y.K. Ho, Robert H. Scott & Kie-ann Wong eds., 1991); Y.C. JAO, HONG KONG AS AN INTERNATIONAL FINANCIAL CENTRE: EVOLUTION, PROSPECTS AND POLICIES (1997); THE HONG KONG FINANCIAL SYSTEM: A NEW AGE (Simon S.M. Ho, Robert H. Scott & Kie-ann Wong eds., 2004).

¹²³ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; Findlay & Wellisz, *supra* note 110.

¹²⁴ See generally THE CHINA-HONG KONG CONNECTION, *supra* note 110; GREATER CHINA: THE NEXT SUPERPOWER (David Shambaugh ed., 1995).

¹²⁵ See generally CHINA'S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE, *supra* note 110; YU, *supra* note 110.

industrialisation, or Hong Kong's rapid transition from labour-intensive manufacturing to value-added services.¹²⁶

The negative ecological ramifications of relentless cross-border expansion/integration have arguably been far greater and less readily reversible. On the Guangdong/mainland side, uncontrolled growth has inflicted havoc on the environment on such a scale that ecosystem sustainability, economic prosperity, human well-being and socio-political stability may be jeopardized.¹²⁷ For Hong Kong, pollution in its various forms, but particularly the severe degradation of air and water quality, has also been the source of serious environmental, economic, health-related and socio-political dislocation.¹²⁸

¹²⁶ See generally Kui-yin Cheung & C. Simon Fan, *Economic Integration between Hong Kong and Mainland China: Did Trade Hurt Hong Kong's Unskilled Workers?*, in CHINA, HONG KONG AND THE WORLD ECONOMY: STUDIES ON GLOBALIZATION, *supra* note 110, at 186.

¹²⁷ See generally RICHARD L. EDMONDS, PATTERNS OF CHINA'S LOST HARMONY: A SURVEY OF THE COUNTRY'S ENVIRONMENTAL DEGRADATION AND PROTECTION (1994); BARBARA J. SINKULE & LEONARD ORTOLANO, IMPLEMENTING ENVIRONMENTAL POLICY IN CHINA (1995); MANAGING THE CHINESE ENVIRONMENT (Richard L. Edmonds ed., 2000); XIAOYING MA & LEONARD ORTOLANO, ENVIRONMENTAL REGULATION IN CHINA: INSTITUTIONS, ENFORCEMENT AND COMPLIANCE (2000); GEOFFREY MURRAY & IAN COOK, GREEN CHINA: SEEKING ECOLOGICAL ALTERNATIVES (2002); MARK ELVIN, THE RETREAT OF THE ELEPHANTS: AN ENVIRONMENTAL HISTORY OF CHINA (2004); GORILD HEGGELUND, ENVIRONMENT AND RESETTLEMENT POLITICS IN CHINA: THE THREE GORGES PROJECT (2004); CHINA'S ENVIRONMENT AND THE CHALLENGE OF SUSTAINABLE DEVELOPMENT (Kristen A. Day ed., 2005) [hereinafter CHINA'S ENVIRONMENT AND THE CHALLENGE OF SUSTAINABLE DEVELOPMENT]; BENJAMIN VAN ROOIJ, IMPLEMENTING LAND AND POLLUTION IN CHINA: LAW-MAKING, COMPLIANCE AND ENFORCEMENT (2006); ENVIRONMENTAL GOVERNANCE IN CHINA (Neil T. Carter & Arthur P.J. Mol eds., 2007) [hereinafter ENVIRONMENTAL GOVERNANCE IN CHINA]; CHEN GANG, POLITICS OF CHINA'S ENVIRONMENTAL PROTECTION: PROBLEMS AND PROGRESS (2010); ELIZABETH C. ECONOMY, THE RIVER RUNS BLACK: THE ENVIRONMENTAL CHALLENGE TO CHINA'S FUTURE. (2d ed. 2010); CHINA'S ENVIRONMENTAL CRISIS: DOMESTIC AND GLOBAL POLITICAL IMPACTS AND RESPONSES (Joel J. Kassiola & Sujian Guo eds., 2010); ECONOMIC GROWTH AND ENVIRONMENTAL REGULATION: THE PEOPLE'S REPUBLIC OF CHINA'S PATH TO A BRIGHTER FUTURE (Tun Lin & Timothy Swanson eds., 2010) [hereinafter ECONOMIC GROWTH AND ENVIRONMENTAL REGULATION]; JUDITH SHAPIRO, CHINA'S ENVIRONMENTAL CHALLENGES (2012); CHINESE ENVIRONMENTAL GOVERNANCE: DYNAMICS, CHALLENGES AND PROSPECTS IN A CHANGING SOCIETY (Bingqiang Ren and Huisheng Shou eds., 2013).

¹²⁸ See generally Peter Hills, *Environmental Protection in a Laissez-Faire Economy*, 11 BUILT ENV'T 268 (1985); Peter Hills & William Barron, *Hong Kong: Can the Dragon Clean Its Nest?*, 32 ENV'T. SCI. & POL'Y SUSTAINABLE DEV. 16-20, 39-45 (1990); William Barron, *Environment and the Political Economy of Hong Kong*, in MANAGING THE NEW HONG KONG ECONOMY 127 (1996); Peter Hills, *The Environmental Agenda in Post-Colonial Hong Kong*, 2 LOCAL ENV'T 203

The inexorable ecological deterioration accompanying accelerated and inadequately harmonized economic development in the region has had purely domestic origins and reverberations.¹²⁹ However, given the high level of cross-border integration and the proliferation of area-wide linkages at the micro/business level, coupled with the intricacies stemming from different historical legacies (from mid-nineteenth to late twentieth century), conceptualizing this thorny issue as an exclusively, or even largely, internal problem is neither a practical nor a productive course of action. The prevalence of institutional divergences at the macro/political level compounds the difficulties which need to be addressed in a broader geographic context, mirroring interdependencies across the entire Southern China space and, where appropriate, beyond.¹³⁰

This is duly reflected in the literature on the subject, where the emphasis has largely, albeit not exclusively, been placed on the cross-border dimension of the phenomenon. The dislocation which it has engendered is primarily regarded as the consequence of the heavy investment by Hong Kong entrepreneurs in Guangdong's manufacturing, infrastructure and property; the multi-decade powerful economic momentum subsequently generated throughout the region; and

(1997); Peter Hills & William Barron, *Hong Kong: The Challenge of Sustainability*, 14 LAND USE POL'Y 41 (1997); THE AIR WE BREATHE: AIR POLLUTION IN HONG KONG (Andy T. Chan et al. eds., 2001) [hereinafter THE AIR WE BREATHE]; Peter Hills, *Environmental Policy and Planning in Hong Kong: An Emerging Regional Agenda*, 10 SUSTAINABLE DEV. 171 (2002) [hereinafter *Environmental Policy and Planning in Hong Kong: An Emerging Regional Agenda*]; Peter Hills & Richard J. Welford, *Ecological Modernization and as a Weak Form of Sustainable Development in Hong Kong*, 9 INT'L J. SUSTAINABLE DEV. & WORLD ECOLOGY 315 (2002); RESOURCE MANAGEMENT, URBANIZATION AND GOVERNANCE IN HONG KONG AND THE ZHUJIANG DELTA (Kwan-yiu Wong & Jianfa Shen eds., 2002); BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING (Anthony O.G. Yeh et al. eds., 2002) [hereinafter BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING]; Rachel Stern, *Hong Kong Haze: Air Pollution as a Social Class Issue*, 43 ASIAN SURV. 780 (2003); SUSTAINABLE DEVELOPMENT IN HONG KONG (Terri Mottershead ed., 2004) [hereinafter SUSTAINABLE DEVELOPMENT IN HONG KONG]; DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER ONE COUNTRY-TWO SYSTEMS (Anthony G.O. Yeh et al. eds., 2006) [hereinafter DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER ONE COUNTRY-TWO SYSTEMS]; THE HONG KONG SPECIAL ADMINISTRATIVE REGION IN ITS FIRST DECADE (Joseph Y.S. Cheng ed., 2007); Andrew Gouldson, Peter Hills & Richard Welford, *Ecological Modernization and Policy Learning in Hong Kong*, 29 GEOFORUM 319 (2008) [hereinafter Gouldson, Hills & Welford].

¹²⁹ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹³⁰ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

the severe deterioration in air quality and condition of waterways in Hong Kong that has followed.¹³¹ The process, as portrayed in the work on the topic,¹³² has had the hallmarks of the boomerang effect, whereby stimuli originating in one area impinge on the dynamics in another. This, in turn, impacts the source in a decidedly unfavourable fashion not properly foreseen when the exploitation of opportunities provided by the opening up of China began in the late 1970s.¹³³

¹³¹ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111; *Environmental Policy and Planning in Hong Kong: An Emerging Regional Agenda*, *supra* note 128; BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING, *supra* note 128; DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER THE ONE COUNTRY-TWO SYSTEMS, *supra* note 128; William Barron & Peter Hills, *The Issue of Cross-Border Pollution*, in THE AIR WE BREATHE, *supra* note 128 [hereinafter Barron and Hills]; Peter Hills, Lei Zhang & Jianhua Liu, *Transboundary Pollution between Guangdong Province and Hong Kong: Threats to Water Quality in the Pearl River Estuary and their Implications for Environmental Policy and Planning*, 41 J. ENVTL PLAN. & MGMT. 375 (1998) [hereinafter Hills, Zhang & Liu]; Jianhua Liu, Peter Hills & William Barron, *Cross-Border Water Pollution and Sustainability in Hong Kong: The Need for an Integrated Approach with China*, in THE MARINE BIOLOGY OF SOUTH CHINA SEA 563 (Brian Morton ed., 1998) [hereinafter Liu, Hills & Barron]; Peter Hills & Peter Roberts, *Political Integration, Transboundary Pollution, and Sustainability: Challenges for Environmental Policy in the Pearl River Delta Region*, 44 J. ENVTL PLAN. MGMT. 455 (2001) [hereinafter Hills & Roberts]; Yok-shiu F. Lee, *Tackling Cross-Border Environmental Problems in Hong Kong: Initial Responses and Institutional Constraints*, 43 CHINA Q. 986 (2002) [hereinafter Lee]; Lisa Hopkinson & Rachel Stern, *One Country, Two Systems, One Smog: Cross-Boundary Air Pollution Policy Challenges for Hong Kong and Guangdong*, 6 CHINA ENV'T SERIES 19 (2003) [hereinafter Hopkins and Stern]; Richard Welford, Peter Hills & Jacqueline Lam, *Environmental Reform, Technology Policy, and Transboundary Pollution in Hong Kong*, 37 DEV. & CHANGE 145 [hereinafter Welford, Hills & Lam].

¹³² See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111; *Environmental Policy and Planning in Hong Kong: An Emerging Regional Agenda*, *supra* note 128; BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING, *supra* note 128; DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER THE ONE COUNTRY-TWO SYSTEMS, *supra* note 128; Barron & Hills, *supra* note 131; Hills, Zhang & Liu, *supra* note 131; Liu, Hills & Barron, *supra* note 131; Hills & Roberts, *supra* note 131; Lee, *supra* note 131; Hopkinson & Stern, *supra* note 131; Welford, Hills & Lam, *supra* note 131.

¹³³ See generally Hills, *supra* note 128; Hills, Zhang & Liu, *supra* note 131; Liu, Hills & Barron, *supra* note 131; Barron & Hills, *supra* note 131; Hills & Roberts, *supra* note 131; Lee, *supra* note 131; BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING, *supra* note 128.; Hopkinson & Stern, *supra* note 131; Welford, Hills & Lam, *supra* note 131; DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER THE ONE COUNTRY-TWO SYSTEMS, *supra* note 128; *The Political*

As matters stand, air masses carrying organic substances cross from Guangdong to Hong Kong. Some of these organic substances are inherently unstable and thus prone to rapid disintegration, but others, notably suspended particles, are capable of travelling long distances and cross mostly intact, suffusing the Hong Kong air with pollutants such as nitrogen and sulphur.¹³⁴ Seasonal factors, particularly the drop in humidity experienced in winter, which allows these substances to stay in the air longer than usual, and the strong winds blowing from the mainland, which reinforce the movement southward, aggravate the situation, a pattern once depicted as featuring a slide from “poor to very poor” conditions,¹³⁵ now deemed to be a serious understatement.¹³⁶ The sharp increase in vehicle ownership in relatively affluent Chinese provinces such as Guangdong, observed in recent years, has greatly compounded the problem.¹³⁷

As indicated, like its air counterpart, severe pollution of the waterways in Hong Kong partly stems from domestic sources. However, Guangdong influences, or more specifically, those emanating from Pearl River Delta, which serves as the economic and social hub of the province and the surrounding areas, are a critical factor in the equation.¹³⁸ Brisk industrialisation and a burgeoning agricultural sector have combined to produce negative externalities that have manifested themselves beyond the traditional confines of the Pearl River Delta. Notably, animal and human wastes, effluents, fertilizers and pesticides from its expanding urban centres and vibrant rural hinterland have persistently washed, mostly untreated, into Hong Kong’s estuarine waters to the west and the adjacent bay.¹³⁹ Two of the territory’s principal conservation zones, located nearby, have been adversely affected as well, and the impact has been seen farther south.¹⁴⁰

Economy of Hong Kong’s Transboundary Pollution, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹³⁴ See generally Barron & Hills, *supra* note 131.

¹³⁵ *Id.* at 75.

¹³⁶ See generally *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹³⁷ See generally Barron & Hills, *supra* note 131.

¹³⁸ See generally Hills, Zhang & Liu, *supra* note 131; Liu, Hills & Barron, *supra* note 131; Barron & Hills, *supra* note 131; Hills & Roberts, *supra* note 131; Welford, Hills & Lam, *supra* note 131.

¹³⁹ See generally Hills, Zhang, & Liu, *supra* note 131; Liu, Hills, & Barron, *supra* note 131; Barron & Hills, *supra* note 131; Hills & Roberts, *supra* note 131; Welford, Hills & Lam, *supra* note 128.

¹⁴⁰ See generally Hills, Zhang & Liu, *supra* note 131; Liu, Hills & Barron, *supra* note 131; Barron & Hills, *supra* note 131; Hills & Roberts, *supra* note 131; Welford, Hills & Lam, *supra* note 131.

This increasingly entrenched pattern, its manifold adverse consequences, and the joint, but not decisive, efforts to curtail transboundary air and water pollution afflicting Hong Kong and its environs, have been subjected to close, albeit incomplete, scrutiny.¹⁴¹ However, despite the fact that inherently complex and difficult interaction between two fundamentally different cultural and institutional entities (epitomized in the expression “one country, two systems”)¹⁴² is involved, no meaningful attempt has been made to seek a deeper understanding of the problem and enhance the effectiveness of the unevenly evolving policy architecture by drawing on relevant ideas from the work on the methodological foundations of comparative social research. Seeking such analytical reinforcement is arguably a productive research strategy, even if there is a dearth of sound precedents to follow.

B. A Possible Model to Emulate

The organisational infrastructure established to combat transboundary pollution in Southern China may be thought of as a regulatory or, better still, governance regime. Several definitions are available to capture the essence of policy vehicles that qualify as such, as reflected in the observation that they encompass virtually “everything from a patterned set of interaction . . . to any form of multilateral coordination, cooperation or collaboration . . . to formal machinery”¹⁴³ and that consequently, they inhabit the large and rather imprecisely delineated “ontological space somewhere between the level of formal institutions . . . and systematic factors”.¹⁴⁴

The elastic and nuanced nature of conceptual discourse in this domain, notwithstanding the definitions offered tend to overlap and represent a broad consensus as to what constitutes a governance regime. It is generally agreed that, in the cross-border context, such entities may be portrayed as “sets of implicit or explicit principles, norms, rules and decision making procedures around which

¹⁴¹ See generally Hills, Zhang and Liu, *supra* note 131; Liu, Hills & Barron, *supra* note 131; Barron & Hills, *supra* note 131; Hills & Roberts, *supra* note 131; Welford, Hills & Lam, *supra* note 131; Lee, *supra* note 131; BUILDING A COMPETITIVE PEARL RIVER DELTA REGION: COOPERATION, COORDINATION AND PLANNING, *supra* note 128; Hopkinson & Stern, *supra* note 131; DEVELOPING A COMPETITIVE PEARL RIVER DELTA IN SOUTH CHINA UNDER THE ONE COUNTRY-TWO SYSTEMS, *supra* note 128; *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹⁴² See generally MUSHKAT, *supra* note 113; GHAI, *supra* note 113.

¹⁴³ ROBERT M. CRAWFORD, REGIME THEORY IN THE POST-COLD WAR WORLD: RETHINKING NEOLIBERAL APPROACHES TO INTERNATIONAL RELATIONS 55 (1996).

¹⁴⁴ Friedrich Kratochwil & John G. Ruggie, *International Organization: A State of the Art and the Art of the State*, 41 INT'L ORG. 753, 760 (1986).

actors' expectations converge in a given area of international relations".¹⁴⁵ It is also widely assumed that "[p]rinciples are beliefs of fact, causation and rectitude";¹⁴⁶ "[n]orms are standards of behaviour";¹⁴⁷ "[r]ules are specific prescriptions or proscriptions for action";¹⁴⁸ and "[d]ecision-making procedures are prevailing practices for making and implementing collective choice".¹⁴⁹

This time-honoured formulation has remained largely intact over the past four decades. Some terms have been replaced by ones more readily amenable to operationalisation and the regulatory underpinnings of an international governance regime have been brought into sharper focus.¹⁵⁰ However, the fine-tuning has been modest in nature and has not amounted to a marked shift in direction. Indeed, it may be said that the definition, in its original form, has provided the impetus for large-scale research on the subject, partly inspired by environmental concerns. This research has, in turn, generated a rich body of scholarly writings which may furnish a solid basis for a methodologically oriented exploration of trans-boundary pollution.¹⁵¹

¹⁴⁵ John G. Ruggie, *International Responses to Technology: Concepts and Trends*, 29 INT'L ORG. 557, 557 (1975).

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ See, e.g., PAMELA S. CHASEK, DAVID L. DOWNIE & JANET WELSH BROWN, *GLOBAL ENVTL POL.* 19 (5th ed. 2010) [hereinafter CHASEK & DOWNIE].

¹⁵¹ See generally CHASEK & DWONIE, *supra* note 150; ORAN R. YOUNG, *RESOURCE REGIMES: NATURAL RESOURCES AND SOCIAL INSTITUTIONS* (1982); *INTERNATIONAL REGIMES* (Stephen D. Krasner ed., 1983); ORAN R. YOUNG, *INTERNATIONAL COOPERATION: BUILDING REGIMES FOR NATURAL RESOURCES AND THE ENVIRONMENT* (1989) [hereinafter INTERNATIONAL COOPERATION]; *THE INTERNATIONAL POLITICS OF THE ENVIRONMENT* (Andrew Hurrell & Benedict Kingsbury eds., 1992); *POLAR POLITICS: CREATING INTERNATIONAL ENVIRONMENTAL REGIMES* (Oran R. Young & Gail Osherenko eds., 1993); *NEGOTIATING INTERNATIONAL REGIMES: LESSONS LEARNED FROM THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED)* (Bertram I. Spector, Gunnar Sjostedt & I. William Zartman eds., 1994); ORAN R. YOUNG, *INTERNATIONAL GOVERNANCE: PROTECTING THE ENVIRONMENT IN A STATELESS SOCIETY* (1994); *REGIME THEORY AND INTERNATIONAL RELATIONS* (Volker Rittberger ed., 1995); *INTERNATIONAL GOVERNANCE ON ENVIRONMENTAL ISSUES* (Mats Rolén, Helen Sjöberg, & Uno Svedin eds., 1997); *GLOBAL GOVERNANCE: DRAWING INSIGHTS FROM THE ENVIRONMENTAL EXPERIENCE* (Oran R. Young ed., 1997); *THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL COMMITMENTS: THEORY AND PRACTICE* (David G. Victor, Kal Raustiala & Eugene B. Skolnikoff eds., 1998); ORAN R. YOUNG, *CREATING REGIMES: ARCTIC ACCORDS AND INTERNATIONAL ENVIRONMENTAL MANAGEMENT* (1998); *THE POLITICS OF INTERNATIONAL ENVIRONMENTAL MANAGEMENT* (Arild Underdal ed., 1998); ANDREAS

Students of international governance regimes, including those of the environmental variety, pursue a wide-ranging agenda. They comprehensively and systematically grapple with diverse but interconnected issues such as regime characteristics, regime essence, regime types, regime formation, regime consequences and effectiveness, and regime transformation. The crucial, yet otherwise often overlooked, question of regime implementation, which has implications for compliance, is also carefully dissected, usually in the broader context of consequences and effectiveness.¹⁵²

HASENCLEVER, PETER MAYER & VOLKER RITTBERGER, THEORIES OF INTERNATIONAL REGIMES (1999); JORGEN WETTESTAD, DESIGNING EFFECTIVE ENVIRONMENTAL REGIMES: THE KEY CONDITIONS (1999); THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIOURAL MECHANISMS (Oran R. Young ed., 1999); GABRIELA KUTTING, ENVIRONMENT, SOCIETY AND INTERNATIONAL RELATIONS: TOWARDS MORE EFFECTIVE ENVIRONMENTAL AGREEMENTS (2000); JOHN VOGLER, THE GLOBAL COMMONS: ENVIRONMENTAL AND TECHNOLOGICAL GOVERNANCE (2000); MARCUS FRANDA, GOVERNING THE INTERNET: THE EMERGENCE OF AN INTERNATIONAL REGIME (2001); GLOBAL ENVIRONMENTAL POLICIES: INSTITUTIONS AND PROCEDURES (Ho-won Jeong ed., 2001); ENVIRONMENTAL REGIME EFFECTIVENESS: CONFRONTING THEORY WITH EVIDENCE (Edward L. Miles et al. eds., 2002); ORAN R. YOUNG, THE INSTITUTIONAL DIMENSION OF ENVIRONMENTAL CHANGE: FIT, INTERPLAY AND SCALE (2002); REGIME CONSEQUENCES: METHODOLOGICAL CHALLENGES AND RESEARCH STRATEGIES (Arild Underdal & Oran R. Young eds., 2004); DENISE K. DEGARMO, INTERNATIONAL ENVIRONMENTAL TREATIES AND STATE BEHAVIOUR: FACTORS INFLUENCING COOPERATION (2005); PALGRAVE ADVANCES IN INTERNATIONAL ENVIRONMENTAL POLITICS (Michele M. Betsill, Kathryn Hochstetler & Dimitris Stevis eds., 2006); HELMUT BREITMEIER, THE LEGITIMACY OF INTERNATIONAL REGIMES (2008); INSTITUTIONS AND ENVIRONMENTAL CHANGE: PRINCIPAL FINDINGS, APPLICATIONS AND RESEARCH FRONTIERS (Oran R. Young, Leslie A. King & Heike Schroeder eds., 2008); AMITAV ACHARYA, CONSTRUCTING A SECURITY COMMUNITY IN SOUTHEAST ASIA: ASEAN AND THE PROBLEM OF REGIONAL ORDER, (2d ed. 2009); GOVERNING THE ENVIRONMENT: SALIENT INSTITUTIONAL ISSUES (Albert Breton et al. eds., 2009); GERRY NAGTZAAM, THE MAKING OF INTERNATIONAL TREATIES: NEOLIBERAL AND CONSTRUCTIVIST ANALYSES OF NORMATIVE EVOLUTION (2009); KATE O'NEILL, THE ENVIRONMENT AND INTERNATIONAL RELATIONS (2009); AFSHIN AKHTARKHAVARI, GLOBAL GOVERNANCE OF THE ENVIRONMENT: ENVIRONMENTAL PRINCIPLES AND CHANGE IN INTERNATIONAL LAW AND POLITICS (2010); RONALD B. MITCHELL, INTERNATIONAL POLITICS AND THE ENVIRONMENT (2010); ORAN R. YOUNG, INSTITUTIONAL DYNAMICS: EMERGENT PATTERNS IN INTERNATIONAL ENVIRONMENTAL GOVERNANCE (2010); PARUEDEE NGUITRAGOOL, ENVIRONMENTAL COOPERATION IN SOUTHEAST ASIA: ASEAN'S REGIME FOR TRANSBOUNDARY HAZE POLLUTION (2011).

¹⁵² See Roda Mushkat, *Compliance with Environmental Governance Regimes: Chinese Lessons*, 34 WM. & MARY ENVTL. L. & POL'Y REV 504-505 (2010).

However, despite the scope and depth of the endeavour, a salient comparative element is commonly lacking. For instance, considerable progress has been made in refining the notion of environmental regime effectiveness, along the entire qualitative-quantitative continuum (interestingly, the former side poses a greater methodological challenge).¹⁵³ Yet, this has been achieved without according due attention to cultural and institutional context. The relationship between regime characteristics and performance (consequences and effectiveness) is thus inadequately highlighted and is one of several examples reflecting a tendency to seek overarching generalisations that omit influences (intervening or mediating variables)¹⁵⁴ stemming from distinct features of different socio-political-economic settings.

Another potential analytical source to tap into is the sprawling literature on regulation: its origins, evolution, forms, sensitivity to an array of exogenous influences, impact and amenability to structural reforms.¹⁵⁵ This is not merely a voluminous corpus of work but a highly sophisticated one, in the conceptual sense of the word. Particularly noteworthy are the efforts to achieve terminological clarity and gain a thorough theoretical understanding of the forces shaping regulatory institutions and practices (i.e., to all intents and purposes, governance regimes).¹⁵⁶

¹⁵³ See generally Miron Mushkat & Roda Mushkat, *Assessing the Effectiveness of Environmental Governance Regimes: Remaining Gaps*, 12 INTERDISC. ENVTL REV. 166 (2011).

¹⁵⁴ See DAVID W. BRITT, A CONCEPTUAL INTRODUCTION TO MODELLING: QUALITATIVE AND QUANTITATIVE PERSPECTIVES 84-86 (1997).

¹⁵⁵ See generally BARRY M. MITNICK, THE POLITICAL ECONOMY OF REGULATION: CREATING, DESIGNING, AND REMOVING REGULATORY FORMS (1980) [hereinafter MITNICK]; REGULATORY POLICY AND THE SOCIAL SCIENCES (Roger G. Noll ed., 1985) [hereinafter REGULATORY POLICY AND THE SOCIAL SCIENCES]; THE POLITICS OF REGULATION: INSTITUTIONS AND REGULATORY REFORMS FOR THE AGE OF GOVERNANCE (Jacint Jordana & David Levi-Faur eds., 2004) [hereinafter THE POLITICS OF REGULATION]; ANTHONY I. OGUS, REGULATION: LEGAL FORM AND ECONOMIC THEORY (2004) [hereinafter OGUS]; BRONWEN MORGAN & KAREN YOUNG, AN INTRODUCTION TO LAW AND REGULATION (2007) [hereinafter MORGAN & YOUNG]; THE OXFORD HANDBOOK OF REGULATION (Robert Baldwin, Martin Cave & Martin Lodge eds., 2010) [hereinafter THE OXFORD HANDBOOK OF REGULATION]; ROBERT BALDWIN, MARTIN CAVE & MARTIN LODGE, UNDERSTANDING REGULATION: THEORY, STRATEGY, AND PRACTICE (2d ed. 2012) [hereinafter BALDWIN, CAVE & LODGE].

¹⁵⁶ See generally MITNICK, *supra* note 155; REGULATORY POLICY AND THE SOCIAL SCIENCES, *supra* note 155; THE POLITICS OF REGULATION, *supra* note 155; OGUS, *supra* note 155; MORGAN & YOUNG, *supra* note 155; THE OXFORD HANDBOOK OF REGULATION, *supra* note 155; BALDWIN, CAVE & LODGE, *supra* note 155.

One issue that has consistently been systematically addressed is what accounts for the various patterns of regulation empirically observed. For example, is it a profound sense of public interest, carefully defined; interest group pressures, subtle or otherwise; entrenched private interests; firmly held ideas, whether emanating from the public or private arena; organisational configurations; or perhaps a combination of such factors?¹⁵⁷ This question has long been explored within an analytically underpinned framework via a string of case studies conducted in different cultural and institutional settings, albeit with a distinct Anglo-Saxon bias.¹⁵⁸

However, again, the comparative dimension, at least in its methodologically inspired form, is largely absent from the picture portrayed. This is not due to conceptual constraints because there is substantial scope for examining relationships from this particular angle (e.g., studying the linkages between cultural and institutional attributes of the environment in which the regulatory/governance system and the exogenous influences mostly responsible for its unique shape are embedded). There are some studies that consciously adhere to the logic of comparative social inquiry, but they are few and far between and tend to be rather narrowly focused.¹⁵⁹

Surveys specifically centred on the regulation/governance of transboundary hazards/pollution rarely deviate from this overall pattern.¹⁶⁰ A recurring theme in this context is the apparently positive relationship between a key structural property of an institutional regime, its degree of decentralisation and its performance.¹⁶¹ However, the existence of this linkage is, for the most part, merely hypothesized or selectively supported with tentative illustrations which may not adequately represent the entire organisational category.¹⁶² Whether

¹⁵⁷ See generally MITNICK, *supra* note 155; REGULATORY POLICY AND THE SOCIAL SCIENCES, *supra* note 155; THE POLITICS OF REGULATION, *supra* note 155; OGUS, *supra* note 155; MORGAN & YOUNG, *supra* note 155; THE OXFORD HANDBOOK OF REGULATION, *supra* note 155; BALDWIN, CAVE & LODGE, *supra* note 155.

¹⁵⁸ See generally MITNICK, *supra* note 155; REGULATORY POLICY AND THE SOCIAL SCIENCES, *supra* note 155; THE POLITICS OF REGULATION, *supra* note 155; OGUS, *supra* note 155; MORGAN & YOUNG, *supra* note 155; THE OXFORD HANDBOOK OF REGULATION, *supra* note 155; BALDWIN, CAVE & LODGE, *supra* note 155.

¹⁵⁹ See, e.g., David Levi-Faur, *Comparative Research Design in the Study of Regulation: How to Increase the Number of Cases without Compromising the Strengths of Case-Oriented Analysis*, in THE POLITICS OF REGULATION, *supra* note 155 at 177.

¹⁶⁰ See, e.g., ROLF LIDSKOG, LINDA SONERYD & YLVA UGGLA, 'TRANSBOUNDARY RISK GOVERNANCE (2010) [hereinafter LIDSKOG, SONERYD & UGGLA].

¹⁶¹ See generally *id.*

¹⁶² See, e.g., *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

regulatory/governance mechanisms are approached by exploring the whole spectrum or certain segments thereof, methodologically rigorous comparison is thus seldom systematically pursued.

A notable exception to the rule, which stands out for its explicit invocation of that logic and the breadth of the undertaking, is the nuanced and wide-ranging investigation of the diverse patterns observed in the risk regulation space.¹⁶³ This project's significance partly lies in the careful dissection of features of today's risk society (according to several commentators, risk now pervades everyday life to such an extent that the current/modern era fundamentally differs from previous historical epochs)¹⁶⁴ that have generally been overlooked by socio-legal scholars and importantly, by injecting a greater measure of variety into the discourse on the subject, while at the same time imposing a tighter structure on the framework within which it is conducted.¹⁶⁵ The latter effect may be attributed to the methodical juxtaposition of the notion of the risk society with that of the regulatory State.¹⁶⁶

Another noteworthy contribution of this well-ordered comparative examination stems from the authors' attempt to conceptualize regulatory/governance regimes in more concrete terms than had earlier been the case by resorting to control/cybernetic theory for this purpose.¹⁶⁷ They posit that, when viewed from this perspective, such entities must exhibit three essential characteristics.¹⁶⁸ First, they should have "some capacity for standard-setting to allow a distinction to be made between more or less preferred states of the system".¹⁶⁹ Second, they ought to possess "some capacity for information-gathering or monitoring to produce knowledge about current or changing states of the system".¹⁷⁰ Third, they must have "some capacity for *behaviour-modification* to change the state of the system".¹⁷¹

¹⁶³ See generally CHRISTOPHER HOOD, HENRY ROTHSTEIN & ROBERT BALDWIN, *THE GOVERNMENT OF RISK: UNDERSTANDING RISK REGULATION REGIMES* (2001) [hereinafter HOOD, ROTHSTEIN & BALDWIN].

¹⁶⁴ See ULRICH BECK, *RISK SOCIETY: TOWARDS A NEW MODERNITY* (1992).

¹⁶⁵ See generally HOOD, ROTHSTEIN & BALDWIN, *supra* note 163.

¹⁶⁶ See *id.* at 4-5; See also Christopher Hood et al., *Where Risk Society Meets the Regulatory State: Exploring Variations in Risk Regulation Regimes*, 1 RISK MGMT: AN: INT'L J. 21 (1999).

¹⁶⁷ See HOOD, ROTHSTEIN & BALDWIN, *supra* note 163 at 23-28; See also Christopher Hood et al., *Explaining Risk Regulation Regimes: Exploring the "Minimal Feasible Response" Hypothesis*, HEALTH, RISK AND SOCIETY 151 (1999).

¹⁶⁸ See HOOD, ROTHSTEIN & BALDWIN, *supra* note 163, at 23-28.

¹⁶⁹ *Id.* at 23.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

While sharing such common features, regulatory/governance regimes differ in several other respects. The authors identify regime context and regime content as crucial sources of variation.¹⁷² The former refers to the backdrop of the system, particularly the nature of the problem (e.g., pollution of one kind or another) it addresses, media and public attitudes about it, and the way influence and power is concentrated or diffused in the socio-political setting where it is situated.¹⁷³ The latter relates to the structure (including size) and mode of operation (including style) of the regulatory/governance regime.¹⁷⁴

This dichotomous classification merely constitutes a starting point, and context and content are disaggregated further, in two successive steps.¹⁷⁵ For instance, if the risk is the nature of the problem confronted, it is initially to be broken down into a degree of residual risk (risk not handled by other regulatory mechanisms or without regulation) and a degree of market—or tort law—failure/inadequacy.¹⁷⁶ The former is then divided into overall degree of risk (probability and consequence) and certainty or disputed/uncertain character of risk, and the latter is split into degree of information failure and degree of opt-out failure.¹⁷⁷

Similar disaggregation is performed for the other two components of regime context, media and public attitudes and organisation of influence/power.¹⁷⁸ The former is broken into media/public salience, a category divided into media salience and mass public opinion salience, and degree of uniformity or coherence of opinion, which is split into degree of consensus and degree of coherence.¹⁷⁹ The latter is broken into presence of dominant organized groups, which is divided into degree of business capture and degree of professional-type capture, and degree of mobilisation of affected stakeholders, which is split into level of mobilisation and level of militancy.¹⁸⁰

A parallel exercise is carried out for regime content.¹⁸¹ Size is broken into policy aggression (how assertive regulation is, how much risk is accepted and how much change is sought), which is divided into degree of policy proactivity and degree of policy attention, and overall regulatory investment (the amount of resources devoted to regulation), which is split into level of financial investment and level of

¹⁷² *See id.* at 28-32.

¹⁷³ *See id.* at 28-30.

¹⁷⁴ *See id.* at 30-32.

¹⁷⁵ *See id.* at 34.

¹⁷⁶ *See id.*

¹⁷⁷ *See id.*

¹⁷⁸ *See id.*

¹⁷⁹ *See id.*

¹⁸⁰ *See id.*

¹⁸¹ *See id.*

non-financial (attention, skill and time) investment.¹⁸² Structure is broken into non-State share of regulatory resources (how regulatory costs are distributed between the State and regulates), which is divided into level of compliance costs and level of third-party contributions, and organisational fragmentation and system complexity (including interfaces with other regulatory/governance regimes), which is split into number and density of regulatory entities and degree of jurisdictional overlap and system complexity.¹⁸³ Mode of operation is broken into rule-orientation (the extent to which regulation is rule driven), which is divided into density of formal regulatory rules and degree of operational rule-following, and regulatory zeal (the extent to which regulators display obsessive devotion to their agenda rather acting in a detached fashion), which is split into degree regulatory commitment to the policy blueprint and degree of regulatory lifetime vocation.¹⁸⁴

This comparatively derived, elaborate classification scheme is then applied to assess the performance of nine late 1990s European Union and United Kingdom regulatory/governance regimes.¹⁸⁵ An ordinal scale, consisting of five categories (low, medium-low, medium, medium-high and high), is relied upon for this purpose.¹⁸⁶ Illuminating insights are generated in the process regarding the effectiveness of policy control mechanisms in coping with such phenomena as attacks by dangerous dogs outside the home; lung cancer caused by emissions of radon gas from the ground or building materials in the home and in the workplace; cancer caused by emissions of benzene from vehicle exhaust or other sources, as well as from workplace exposures; attacks on children from convicted paedophiles released from prison into the community; injuries and deaths from motor vehicles on local roads, insofar as these may be abstracted from road safety regulation more generally; and adverse health impact of exposure to pesticide residues in food and drinking water.¹⁸⁷ The framework is sufficiently rich to also address a number of fundamental theoretical and practical issues pertaining to regime functioning.¹⁸⁸

Two cautionary observations are in order. This is a product of a deductive-style, top-down research rather than one of the inductive-type, bottom-up variety. It could be argued that, at this early juncture in the evolution of methodologically-conscious comparative socio-legal inquiry, much might be gained by devoting substantial resources to building a solid foundation by approaching the task from the opposite end of the analytical spectrum. In addition, while the subject is

¹⁸² *See id.*

¹⁸³ *See id.*

¹⁸⁴ *See id.*

¹⁸⁵ *See id.* at 37-58.

¹⁸⁶ *See id.*

¹⁸⁷ *See id.*

¹⁸⁸ *See id.* at 70-156.

systematically explored, and in a conceptually sophisticated fashion, this pioneering and thorough study is not methodologically inspired in the strict sense of the term, at the elementary as well as at the advanced level (where there is scope, given the sample size, to employ, in one form or another, tools such as QCA, CCM and CMA). That being said, this remains a compelling illustration of what empirically-oriented scholars may achieve when dissecting in a highly structured manner, regulatory/governance regimes from a comparative viewpoint.

C. Combating Transboundary Pollution in Southern China

Given the ambiguities and complexities of the cross-border relationship, as well as the entire One Country-Two Systems configuration underlying it, the considerable policy constraints and the often incremental decision-making styles on both sides, the difficulties inherent in institutional design in a very dynamic setting heavily influenced by powerful autonomous (private market) forces, the development of institutions to deal with challenges commonly confronted by Hong Kong and Guangdong Province, has inevitably been a piecemeal affair.¹⁸⁹ Attempts to carefully obtain an appreciation of the picture and its implications for action from a methodologically focused comparative angle have been virtually non-existent.

There is no convincing evidence to suggest that policy makers in the two regional centres have addressed the issue of transboundary pollution in a sufficiently decisive, holistic and systematic manner, let alone one reflecting the principles of structured social comparison. Rather, they have for the most part handled it either independently (initially) or jointly (subsequently), but mechanically, partially and reactively.¹⁹⁰ The fragile and loosely-connected components of the slowly evolving policy apparatus patched together to alleviate the problem have not been conceptualized and organized in a way that adequately accounts for the unique characteristics of this highly differentiated and intricate socio-political setting.¹⁹¹

Semi-regular and broadly focused exchanges between Hong Kong officials and their Guangdong counterparts regarding commonly experienced ecological degradation, although largely conducted in the early stages via multi-purpose institutional channels (e.g., the Sino-British Joint Liaison Group/SBJLG, the Hong Kong- Guangdong Cooperation Joint Conference/HKGCJC, the Sino-British Infrastructure Coordination Committee/SBICC and the Hong Kong-Mainland

¹⁸⁹ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹⁹⁰ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

¹⁹¹ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

Cross-Boundary Major Infrastructure Coordinating Committee/HKMCBICC), began soon following the adoption of the open-door policy by the post-Mao leadership in the late 1970s.¹⁹² The relationship quickly assumed a more regular and specific form, albeit on limited scale.¹⁹³ Joint projects were thus initiated by the investigative branches of the two governments (the Hong Kong Environmental Protection Department and the Guangdong Environmental Research Institute) with a view to enhancing the technical effectiveness of decision support systems and improving procedures for information sharing.¹⁹⁴

A symbolically and practically notable step forward in this respect was the formation of the Hong Kong-Guangdong Environmental Protection Liaison Group/HKGEPLG in 1990, with a mission couched in clearly defined ecological terms and an organisational foundation designed to facilitate regular two-way politico-bureaucratic contact at a senior functional level.¹⁹⁵ This initiative reflected a realisation on both sides that effective strategies to combat transboundary pollution required joint responses (“we need cooperation of our neighbours...to protect our air and water. They in turn need our support since some of their pollution problems originate from our activities”).¹⁹⁶ However, action remained mostly geared towards boosting learning capacity through pooling of information gathering resources and related promotional efforts.¹⁹⁷

The rather limited scope and predominantly passive nature of cooperation via this organisational medium prior to the transfer of sovereignty from the United Kingdom to China in 1997, and perhaps selectively beyond, has been attributed to competing priorities, divergent British and Chinese visions regarding Hong Kong’s institutional adaptation and concerns about the capitalist enclave’s post-1997

¹⁹² See *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111, at 181-82; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 73-74.

¹⁹³ See *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111, at 181-82; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 73-74.

¹⁹⁴ See *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111, at 181-82; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 73-74.

¹⁹⁵ See *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111, at 182; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 73.

¹⁹⁶ Barron & Hills, *supra* note 131, at 73.

¹⁹⁷ See *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111, at 182; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 73.

autonomy.¹⁹⁸ Environmental preservation was simply not accorded the attention it deserved by officials overwhelmingly focused on the more strategically vital goals of (economic) prosperity and (social) stability in a setting characterized by a high degree of political uncertainty.¹⁹⁹ By the same token, British and Chinese officials were driven by fundamentally different ideas with respect to the appropriate governance structure for Hong Kong.²⁰⁰ Last but not least, close cooperation was perceived as a double-edged sword, a tool to optimize policy performance in tackling region-wide challenges, but one posing the risk of potential encroachment by China (or organs of the Chinese Communist Party/CCP) on the territory's greatly cherished freedom of action at home and even abroad (in matters not involving foreign affairs and national defence).²⁰¹

These impediments largely receded following the transfer of sovereignty, although unease regarding the asymmetrical relationship with the central government in Beijing and its provincial offshoots persists.²⁰² New organisational vehicles were

¹⁹⁸ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 181; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111 at 74.

¹⁹⁹ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 181; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111 at 74.

²⁰⁰ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 181; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111 at 74.

²⁰¹ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 181; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111 at 74.

²⁰² See generally GHAI, *supra* note 113; CRISIS AND TRANSFORMATION CHINA'S HONG KONG (Ming K. Chan & Alvin Y. So eds., 2002) [hereinafter CRISIS AND TRANSFORMATION CHINA'S HONG KONG]; SONNY S.H. LO, GOVERNING HONG KONG: LEGITIMACY, COMMUNICATION AND POLITICAL DECAY (2002) [hereinafter GOVERNING HONG KONG]; Ma Ngok & Ray Yep, *A High Degree of Autonomy? Hong Kong Special Administrative Region, 1997-2002*, 73 POL. Q. 455 (2002) [hereinafter Ngok & Yep]; RALF HORLEMANN, HONG KONG'S TRANSITION TO CHINESE RULE: THE LIMITS OF AUTONOMY (2003) [hereinafter HORLEMANN]; Ian Holliday, Ma Ngok, & Ray Yep, *After 1997: The Dialectics of Hong Kong Dependence*, 34 J. CONTEMP. ASIA 254 (2004) [hereinafter Holliday, Ngok and Yep]; ONE COUNTRY-TWO SYSTEMS IN CRISIS: HONG KONG'S TRANSFORMATION SINCE THE HANDOVER (Yiu-chiu Wong ed., 2004) [hereinafter ONE COUNTRY-TWO SYSTEMS IN CRISIS: HONG KONG'S TRANSFORMATION SINCE THE HANDOVER]; Huaqun Zeng, *Hong Kong Autonomy: Concept, Developments and Characteristics*, 1 CHINA: AN INT'L J. 313 (2005) [hereinafter Zeng]; Phil C.W. Chan, *Hong Kong Political Autonomy and its Continuing Struggle for Universal Suffrage*, 47 SINGAPORE J. LEGAL STUD. 285 (2006) [hereinafter Chan]; Roda Mushkat, *Hong Kong's Exercise of External Autonomy: A Multi-Faceted Appraisal*, 55 INT'L & COMP. L. Q. 945 (2006) [hereinafter *Hong Kong's Exercise of External Autonomy: A Multi-*

created to solidify efforts to alleviate transboundary pollution and the collective policy agenda was augmented, albeit not necessarily overhauled.²⁰³ The establishment of the Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection (“HKGJWSDEP”) in 1999 was the most palpable manifestation of enhanced cooperation, because of the seniority of the officials heading it, frequency of contact (twice a year) exceeding previous norms at this level, wide-ranging programme adopted (six priority domains), investigative thoroughness signalled (eight panels set up to undertake detailed studies of adverse cross-border ecological spillovers) and steps taken not merely to improve monitoring capabilities but also to harmonize standards and consider (short-term) stabilizing measures.²⁰⁴

This broadening of the institutional base, as well as the elevation of its status, the accompanying intensification of bilateral exchanges, and the widening of the operational horizon have not decisively shifted the diagnostic, prognostic and remedial focus from information gathering and knowledge accumulation towards hazard mitigation but have placed these activities within a more multi-dimensional and robust framework.²⁰⁵ An extensive regional air quality monitoring network was thus established and in-depth studies were carried out to determine air quality in the region.²⁰⁶ This was not a purely academic exercise as modest steps were also taken to selectively curb pollution in the industrial, power generation, and transportation sectors.²⁰⁷

Two-way multi-level cooperation and coordination was also enhanced via formal accords, such as the agreement signed in 2005 by China’s State Environmental Protection Administration (“SEPA”), subsequently converted into Ministry of Environmental Protection (“MEP”), and Hong Kong’s Environmental Protection Department (“EPD”), to jointly tackle air pollution.²⁰⁸ This instrument provided a

Faceted Appraisal]; Sonny S.H. Lo, *The Mainlandization and Recolonization of Hong Kong: A Triumph of Convergence over Divergence with Mainland China*, in THE HONG KONG ADMINISTRATIVE REGION IN ITS FIRST DECADE 179 (Joseph Y.S. Cheng ed., 2007) [hereinafter *The Mainlandization and Recolonization of Hong Kong*]; SONNY S.H. LO, THE DYNAMICS OF BEIJING-HONG KONG RELATIONS: A MODEL FOR TAIWAN? (2008) [hereinafter THE DYNAMICS OF BEIJING-HONG KONG RELATIONS]; SUSAN J. HENDERS, TERRITORIALITY, ASYMMETRY AND AUTONOMY: CATALONIA, CORSICA, HONG KONG AND TIBET (2010) [hereinafter HENDERS].

²⁰³ See *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 74-75.

²⁰⁴ See *id.*

²⁰⁵ See *id.* at 75.

²⁰⁶ See *id.*

²⁰⁷ See *id.*

²⁰⁸ See *id.*

blueprint for the regional players to extend the ecological planning horizon beyond the customary short/medium-term bounds and confront together the complex but essential task of figuring out the shape of a faraway environmental order (reflected in the aspirations expressed in the Pearl River Delta Quality Living Area strategic outline) spurred by a vision of a green-like future.²⁰⁹ A wide-ranging accord, the Framework Agreement on Hong Kong/Guangdong Cooperation, designed to lay a solid foundation for cross-border collaboration on the ecological front, and given a national seal of approval by virtue of being endorsed by the PRC State Council, was also arrived at and was presented as a vital initiative with the potential to significantly intensify bilateral efforts to curtail transboundary pollution.²¹⁰

The pace and scope of cross-border cooperation and coordination has indeed not merely accelerated and broadened in recent years, but the entire institutional facade has been expanded and rendered more effective by turning the governance regime into a three-dimensional structure, involving Macao, the former Southern China Portuguese colony, as a full-fledged partner.²¹¹ The battle against transboundary pollution through triangular channels has quickly progressed beyond symbolic signalling and has evolved into a programmatic activity, notably in the form of an elaborate “Plan for the Reform and Development of the Pearl River Delta (2008-2020)”.²¹² The blueprint articulates a vision geared towards “transforming the Greater PRD region into a low-carbon, high-technology, and low-pollution city cluster of quality living, with a view to enhancing its overall competitiveness and attractiveness”.²¹³

This forward-looking document cannot be portrayed as just a set of noble yet uncomfortably vague intentions. It offers specific recommendations for strengthening three-way cooperation and coordination, as well as tangible steps towards pollution abatement (air emissions in particular, based on the Pearl River Delta Regional Air Quality Management Plan 2002-2010).²¹⁴ The plan calls for the completion and publication of a detailed programme for a progressive reduction of pollution levels, with the support of an improved monitoring network, and even

²⁰⁹ *See id.*

²¹⁰ *See id.* at 75-76.

²¹¹ *See* HONG KONG ENVIRONMENTAL PROTECTION DEPARTMENT, HONG KONG, GUANGDONG, AND MACAO ANNOUNCE REGIONAL COOPERATION PLAN ON BUILDING A QUALITY LIVING AREA, www.info.gov.hk/gia/general/201206/25/P201206250262.htm (last visited Mar. 31, 2014) [hereinafter HONG KONG ENVIRONMENTAL PROTECTION DEPARTMENT].

²¹² *See id.*

²¹³ *Id.*

²¹⁴ *See id.*

includes references to concrete policy measures such as the promotion of cleaner energy use by vessels berthing at Greater Pearl River Delta ports.²¹⁵

The quest for environmental preservation is not confined to joint ventures of the type outlined above. Each party is independently seeking ways to strike a better balance between the imperatives of economic growth and sustainability. Hong Kong is pursuing this goal, albeit less than decisively, through a cluster of pollution ordinances, regulatory control mechanisms, and related organisational vehicles.²¹⁶ The picture on the Chinese side is more opaque.²¹⁷ The quantity of inputs is by no means negligible, but the quality of outputs leaves much to be desired.²¹⁸ Still, progress is apparently being made, slowly and unevenly, yet with greater determination and sense of purpose than in the not too distant past.²¹⁹

However, thus far, all these efforts have had no discernible impact on the grim realities on the ground and it is commonly thought that the commitment exhibited, organisational foundation constructed and policies adopted have not been commensurate with the enormous risks confronted by Pearl River Delta residents.²²⁰ A recent attempt to shed better light on the evolution of environmental governance regimes is relevant in this respect.²²¹ The author argues that such systems should be assessed in terms of their constitutive, contributory

²¹⁵ See *id.*

²¹⁶ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111; Lin Feng, *Towards a Sustainable Environment in the Pearl River Delta Region: A Case Study of Water Pollution Legislation and its Relevance to the HKSAR*, in *GUANGDONG IN THE TWENTY-FIRST CENTURY: STAGNATION OR SECOND TAKE-OFF?* 355 (Joseph Y.S. Cheng ed., 2000).

²¹⁷ See generally Stefanie Beyer, *Environmental Law and Policy in the People's Republic of China*, 5 *CHINESE J. INT'L L.* 185 (2006) [hereinafter Beyer]; Roda Mushkat, *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, 18 *S. CAL. INTERDISC. L.J.* 45 (2008) [hereinafter *Implementing Environmental Law in Transitional Settings: The Chinese Experience*]; Roda Mushkat, *Contextualizing Environmental Human Rights: A Relativist Perspective*, 26 *PACE ENVTL. REV.* 119 (2009) [hereinafter *Contextualizing Environmental Human Rights: A Relativist Perspective*].

²¹⁸ See generally Beyer, *supra* note 217; *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217; *Contextualizing Environmental Human Rights: A Relativist Perspective*, *supra* note 217.

²¹⁹ See generally Miron Mushkat & Roda Mushkat, *Regime Transformation and Environmental Policy Innovation in China*, 12 *INTERDISC. ENVTL. REV.* 349 (2011) [hereinafter *Regime Transformation and Environmental Policy Innovation in China*].

²²⁰ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

²²¹ See generally Ian Thynne, *Climate Change, Governance and Environmental Services: Institutional Perspectives, Issues and Challenges*, 28 *PUB ADMIN. & DEV.* 327 (2008).

and warranted attributes.²²² In light of his analytical insights, it would be reasonable to suggest that, as matters stand, the Southern China institutional façade for combating transboundary pollution continues to possess modest constitutive (efficiency and effectiveness), contributory (cooperation and coordination), and warranted (authorisation, justification and endorsement) capabilities.²²³

These deficiencies cannot be attributed to a single factor and remedying them, whether partially or wholly, requires a multi-pronged strategy entailing far-reaching organisational re-engineering and policy revamping. Incorporating a methodological element, derived from the logic of comparative social inquiry, into the analytical equation should not be presented as a decisive step in the institutional design/redesign process, let alone as a would-be panacea. Excessively narrow-based explanatory schemes and problem-solving approaches are ill-suited for dealing with intricate phenomena. Nevertheless, as part of a comprehensive and long-term knowledge accumulation process, such incomplete and selective research endeavours may prove valuable.

It must be noted at the outset that the situation at hand does not lend itself readily to a technically robust application of the comparative method. Given that, to all intents and purposes, the Southern China transboundary pollution patterns and responses thereto constitute merely one case, the use of sophisticated tools such as QCA, CCM, and CMP (or, for that matter, logit analysis, which does not rely on Boolean algebra)²²⁴ needs to be ruled out because they are appropriate for a large sample only. Due to data limitation, there is also no adequate scope for undertaking a genuinely dynamic, as distinct from static,²²⁵ exploration of the trends observed.

A dynamic or longitudinal case study may be prospective or retrospective in nature.²²⁶ The former tracks changes forward over time, whereas the latter entails a reconstruction of the history of the case, after the fact.²²⁷ If the history is stripped of its dynamic attributes, prospective (simple rather than multiple panels)²²⁸ and

²²² See generally *id.*

²²³ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

²²⁴ See PETERS, *supra* note 108, at 171-73.

²²⁵ See Neil J. Smelser, *The Methodology of Comparative Analysis*, in *COMPARATIVE RESEARCH METHODS*, *supra* note 108, at 63-64.

²²⁶ See DAVID DE VAUS, *RESEARCH DESIGN IN SOCIAL RESEARCH* 227-28 (2001).

²²⁷ See *id.*

²²⁸ See *id.* at 118-20. A panel study is a particular type of longitudinal inquiry in which a unit of analysis is followed at specified intervals over a long period.

retrospective (again, simple rather than multiple panels)²²⁹ case studies may acquire static or quasi-static properties, in that the dissection of the empirical material is performed at a single point in time.²³⁰ In the Southern China transboundary pollution context, the history simply does not provide sufficient variation for a proper dynamic examination and one has to settle for a static retrospective format.

A single and static case study of this type is not beyond the scope of the comparative method. Without resorting to technically elaborate research strategies, which are not feasible in such circumstances, it is possible to adopt a soft version of the most different system design, its most similar system counterpart, or a combination of the two.²³¹ The former centres on the differences between social systems and the ensuing consequences, whereas the latter focuses on the similarities between the same and the resulting implications.²³² While this is less common, both perspectives (and multiple research designs in general) may be employed simultaneously²³³ in order to determine, for instance, how system differences and similarities account for governance regime performance, and how the understanding gained thereby may provide a basis for structural-functional reconfiguration.

Socio-legal scholars exploring cross-border environmental problems and their management, commonly address the issue within a four-dimensional framework highlighting cultural (or, where appropriate, social), economic, physical and political (including legal) differences and similarities—broad categories which may be further disaggregated into finer classes.²³⁴ However, it may be more fruitful, at least in this case, to directly orient the analytical effort towards key attributes of the governance regime—asymmetry, hierarchy, and openness—and salient features of the policy making dynamics—implementation and style—that shape its operational range.

Asymmetry manifests itself in a variety of institutional settings, federalism being one of them.²³⁵ Asymmetric patterns in such circumstances are the product of

²²⁹ See *id.* at 126-28.

²³⁰ See JOHNNY SALDANA, *LONGITUDINAL QUALITATIVE RESEARCH: ANALYZING CHANGE THROUGH TIME* (2003).

²³¹ See PRZEWORSKI & TEUNE, *supra* note 91, at 32-38; PETERS, *supra* note 108, at 37-41.

²³² See PRZEWORSKI & TEUNE, *supra* note 91, at 32-38; PETERS, *supra* note 108, at 37-41.

²³³ See *generally* ALBERT HUNTER & JOHN BREWER, *FOUNDATIONS OF MULTI-METHOD RESEARCH* (2006).

²³⁴ See RONGXING GUO, *CROSS-BORDER RESOURCE MANAGEMENT: THEORY AND PRACTICE* 35-46 (2005) [hereinafter GUO].

²³⁵ See *generally* MICHAEL BURGESS, *COMPARATIVE FEDERALISM: THEORY AND PRACTICE* (2006); *FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY* (Richard M. Bird & Robert D. Ebel eds., 2007) [hereinafter

territorial heterogeneity that originates from one or more sources and coincides with some form of inequality.²³⁶ Differences in living standards between distinct geographic units within a sovereign State are perhaps the most conspicuous example of asymmetric federalism.²³⁷ Cultural, ethnic, linguistic and political influences may also generate distributional asymmetries across a differentiated but not fragmented (in the sense of ultimately being controlled by a single authority) territorial space.²³⁸

A distinction may be drawn between *de jure* and *de facto* asymmetric treatment of the component units of a federal State.²³⁹ In the first case, national policy makers openly bestow advantages on certain regions, “such as providing them with wider revenue powers than other regions”.²⁴⁰ In the second case, the advantages stem from the way in which policies are implemented, “basically discriminating in favour of or against particular regions by, for example, channelling additional resources to some regions in an ad hoc or non-transparent manner”.²⁴¹

Another useful distinction is between asymmetric treatment *ex ante* and *ex post*.²⁴² Asymmetric federalism is associated with unequal treatment *ex ante*, with regions enjoying different powers and privileges “for being what they are”.²⁴³ *Ex post*, most regions will inevitably fare differently “because of the many other factors that affect outcomes in addition to the institutional policy framework provided by the central government”.²⁴⁴

These subtle distinctions are relevant in the Chinese context. Clearly, from a structural angle, giving prominence to formal institutional arrangements, “China does not have a federalist system of government—it has neither a constitutional division of power between the different levels of government, nor a separation of

FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY]; ALAIN-G. GAGNON, THE CASE FOR MULTINATIONAL FEDERALISM: BEYOND AN ALL-ENCOMPASSING NATION (2010).

²³⁶ See Richard M. Bird & Robert D. Ebel, *Subsidiarity, Solidarity and Asymmetry: Aspects of the Problem*, in FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY, *supra* note 235, at 11.

²³⁷ See *id.* at 11.

²³⁸ See *id.* at 11.

²³⁹ See Jorge Martinez-Vazques, *Asymmetric Federalism in Russia: Cure or Poison?*, in FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY, *supra* note 235, at 246.

²⁴⁰ *Id.*

²⁴¹ *Id.*

²⁴² See *id.*

²⁴³ *Id.*

²⁴⁴ *Id.*

power within the branches of government”.²⁴⁵ However, from a functional perspective, shifting the focus to how institutions actually operate, the Chinese political system, following “the implementation of post-Mao reform characterized by inter-governmental decentralisation . . . in terms of central-local relations, [it] functions like [*de facto*] federalism”.²⁴⁶

This intriguing configuration is partly the product of conscious (*ex ante*) top-down efforts, referred to as “particularistic contracting”,²⁴⁷ to reinvigorate potentially dynamic geographic segments of the economy, in the hope that the prosperity generated there would trickle down to fundamentally less vibrant ones.²⁴⁸ Yet, it cannot be attributed to deliberate policies alone as other (*ex post*) forces are at work.²⁴⁹ Whatever the exact underlying causal pattern, the component units of the Chinese *de facto* federal system considerably differ in terms of living standards and the entire spatial space is marked by a high degree of economic inequality.²⁵⁰

Guangdong province is among the most affluent regional entities in asymmetrically shaped China.²⁵¹ However, it is not yet match for Hong Kong in this respect.²⁵² The special political status or substantial autonomy enjoyed by the former British colony renders it difficult, conceptually and practically, to unambiguously place Hong Kong within the Chinese institutional architecture.²⁵³ Nevertheless, it is appropriate, for analytical purposes, to regard this economic and political outlier as

²⁴⁵ ZHENG YONGNIAN, DE FACTO FEDERALISM IN CHINA: REFORM AND DYNAMICS OF CENTRAL-LOCAL RELATIONS 32 (2007).

²⁴⁶ *Id.*

²⁴⁷ See SUSAN L. SHIRK, THE POLITICAL LOGIC OF ECONOMIC REFORM IN CHINA 141-43, 149-96, 280-330 (1993) [hereinafter THE POLITICAL LOGIC OF ECONOMIC REFORM IN CHINA]; SUSAN L. SHIRK, HOW CHINA OPENED ITS DOOR: THE POLITICAL SUCCESS OF THE PRC'S FOREIGN TRADE AND INVESTMENT REFORMS 32-33 (1994) [hereinafter HOW CHINA OPENED ITS DOOR].

²⁴⁸ See generally YEHUA D. WEI, REGIONAL DEVELOPMENT IN CHINA: STATES, GLOBALIZATION AND INEQUALITY (2009) [hereinafter WEI]; REGIONAL INEQUALITY IN CHINA: TRENDS, EXPLANATIONS, AND POLICY RESPONSES (Shenggen Fan, Ravi Kanbur & Xiaobo Zhang eds., 2009) [hereinafter REGIONAL INEQUALITY IN CHINA]; Miron Mushkat & Roda Mushkat, *The Political Economy of Chinese Federalism: New Analytical Directions*, 38 GLOBAL ECON. REV. 13 (2009) [hereinafter *The Political Economy of Chinese Federalism: New Analytical Directions*].

²⁴⁹ See generally WEI, *supra* note 248; REGIONAL INEQUALITY IN CHINA, *supra* note 248; *The Political Economy of Chinese Federalism: New Analytical Directions*, *supra* note 248.

²⁵⁰ See generally WEI, *supra* note 248; REGIONAL INEQUALITY IN CHINA, *supra* note 248; *The Political Economy of Chinese Federalism: New Analytical Directions*, *supra* note 248.

²⁵¹ See generally CHINA'S ECONOMIC POWERHOUSE: ECONOMIC REFORM IN GUANGDONG PROVINCE, *supra* note 110; YU, *supra* note 110.

²⁵² See generally LI, *supra* note 110.

²⁵³ See generally MUSHKAT, *supra* note 113, GHAI, *supra* note 113.

an integral part, albeit loosely so, of China's asymmetrically constructed *de facto* federal State.²⁵⁴

The differences in living standards between Hong Kong and Guangdong province are worth highlighting. Indeed, it is surprising that they have been overlooked almost completely in addressing transboundary pollution in the area.²⁵⁵ Fifteen years ago, an American legal scholar researching the subject suggested that the gap was sufficiently wide for Hong Kong, which traditionally boasts of massive fiscal reserves,²⁵⁶ to bear a disproportionate share of the burden of combating region-wide environmental degradation and pay Guangdong province for adopting the necessary measures to this end,²⁵⁷ but there has been no serious follow-up. The idea was expressed in general terms and no specific burden sharing schemes²⁵⁸ were proposed, yet this is an issue, the careful consideration of which might have enhanced the effectiveness of the cross-border governance regime for pollution abatement.

Hierarchy is another salient attribute of elaborate institutional mechanisms designed to regulate risk.²⁵⁹ Hierarchically-structured control systems of the bureaucratic variety are thus commonly contrasted with fluid ones such as markets and networks.²⁶⁰ The differences between the three categories are ascribed to the basis of relationship among members, means of interaction, tools for governing, approach to resolution, flexibility, commitment of members, ethos, choices made by members, and role of the State.²⁶¹

The question of hierarchy also arises in a more abstract form, when the issue of orders of governance—first-, second-, and meta-governance orders—is confronted.²⁶² First-order governance refers to “the way that problems are dealt with directly through action and implementation”²⁶³ (“[i]n relation to climate change, for example, first-order governance might involve deciding on the mix and

²⁵⁴ See generally HENDERS, *supra* note 202, at 125-62; PETER T.Y. CHEUNG, *Towards Federalism in China? The Experience of the Hong Kong Special Administrative Region*, in FEDERALISM IN ASIA 242 (Baogang He, Brian Galligan & Takashi Inoguchi eds., 2007).

²⁵⁵ Benjamin L. Liebman, *Autonomy through Separation? Environmental Law and the Basic Law of Hong Kong*, 39 HARV. INT'L L. J. 231 (1998) [hereinafter Liebman], is an exception to the rule.

²⁵⁶ See LI, *supra* note 110, at 135-209.

²⁵⁷ See *id.* at 292.

²⁵⁸ As outlined in GUO, *supra* note 234, at 72-85, 96-105, 119-130.

²⁵⁹ See J.P. EVANS, ENVIRONMENTAL GOVERNANCE 34-38 (2007).

²⁶⁰ See *id.* at 32-38.

²⁶¹ See *id.* at 35.

²⁶² See *id.* at 39-42.

²⁶³ *Id.* at 39.

proportion of renewable energy in an overall national energy policy”).²⁶⁴ Second-order governance relates to “the context in which the first order takes place, focusing on institutional design and the creation of policy instruments and programmes to steer first-order governance”²⁶⁵ (“[t]aking the example of climate change once more, a classic second-order governance challenge facing government concerns how to institutionalise climate change in order to make effective and fair decisions”).²⁶⁶ Meta-governance alludes to “the governance of governance”,²⁶⁷ which means the “guiding principles”²⁶⁸ constraining and driving operations and entails “ethical arguments and debates [regarding] the norms within which problems are framed”.²⁶⁹

The third notable manner in which hierarchy impinges on regulatory performance is via the vertical length (which has implications for complexity, flexibility, and responsiveness) of the organisational chain relied upon by the policy control system.²⁷⁰ Typically this is encapsulated in the concept of multi-level governance.²⁷¹ The point is that the environmental regulatory machinery may be relatively extended, consisting of a number of vertical layers, or basically flat, in which case horizontal coordination (possibly, but not necessarily, through

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Id.* at 40.

²⁶⁸ *Id.*

²⁶⁹ *Id.*

²⁷⁰ See generally Joel S. Demski & David E.M. Sappington, *Hierarchical Regulatory Control*, 18 RAND J. ECON. 369 (1987); MULTI-LEVEL GOVERNANCE (Ian Bache & Matthew Flinders eds., 2004) [hereinafter MULTI-LEVEL GOVERNANCE]; GOVERNING FINANCIAL GLOBALIZATION: INTERNATIONAL POLITICAL ECONOMY AND MULTI-LEVEL GOVERNANCE (Andrew Baker, David Hudson & Richard Woodward eds., 2005); MULTI-LEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE: PERSPECTIVES FROM SCIENCE, SOCIOLOGY AND THE LAW (Gerd Winter ed., 2006) [hereinafter MULTI-LEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE]; ENVIRONMENTAL GOVERNANCE AND DECENTRALIZATION (Albert Breton et al. eds., 2007) [hereinafter ENVIRONMENTAL GOVERNANCE AND DECENTRALIZATION]; HANDBOOK OF MULTI-LEVEL GOVERNANCE (Henrik Enderlein, Sonja Walti & Michael Zurn eds., 2010) [hereinafter HANDBOOK OF MULTI-LEVEL GOVERNANCE]; SIMONA PIATTONI, THE THEORY OF MULTI-LEVEL GOVERNANCE: CONCEPTUAL, EMPIRICAL AND NORMATIVE CHALLENGES (2010) [hereinafter PIATTONI].

²⁷¹ See generally MULTI-LEVEL GOVERNANCE, *supra* note 270; MULTI-LEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE, *supra* note 270; HANDBOOK OF MULTI-LEVEL GOVERNANCE, *supra* note 270; PIATTONI, *supra* note 270.

network-like channels) is employed to maintain policy coherence.²⁷² This has both functional and structural ramifications.²⁷³

The notion of multi-governance is commonly invoked in two political contexts, European²⁷⁴ and global.²⁷⁵ In both settings, it is resorted to as an analytical vehicle to highlight the features of an institutional mode that serves as an alternative to a State-centric organisational model.²⁷⁶ Multi-level governance generally involves principle-based hierarchical differentiation, but not necessarily in a uniform fashion.²⁷⁷ Task allocation may thus be consistent with the principle of efficiency, whereby responsibility for the provision of public goods is assigned to the level best-equipped to discharge it.²⁷⁸ Alternatively, it may reflect the principle of subsidiarity, which has a built-in bias (in its most natural interpretation) towards the local/lowest level in the vertical distribution of policy functions.²⁷⁹ The corollary is that hierarchy may comfortably accommodate both centralized (if efficient) and decentralized structures.²⁸⁰

Hierarchy is a source of two key differences in the Hong Kong-Guangdong environmental space. First, paradoxically, semi-socialist China/Guangdong province is far ahead of quintessentially capitalist Hong Kong in the transition from bureaucratic, command-and-control-style regulation to reliance on market-

²⁷² See generally MULTI-LEVEL GOVERNANCE, *supra* note 270; MULTI-LEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE, *supra* note 270; HANDBOOK OF MULTI-LEVEL GOVERNANCE, *supra* note 270; PIATTONI, *supra* note 270.

²⁷³ See generally MULTI-LEVEL GOVERNANCE, *supra* note 270; MULTI-LEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE, *supra* note 270; HANDBOOK OF MULTI-LEVEL GOVERNANCE, *supra* note 270; PIATTONI, *supra* note 270.

²⁷⁴ See generally COHESION POLICY AND EUROPEAN INTEGRATION: BUILDING MULTI-LEVEL GOVERNANCE (Liesbet Hooghe ed., 1996); THE TRANSFORMATION OF GOVERNANCE IN THE EUROPEAN UNION (Beate Kohler-Koch & Rainer Eising eds., 1999); ALBERT WEALE ET AL., ENVIRONMENTAL GOVERNANCE IN EUROPE: AN EVER CLOSER ECOLOGICAL UNION? (2000) [hereinafter WEALE]; LIESBET HOOGHE & GARY MARKS, MULTI-LEVEL GOVERNANCE AND EUROPEAN INTEGRATION (2001); ENRICO GUALINI, MULTI-LEVEL GOVERNANCE AND INSTITUTIONAL CHANGE: THE EUROPEANIZATION OF REGIONAL POLICY IN ITALY (2004) [hereinafter GUALINI]; EUROPEAN MULTI-LEVEL GOVERNANCE: CONTRASTING IMAGES IN NATIONAL RESEARCH (Beate Kohler-Koch & Fabrice Larat eds., 2009).

²⁷⁵ See generally GOVERNING FINANCIAL GLOBALIZATION: INTERNATIONAL POLITICAL ECONOMY AND MULTI-LEVEL GOVERNANCE, *supra* note 270; MULTILEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE, *supra* note 270.

²⁷⁶ See WEALE ET AL., *supra* note 274, at 68-69, 460-62.

²⁷⁷ See *id.*

²⁷⁸ See *id.*

²⁷⁹ See *id.*

²⁸⁰ See *id.*

oriented controls,²⁸¹ even though the process has by no means been smooth.²⁸² This impedes—although, as indicated, does not prevent—the cross-border harmonisation of standards.²⁸³ A discernible shift towards market by Hong Kong, which would not constitute an insurmountable challenge, would be conducive, at least at the margin, to more focused joint problem-solving on this front.

Second, rather importantly, in Hong Kong, authority for environmental management is, to all intents and purposes, concentrated at a single point within the bureaucratic pyramid,²⁸⁴ whereas the *de facto* Chinese federation has a highly decentralized multi-level system.²⁸⁵ It is consequently anomalous for Hong Kong to endeavour to forge a productive relationship with Guangdong province (and latterly Macao) but for the two protagonists to largely leave Beijing out of the picture—particularly since, as noted, transboundary pollution in the region is not of an exclusively Southern China origin.²⁸⁶

Coming to grips with this organisational divergence is not a simple proposition. The Chinese environmental multi-governance regime is characterized by a high degree of ambiguity, displays inadequate coherence and suffers from low

²⁸¹ See Liebman, *supra* note 255, at 291-292.

²⁸² See generally ECONOMIC GROWTH AND ENVIRONMENTAL REGULATION, *supra* note 127; Elizabeth C. Economy, *Environmental Governance in China: The Emerging Economic Dimension*, in ENVIRONMENTAL GOVERNANCE IN CHINA, *supra* note 127, at 23-41; TINGSONG JIANG, ECONOMIC INSTRUMENTS OF POLLUTION CONTROL IN AN IMPERFECT WORLD: THEORY AND IMPLICATIONS FOR CARBON DIOXIDE CONTROL IN CHINA (2003); Jolene Li Shuwen, *Assessing the Dragon's Choice: The Use of Market-Based Instruments in Chinese Environmental Policy*, 16 GEO. INT'L ENVTL L. REV. 617 (2004); Roger Raufer & Shaoyi Li, *Emissions Trading in China: A Conceptual "Leapfrog" Approach*, 34 ENERGY: INT'L J. 904 (2009); Julia Tao & Daphne Ngar-yin Mah, *Between Market and State: Dilemmas of Environmental Governance in China's Sulphur Dioxide Emission Trading System*, 27 ENV'T & PLAN. C: GOV'T & POL'Y 175 (2009); GUOYI HAN ET AL., CHINA'S CARBON EMISSION TRADING: AN OVERVIEW OF CURRENT DEVELOPMENT (2012); BO MIAO, EMISSIONS, POLLUTANTS AND ENVIRONMENTAL POLICY IN CHINA: DESIGNING A NATIONAL EMISSIONS TRADING SYSTEM (2013).

²⁸³ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 182; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 74-76.

²⁸⁴ See HONG KONG ENVIRONMENTAL PROTECTION DEPARTMENT, ENVIRONMENTAL PERFORMANCE REPORT 2011, www.epd.gov.hk/epd/misc/er/er2011/text/contents_01.html (last visited Mar. 31, 2014).

²⁸⁵ See Changhua Wu & Hua Wang, *Seeking Meaningful Decentralization to Achieve Sustainability*, in ENVIRONMENTAL GOVERNANCE AND DECENTRALIZATION, *supra* note 270, at 397.

²⁸⁶ See *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111, at 179-80; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111, at 65.

cohesion.²⁸⁷ On the Hong Kong side, as pointed out, legally-underpinned autonomy within China's body politic,²⁸⁸ coupled with a fear of losing this precious status,²⁸⁹ at times militates against initiatives that might place cross-border cooperation on a more formal footing.²⁹⁰ Nevertheless, the current state of affairs, entailing piecemeal institution-building, not driven by any strategic blueprint, and devoid of any normative substance (no concrete guidelines or principles) is highly unsatisfactory. The amorphous organisational architecture can be modestly, but meaningfully, tightened, despite the considerable political and structural constraints hampering progress.

This cautious assessment may appear overly optimistic.²⁹¹ It may thus be appropriate to note that the challenges confronted in this context pale in comparison with those faced in the course of Europeanization, when fundamental transformation of the regulatory setting, culminating in multi-level governance, has involved quantum leaps in the form of the denationalisation of the State, the de-stat-isation of political systems, the internationalisation of policy regimes and the rescaling of policies and politics, to provide just the most dramatic illustrations.²⁹²

The openness of a governance regime hinges on the extent to which it provides free and meaningful access to the policy arena.²⁹³ Regulatory systems which score highly in terms of this criterion are portrayed as participatory States or equivalent²⁹⁴ communitarian entities,²⁹⁵ channels for deliberation,²⁹⁶ platforms for

²⁸⁷ See generally *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217.

²⁸⁸ See generally MUSHKAT, *supra* note 113; GHAI, *supra* note 113.

²⁸⁹ See generally CRISIS AND TRANSFORMATION CHINA'S HONG KONG, *supra* note 202; GOVERNING HONG KONG, *supra* note 202; Ngok & Yep, *supra* note 202; HORLEMANN, *supra* note 202; Holliday, Ngok and Yep, *supra* note 202; ONE COUNTRY-TWO SYSTEMS IN CRISIS: HONG KONG'S TRANSFORMATION SINCE THE HANDOVER, *supra* note 202; Zeng, *supra* note 202; Chan, *supra* note 202; *Hong Kong's Exercise of External Autonomy: A Multi-Faceted Appraisal*, *supra* note 202; *The Mainlandization and Recolonization of Hong Kong*, *supra* note 202; THE DYNAMICS OF BEIJING-HONG KONG RELATIONS, *supra* note 202; HENDERS, *supra* note 202.

²⁹⁰ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

²⁹¹ See, e.g., Liebman, *supra* note 255.

²⁹² See GUALINI, *supra* note 274, at 41-43.

²⁹³ See generally B. GUY PETERS, *THE FUTURE OF GOVERNING: FOUR EMERGING MODELS* (1996) [hereinafter PETERS]; JON PIERRE & B. GUY PETERS, *GOVERNANCE, POLITICS AND THE STATE* (2000) [hereinafter GOVERNANCE, POLITICS AND THE STATE]; ANNE METTE KJAER, *GOVERNANCE* (2004) [hereinafter METTE KJAER]; JON PIERRE & B. GUY PETERS, *GOVERNING COMPLEX SOCIETIES: TRAJECTORIES AND SCENARIOS* (2005) [hereinafter GOVERNING COMPLEX SOCIETIES].

²⁹⁴ See, e.g., PETERS, *supra* note 293, at 47-71.

the exercise of direct democracy,²⁹⁷ and democratically accountable and legitimate institutional vehicles.²⁹⁸ They are also believed to display substantial flexibility,²⁹⁹ an attribute which, in conjunction with their openness, is viewed favourably by students of governance regimes for managing transboundary risk, at least in economically and politically mature settings in the Western world.³⁰⁰

Openness is a system property regarding which the emphasis—overall, if not at the margin—needs to switch from differences to similarities between Hong Kong and Guangdong province/China. It is true that the more affluent are equipped with better checks-and-balances, including the rule of law,³⁰¹ capitalist side of the two-way equation continues to steadily inch towards accountable, representative, responsive, and transparent government, albeit one clearly led, perhaps even tightly controlled, by its executive arm.³⁰² However, as matters stand, in the ecological domain, non-bureaucratic outsiders face considerable barriers to entry.³⁰³

A long-time observer of developments in this realm has argued that the “environmental debate and the policy-making process in Hong Kong has been dominated by the discourse of administrative rationalism”.³⁰⁴ This is a philosophy rooted in “a nexus of science, professional administration and bureaucratic structure”,³⁰⁵ attaching great importance to the role of expert knowledge in problem solving in the public sphere.³⁰⁶ Almost completely absent has been a genuine concern with “transparency, accountability, and openness in government, coupled with real empowerment of the local community”.³⁰⁷

²⁹⁵ See, e.g., GOVERNANCE, POLITICS AND THE STATE, *supra* note 293, at 146-50.

²⁹⁶ See, e.g., *id.* at 150-54.

²⁹⁷ See, e.g., *id.* at 154-58.

²⁹⁸ See, e.g., METTE KJAER, *supra* note 293, at 149-71; GOVERNING COMPLEX SOCIETIES, *supra* note 293, at 126-31.

²⁹⁹ See PETERS, *supra* note 293, at 72-90.

³⁰⁰ See generally LIDSKOG, SONERYD & UGGLA, *supra* note 160.

³⁰¹ See generally PETER WESLEY-SMITH, AN INTRODUCTION TO THE HONG KONG LEGAL SYSTEM (3d ed. 1998); IAN DOBINSON & DEREK ROEBUCK, INTRODUCTION TO LAW IN THE HONG KONG SAR (2d ed. 2001).

³⁰² See generally MA NGOK, POLITICAL DEVELOPMENT IN HONG KONG: STATE, POLITICAL SOCIETY AND CIVIL SOCIETY (2007).

³⁰³ See generally SUSTAINABLE DEVELOPMENT IN HONG KONG, *supra* note 128; Stephen Tsang et al., *Trust, Public Participation, and Environmental Governance in Hong Kong*, 19 ENVTL. POL'Y & GOVERNANCE 99 (2009) [hereinafter Tsang et al].

³⁰⁴ Peter Hills, *Administrative Rationalism, Sustainable Development, and the Politics of Environmental Discourse in Hong Kong*, in SUSTAINABLE DEVELOPMENT IN HONG KONG, *supra* note 128, at 20.

³⁰⁵ *Id.*

³⁰⁶ *Id.*

³⁰⁷ *Id.*

The Hong Kong authorities have adopted a less restrictive and technically-oriented approach since this assessment was offered a decade ago. They now profess not to merely consult with selective stakeholders but to be earnestly committed to a proactive strategy of wide-ranging civic engagement.³⁰⁸ However, thus far, this strategy has not materially expanded in scope, has not gained strong momentum and has had a rather limited impact.³⁰⁹ The available empirical evidence suggests that the distance between bureaucratic insiders and non-bureaucratic outsiders remains considerable and that the relationship is characterized by persistently low trust.³¹⁰

China is even farther away from the participatory end of the unofficial stakeholder engagement-exclusion continuum. The entire governance regime has shifted away from hard authoritarianism towards soft.³¹¹ The latter is significantly milder than its harsh predecessor and tolerates a substantially higher degree of civil society autonomy.³¹² The media thus, at times, deviates from the official line regarding ecological hazards, environmental non-governmental organisations (“NGOs”) occasionally flex their muscle, and spontaneous grassroots protests periodically erupt in reaction to ecologically disruptive policy actions.³¹³ Yet, these presently constitute peripheral inputs into a fragmented, but not open, environmental management system.³¹⁴

³⁰⁸ See generally Tsang et al, *supra* note 303.

³⁰⁹ See generally *id.*

³¹⁰ See generally *id.*

³¹¹ See generally KENNETH G. LIEBERTHAL, *GOVERNING CHINA: FROM REVOLUTION TO REFORM* (2d ed. 2004) [hereinafter LIEBERTHAL]; TONY SAICH, *GOVERNANCE AND POLITICS OF CHINA* (3d ed. 2011) [hereinafter SAICH].

³¹² See LIEBERTHAL, *supra* note 311, at 199-201, 289-313; SAICH, *supra* note 311, at 241-61.

³¹³ See generally Eric Zusman & Jennifer L. Turner, *Beyond the Bureaucracy: Changing China's Policymaking Environment*, in *CHINA'S ENVIRONMENT AND THE CHALLENGE OF SUSTAINABLE DEVELOPMENT*, *supra* note 127, at 121; Peter Ho, *Greening without Conflict: Environmentalism, NGOs, and Civil Society in China*, 32 *DEV. & CHANGE* 893 (2001); Yonqi Tong, *Environmental Movements in Transitional Societies: A Comparative Study of Taiwan and China*, 37 *COMP. POL.* 167 (2005); Susan Martens, *Public Participation with Chinese Characteristics: Citizen Consumers in China's Environmental Movement*, 15 *ENVTL. POL.* 211; Neil T. Carter & Arthur P.J. Mol, *China and the Environment: Domestic and Transnational Dynamics of a Future Hegemon*, 15 *ENVTL. POL.* 330 (2006); Arthur P.J. Mol & Neil T. Carter, *China's Environmental Governance in Transition*, 15 *ENVTL. POL.* 149 (2006); Han Shi & Lei Zhang, *China's Environmental Governance of Rapid Industrialization*, 15 *ENVTL. POL.* 271 (2006); Phillip Stalley & Dogning Yang, *An Emerging Environmental Movement in China?*, 186 *CHINA Q.* 333 (2006).

³¹⁴ See *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217, at 85-86; *Regime Transformation and Environmental Policy Innovation in China*, *supra* note 219, at 365-66.

Given that politically it enjoys greater room for manoeuvre in this respect, the onus is on Hong Kong to move towards a more participatory governance model. Such a bureaucratically unconstrained institutional pattern is equated with responsive regulation.³¹⁵ This notion, in turn, is closely associated with that of tripartism, which is defined as “a regulatory policy that fosters the participation of public interest groups [PIGs] in the regulatory process”.³¹⁶ Three procedural strategies are relied upon for this purpose.³¹⁷ First, PIGs and all their members are offered unfettered access to the information available to the regulator.³¹⁸ Second, they are provided with a seat at the negotiating table with the regulatee when adjustments to the governance structure are contemplated.³¹⁹ Third, they are accorded the same standing to sue or prosecute under regulatory statute as the regulator.³²⁰ By embracing these principles, Hong Kong might, among other things, help create a climate more conducive to effectively tackling transboundary pollution, despite the inevitably unilateral nature of such an approach.

Governance regimes, including those of the environmental variety, are the product of policy decisions, originating in the domestic and international arenas, which may not necessarily be highly deliberate and tightly structured.³²¹ While public attention often gravitates towards the content or output of government programmes, the policy process is multi-dimensional in nature and consists of several interdependent steps such as initiation (agenda setting), formulation (assessing options), selection (legitimation), budgeting, implementation, evaluation, continuation (justification), adjustment (reformation), and termination (starting over).³²²

³¹⁵ See generally IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992).

³¹⁶ *Id.* at 57-60.

³¹⁷ See *id.* at 57-58.

³¹⁸ See *id.* at 57.

³¹⁹ See *id.*

³²⁰ See *id.* at 57-58; See also Fu Hualing & Richard Cullen, *The Development of Public Interest Litigation in China*, in *PUBLIC INTEREST LITIGATION IN ASIA 9* (Po Jen Yap & Holning Lau, eds., 2011); Mei Hong & Yin Yanjie, *A Feasible Approach to Environmental Public Interest Litigation: The People's Procuratorate as Plaintiff*, in *ENVIRONMENTAL GOVERNANCE AND SUSTAINABILITY 135* (Paul Martin et al. eds., 2012); Qin Tianbao & Wang Huanhuan, *Environmental e-Governance in China: Insights from Government-Citizen Interaction*, in *ENVIRONMENTAL GOVERNANCE AND SUSTAINABILITY 148* (Paul Martin et al. eds., 2012).

³²¹ See LAMONT C. HEMPEL, *ENVIRONMENTAL GOVERNANCE: THE GLOBAL CHALLENGE* 119-178 (1996).

³²² See *id.* at 121; See for additional insights MICHAEL HOWLETT, M. RAMESH & ANTHONY PEARL, *STUDYING PUBLIC POLICY* (3d ed. 2009) [hereinafter HOWLETT, RAMESH & PERL];

Two, or perhaps three, of these sequential (in theory, but a less orderly path may be followed in practice) steps merit special attention in the present context: formulation, possibly in conjunction with initiation, which is/are heavily influenced by policy style, and implementation. Style of course impinges on government action throughout the entire multi-phase process, yet it plays a particularly significant role during the early stages of the ongoing policy cycle. Rather surprisingly, implementation and style are a source of broad similarities between Hong Kong and China/Guangdong province, which have ramifications for the management of transboundary pollution.

Environmental policy implementation on both sides of the border has been marred by persistent failures.³²³ The handling of transboundary pollution has been no exception to the rule.³²⁴ This state of affairs may be attributed to several factors that merit close scrutiny.³²⁵ However, one of these factors stands out because of its deep political roots and is worth highlighting here. It is a combination of top-level policy preferences, favouring robust economic expansion through strategies benefiting private interests best positioned to sustain it (regulatory cartelisation),³²⁶ and forbearance shown towards such interests (regulatory capture).³²⁷

The preoccupation with output growth (GDP-ism), pursued by a dominant coalition of senior civil servants and business leaders, initially British and subsequently local, has long been a salient feature of the Hong Kong policy setting.³²⁸ The roughly equivalent Chinese/Guangdong province political constellation is a post-1978 phenomenon, inspired by a desire to decisively lift living standards and regain international prominence following the stagnation and

PAUL CAIRNEY, UNDERSTANDING PUBLIC POLICY: THEORIES AND ISSUES (2012) [hereinafter CAIRNEY].

³²³ See generally SUSTAINABLE DEVELOPMENT IN HONG KONG, *supra* note 128; *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217.

³²⁴ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

³²⁵ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

³²⁶ See Noll, *Government Regulatory Behaviour: A Multidisciplinary Survey*, in REGULATORY POLICY AND THE SOCIAL SCIENCES, *supra* note 155, at 24 [hereinafter Noll].

³²⁷ See *id.* at 23-24.

³²⁸ See generally Miron Mushkat & Roda Mushkat, *The Political Economy of Loose Regulation: Modernity Meets Tradition in Hong Kong*, 7 INT'L J. REG. & GOVERNANCE 101 (2007) [hereinafter *The Political Economy of Loose Regulation*]; Miron Mushkat & Roda Mushkat, *The Political Economy of Hong Kong's "Open Skies" Legal Regime: An Empirical and Theoretical Exploration*, 10 SAN DIEGO J. INT'L L. 381 (2009) [hereinafter *The Political Economy of Hong Kong's "Open Skies" Legal Regime*].

marginalisation experienced during the revolutionary era.³²⁹ It has been accompanied by the emergence of a decentralized power configuration at whose epicentre operates a coalition of provincial and sub-provincial bureaucrats-cum-entrepreneurs and industrial managers and owners determined to safeguard their interests and deflect pressures emanating from environmental sources.³³⁰

Cartelisation- and capture-induced impediments to effective implementation have somewhat diminished throughout the region in recent years due to a slight shift in strategic priorities, gradual entry of pro-preservation forces into the political arena, growing eco-consciousness at grassroots level and steadily strengthening demand for green products.³³¹ Nevertheless, these changes are not on a sufficient scale to bring about a fundamental readjustment of the balance between wealth creation and sustainability.³³² To further reduce the impact of regulatory cartelisation and capture, the fragmented environmental movements in Hong Kong and China/Guangdong province need to eliminate internal divisions, consolidate resources with a view to achieving critical mass, engage in cross-border horizontal cooperation, join forces with mushrooming (from a low base) green industries and elicit international support of similar elements (notably NGOs), while treading carefully in order not to trigger a political backlash.

A market-driven, multi-level and open governance architecture, which features horizontal links among autonomous advocacy groups with eco-friendly agendas, need not be overly decentralised in nature. The optimal structural looseness/tightness of a regulatory regime is an issue that continues to defy expert

³²⁹ See generally *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217; *Contextualizing Environmental Human Rights: A Relativist Perspective*, *supra* note 217.

³³⁰ See *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, *supra* note 217, at 81-83.

³³¹ See generally HONG KONG ENVIRONMENTAL PROTECTION DEPARTMENT, *supra* note 284; Paul G. Harris, *Environmental Perspectives and Behaviour in China: Synopsis and Bibliography*, 38 ENV'T & BEHAV. 5 (2006); Paul G. Harris, *Green or Brown? Environmental Governance and Attitudes in Greater China*, 3 NATURE & CULTURE 151 (2008); Civic Exchange, *A Climate of Change: Public Opinion Survey on Global Climate Change in Hong Kong* (2010); Roda Mushkat, *Economic Growth, Environmental Preservation and International Policy Learning in China: Venturing beyond Transnational Legal Process Theory*, in RETHINKING LAW AND DEVELOPMENT: THE CHINESE EXPERIENCE 187 (Guanghua Yu ed., 2013) [hereinafter *Economic Growth, Environmental Preservation and International Policy Learning in China*].

³³² See generally Hills & Roberts, *supra* note 131; Welford, Hills & Lam, *supra* note 131; Gouldson, Hills & Welford, *supra* note 128; *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

consensus.³³³ Whether a high degree of decentralisation is conducive to efficiency, equity, responsiveness and stability remains a matter of dispute and, in most circumstances, hinges on a host of additional factors.³³⁴ Indeed, excessive looseness may not be desirable for the Southern China region, characterized by institutional diversity, opaqueness and weak vertical command-and-control mechanisms.³³⁵ This poses a challenge, but one that may be confronted via strategies relying on flexible, yet workable, organisational coordination devices.³³⁶

The notion of a discernible policy or, more specifically, regulatory style is closely associated with the European institutional landscape where, despite the prevalence of strong unifying impulses, the tension between centripetal and centrifugal forces has not fully subsided and where consequently “[e]ach nation has a distinct regulatory style, which is a function of its more general policy style, and which causes the environment to be regulated very much in the same way as other areas of corporate conduct”.³³⁷ The corollary is that “[i]t can sometimes be more difficult to define a common EU policy, given such differences in regulatory traditions, than it is to reconcile different opinions about the level of environmental protection”.³³⁸

Policy/regulatory style has been conceptualized in the environmental studies literature as a two-dimensional variable.³³⁹ First, it has been assumed that a government’s approach to dealing with ecological challenges may range from reactive (e.g., United Kingdom) to anticipatory (e.g., Germany).³⁴⁰ Second, it has

³³³ See generally FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY, *supra* note 235; ENVIRONMENTAL GOVERNANCE AND DECENTRALIZATION, *supra* note 270; TIM JEPPESEN, ENVIRONMENTAL REGULATION IN A FEDERAL SYSTEM: FRAMING ENVIRONMENTAL POLICY IN THE EUROPEAN UNION (2002) [hereinafter JEPPESEN].

³³⁴ See generally JEPPESEN, *supra* note 333; FISCAL FRAGMENTATION IN DECENTRALIZED COUNTRIES: SUBSIDIARITY, SOLIDARITY AND ASYMMETRY, *supra* note 235; ENVIRONMENTAL GOVERNANCE AND DECENTRALIZATION, *supra* note 270.

³³⁵ See generally *The Political Economy of Hong Kong’s Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

³³⁶ See generally HENRY MINTZBERG, *STRUCTURE IN FIVES: DESIGNING EFFECTIVE ORGANIZATIONS* (1983).

³³⁷ Mikael S. Andersen & Duncan Leifferink, *Introduction: The Impact of Pioneers on EU Environmental Policy*, in *EUROPEAN ENVIRONMENTAL POLICY: THE PIONEERS* 1, 6 (Mikael S. Andersen & Duncan Leifferink eds., 1997).

³³⁸ *Id.* at 6.

³³⁹ See generally *POLICY STYLES IN WESTERN EUROPE* (Jeremy Richardson ed., 1982) [hereinafter *POLICY STYLES IN WESTERN EUROPE*].

³⁴⁰ See Jeremy Richardson, Gunnell Gustafson & Grant Jordan, *The Concept of Policy Style*, in *POLICY STYLES IN WESTERN EUROPE*, *id.* at 13-14; Kenneth Dyson, *West Germany: The Search for a Rationalist Consensus*, in *POLICY STYLES IN WESTERN EUROPE*, *id.* at 17; Grant

been posited that its relationship with parties outside the policy establishment may vary from consensual (e.g., United Kingdom) to obligatory (e.g., Germany, other than in regulatory domains where corporatist practices facilitate input from employers and unions).³⁴¹ This typology cannot be applied mechanistically because national styles are not static and periodic sectoral shifts are a common socio-economic phenomenon.³⁴² However, both the entire classification scheme and its components may fruitfully be employed in appropriate institutional contexts.³⁴³

The reactive mode, which is most relevant here, is commonly associated with incrementalism³⁴⁴ and path dependence,³⁴⁵ both of which are predominantly backward-looking and entail forward movement in small, interconnected steps.³⁴⁶ Sharp departures from the status quo and genuinely innovative initiatives are seldom observed in settings functioning along these lines.³⁴⁷ In regulatory writings, such operational patterns are equated with structurally-induced strategic inertia.³⁴⁸ The implication generally is that anticipatory planning, while highly demanding and not without risks, may be required to creatively and thoroughly address knotty policy issues.³⁴⁹ This involves a switch from an incremental/path-dependent decision-making mode to a rational-comprehensive one.³⁵⁰

Jordan & Jeremy Richardson, *The British Policy Style or the Logic of Negotiation?*, in POLICY STYLES IN WESTERN EUROPE, *id.* at 80.

³⁴¹ See Jeremy Richardson, Gunnel Gustafson & Grant Jordan, *The Concept of Policy Style*, in POLICY STYLES IN WESTERN EUROPE, *supra* note 339, at 13-14; Kenneth Dyson, *West Germany: The Search for a Rationalist Consensus*, in POLICY STYLES IN WESTERN EUROPE, *supra* note 339, at 17; Grant Jordan & Jeremy Richardson, *The British Policy Style or the Logic of Negotiation?*, in POLICY STYLES IN WESTERN EUROPE, *supra* note 339, at 80.

³⁴² See Roda Mushkat, *The Development of Environmental Governance Regimes: A Chinese-Inspired Reconstruction*, 2 WASH. & LEE J. ENERGY, CLIMATE & ENV'T 29 (2011).

³⁴³ See *id.* at 29-30.

³⁴⁴ See HOWLETT, RAMESH & PERL, *supra* note 322, at 146-49; CAIRNEY, *supra* note 322, at 98-100.

³⁴⁵ See HOWLETT, RAMESH & PERL, *supra* note 322, at 200; CAIRNEY, *supra* note 322, at 76-78.

³⁴⁶ See HOWLETT, RAMESH & PERL, *supra* note 322, at 146-49, 200; CAIRNEY, *supra* note 322, at 76-78, 98-100.

³⁴⁷ See HOWLETT, RAMESH & PERL, *supra* note 322, at 146-49, 200; CAIRNEY, *supra* note 322, at 76-78, 98-100.

³⁴⁸ See Noll, *supra* note 326, at 61-63.

³⁴⁹ See generally YEHEZKEL DROR, DESIGN FOR POLICY SCIENCES (1971); YEHEZKEL DROR, VENTURES IN POLICY SCIENCES (1971); YEHEZKEL DROR, PUBLIC POLICYMAKING RE-EXAMINED (1983); YEHEZKEL DROR, POLICYMAKING UNDER ADVERSITY (1985); YEHEZKEL DROR, THE CAPACITY TO GOVERN: A REPORT TO THE CLUB OF ROME (2001); YEHEZKEL DROR, ISRAELI STATECRAFT: NATIONAL SECURITY CHALLENGES (2011).

³⁵⁰ See HOWLETT, RAMESH & PERL, *supra* note 322, at 143-46; CAIRNEY, *supra* note 322, at 96-97.

A reactive, incremental and path-dependent adaptation has been the hallmark of Hong Kong's cautious, minimalist and restrained governance regime, in the environmental realm³⁵¹ and elsewhere.³⁵² The patterns seen in reformist China have been more mixed, featuring continuities and discontinuities, conservatism and innovation, but with a bias towards pragmatically-driven marginal adjustments based on past performance.³⁵³ The handling of ecological hazards has been characterized by enormous strategic inertia, interrupted by change-inducing crises³⁵⁴ (the regulatory system may thus be portrayed as being in a state of punctuated equilibrium).³⁵⁵

These broad similarities partly account for the painfully slow evolution of the Southern China governance regime for combating transboundary pollution.³⁵⁶ The intricate cross-border and negotiated (rather than spontaneous or imposed)³⁵⁷ nature of the system further reinforces the propensity towards reactive responses, incrementalism, path dependence and strategic inertia.³⁵⁸ In such delicate circumstances, policy dynamics inevitably tend to be muted and participants' efforts are channelled towards regime maintenance rather than strategic innovation.³⁵⁹

³⁵¹ See generally SUSTAINABLE DEVELOPMENT IN HONG KONG, *supra* note 128; Gouldson, Hills & Welford, *supra* note 128.

³⁵² See generally *The Political Economy of Loose Regulation*, *supra* note 328; *The Political Economy of Hong Kong's "Open Skies" Legal Regime*, *supra* note 328; JOHN P. BURNS, GOVERNMENT CAPACITY AND THE HONG KONG CIVIL SERVICE (2004); IAN SCOTT, THE PUBLIC SECTOR IN HONG KONG (2010).

³⁵³ See generally THE POLITICAL LOGIC OF ECONOMIC REFORM IN CHINA, *supra* note 247; HOW CHINA OPENED ITS DOOR, *supra* note 247; CHINA'S ECONOMIC REFORM: THE COSTS AND BENEFITS OF INCREMENTALISM (Qimiao Fan & Peter Nolan eds., 1994); CHINA: TWO DECADES OF REFORM AND CHANGE (Wang Gungwu & John Wong eds., 1999); Zheng Yongnian, *Political Incrementalism: Political Lessons from China's 20 Years of Reform*, 20 THIRD WORLD Q. 1157 (1999); JINGLIAN WU, UNDERSTANDING AND INTERPRETING CHINESE ECONOMIC REFORM (2005); Jean-Gemain Gros, "Big Think," *Disjointed Incrementalism: Chinese Economic Success and Policy Lessons for Africa, or the Case for Pan-Africanism*, 11 AFR. J. INT'L AFF. 55-87 (2008).

³⁵⁴ See generally Mushkat, *Economic Growth, Environmental Preservation and International Policy Learning in China*, *supra* note 331.

³⁵⁵ See HOWLETT, RAMESH & PERL, *supra* note 322, at 207-08; CAIRNEY, *supra* note 322, at 175-199.

³⁵⁶ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

³⁵⁷ See INTERNATIONAL COOPERATION, *supra* note 151, at 84-89.

³⁵⁸ See generally *The Political Economy of Hong Kong's Transboundary Pollution*, *supra* note 111; *Endemic Institutional Fragility in the Face of Dynamic Economic Integration in Asia*, *supra* note 111.

³⁵⁹ See BRIAN W. HOGWOOD & B. GUY PETERS, POLICY DYNAMICS 26-29 (1983).

Again, the onus is on Hong Kong, as the wealthier side, possessing better learning capabilities, and with superior organisational infrastructure, to strive harder to enhance the quality of institutional mechanisms and regulatory instruments for alleviating transboundary pollution in the region. This means a much greater sense of urgency, closer collaboration with civil society elements (at home and abroad), less conventional ways of problem solving,³⁶⁰ more resources (for research and development, as well as for ongoing operations), new (including out-of-the-box) ideas and non-mainstream structural vehicles (e.g., special-purpose think tanks).

The above analysis suggests that system attributes such as hierarchy (market-based versus bureaucratic-style controls and length of vertical chain of command), openness, implementation dynamics and policy style are key determinants of governance regime effectiveness. The omission of sociological (e.g., cultural differences) and traditional-type legal (e.g., common law versus civil law) factors and the emphasis laid on organisational and functional properties that loom large in the structure-conduct-performance model, invoked in the policy-oriented literature on regulation and rooted in theories of industrial economics,³⁶¹ is not accidental. Fundamental sociological and legal variables, such as culture and form of law relied upon, cannot be controlled by regime architects, other than perhaps in the very long run. Consequently, it is more productive to focus on ones that are controllable and may be adjusted, if appropriate, within a reasonable time horizon.³⁶²

The output of a governance regime, its specific legal rules and regulations, does of course, qualify as a controllable variable. However, this dimension of the picture has also been accorded limited attention, whereas the institutional setting, in the context of both the organisational underpinnings and embedded processes, has been amply highlighted. This stems from the assumption that features of the institutional milieu are the critical factors in this delicate equation. Unless they are properly attended to, output modifications are not likely to yield beneficial results. Sound laws and regulations cannot fulfil their purpose if the institutional foundation remains shaky.

³⁶⁰ See, e.g., Miron Mushkat & Elfed Roberts, *Towards Adversarial Decision Making in the Pre-1997 Hong Kong Government*, in HONG KONG AND 1997: STRATEGIES FOR THE FUTURE 177 (Y.C. Yao et al. eds., 1985).

³⁶¹ See Noll, *supra* note 326, at 55-63.

³⁶² See RUSSELL L. ACKOFF, *THE ART OF PROBLEM SOLVING: ACCOMPANIED BY ACKOFF'S FABLES 50-99* (1978).

V. CONCLUSION

Comparative legal analysis has developed into a firmly established and increasingly sophisticated tool of inquiry within the wide-ranging and richly diversified field of law. The journey from the periphery to the mainstream has been long and may not be entirely over. Yet, substantial progress has been made on several fronts and forward momentum is being sustained. Comparative legal research may never attain a prominent status akin to that of core domestically-oriented legal sub-disciplines, or possibly even international law, but it may continue to thrive as a conceptually solid, intellectually vibrant and practically valuable sphere of legal scholarship.

The comparative law enterprise has not been free of controversies and disagreements. Nor has the headway observed been even and steady in all respects. The persistence of controversies and disagreements, seen in the hard sciences, which are not immune to the rise and fall of theoretical paradigms,³⁶³ is scarcely a cause for serious concern and may indeed be viewed as a healthy sign. The lack of even and steady progress, on the other hand, is a reflection of the fact that there are areas where, to-date, rather modest advancement has been recorded. Notably, as matters stand, comparative legal studies lack a distinct methodology of their own and do not significantly draw on other sources in an effort to enrich their incomplete repertoire.

As illustrated in this paper, the social sciences are a fertile ground for exploration.³⁶⁴ If the number of cases is sufficiently large, robust techniques, qualitative in nature, although requiring some quantitative manipulation, are available. They include QCA, CCM, CMA and logit analysis, to provide just the best-known examples of widely used methods.³⁶⁵ If sample size falls short of requirements, there are sound, largely qualitative social science techniques for systematically dissecting a small number of cases.

³⁶³ See generally THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (3d ed. 1996).

³⁶⁴ A more elaborate assessment is offered by Raza Azarian, *Potential and Limitations of Comparative Method in Social Science*, 1 INT'L J. HUMAN. & SOC. SCI. 113 (2011).

³⁶⁵ Relevant applications remain rare, but the potential of these new tools is beginning to be recognized in the international and comparative legal space. See, e.g., Mathias M. Siems, *Numerical Comparative Law—Do We Need Statistical Evidence in Law in Order to Reduce Complexity?*, 13 CARDOZO J. INT'L & COMP. L. 521 (2005); Helmut Breiter, Arild Underdal & Oran R. Young, *The Effectiveness of International Environmental Regimes: Comparing and Contrasting Findings from Quantitative Research*, 13 INT'L STUD. REV. 579 (2011); OLAV SCHRAM STOKKE, *DISAGGREGATING INTERNATIONAL REGIMES: A NEW APPROACH TO EVALUATION AND COMPARISON* (2012).

The case selected here for purposes of illustration is one where the governance regime poses substantial conceptual and policy challenges. However, on the face of it, from a methodological perspective, it appears to leave little room to manoeuvre. Yet, even in such defined circumstances, it is possible to proceed in a systematic fashion, consistent with the logic of comparative social inquiry, and obtain relevant theoretical and practical insights that would have otherwise been difficult to coherently produce on a meaningful scale.

That is not to say that a careful assessment of socio-legal realities may not be undertaken on the basis of a less structured approach. A telling example is the illuminating comparison of the governance regimes for biodiversity conservation in China and Taiwan.³⁶⁶ Nevertheless, methodologically grounded comparative socio-legal research, which logically focuses on controllable institutional differences and similarities, may sharpen awareness of key relationships and the potential for redesigning, or at least recalibrating the regulatory system.

³⁶⁶ See generally GERALD A. MCBEATH & TSE-KANG LEUNG, GOVERNANCE OF BIODIVERSITY CONSERVATION IN CHINA AND TAIWAN (2006).