

= The Ingenuity Gap =

The Ingenuity Gap is a non-fiction book by Canadian academic Thomas Homer Dixon . It was written over the course of eight years from 1992 to 2000 when it was published by Knopf . The book argues that the nature of problems faced by our society are becoming more complex and that our ability to implement solutions is not keeping pace . Homer Dixon focuses upon complexities , unexpected non-linear results , and emergent properties . He takes an interdisciplinary approach connecting political science with sociology , economics , history , and ecology .

After Robert D. Kaplan referenced Homer Dixon 's work in the 1994 The Atlantic Monthly article , " The Coming Anarchy " , Homer Dixon was offered a book deal . He spent the next half decade preparing until it was finally published in 2000 in North America and the United Kingdom . While it spent three weeks at # 1 on a Canadian best-seller list , it did not sell many copies in the United States . Critics were pleased with Homer Dixon 's scholarship , straightforward presentation , and the book 's breadth but some found the writing to have a self-indulgent quality . Homer Dixon was awarded the Governor General 's Award for English language non-fiction in 2001 and the book went on to be translated into French and Spanish .

= = Background = =

Author Thomas Homer Dixon was a 44-year-old academic and director at the University of Toronto 's Peace and Conflict Studies program at the time of publication . While the book took eight years to write , Homer Dixon had been developing the ideas behind it for most of his career . As a youth , an interest in current events was fostered by his parents and led him to study causes of human violence at university . He graduated from Carleton University with a Bachelor of Arts and , in 1989 , the Massachusetts Institute of Technology with a doctorate in Political science . He accepted the director position at the Peace and Conflict Studies program in 1990 . Homer Dixon and his theories were featured in an article written by Robert D. Kaplan , in the February 1994 edition of The Atlantic Monthly , entitled " The Coming Anarchy " . The article made him into an emerging academic celebrity and resulted in several book deal offers . By 1997 Homer Dixon , working out of his home office , had accumulated more than 100 kilometres ( 62 mi ) of paper and was overwhelmed by the project , stating , " I 'm living the problem I 'm describing . " In 1999 , Homer Dixon and Princeton University Press published Environment , Scarcity , and Violence containing Homer Dixon 's research on resource scarcity leading to violence . For The Ingenuity Gap , he re-organized the framework along three strands , thematic , geographical , and metaphoric , and structured it like a travelogue from which he could launch examples .

= = Content = =

Homer Dixon begins by presenting his personal and academic background that led to the drafting of this book . He establishes that the nature of problems are becoming overly burdensome , including providing resources for exponentially growing populations , managing international environmental impacts , and creating a secure global economic market . Modern problems often contain numerous factors that interact to create hidden complexities and non-linear results . The 1997 Asian Financial Crisis is used to illustrate a system in which professed experts had confidence in but internal and external factors compounded upon each other to create a sudden , unexpected drop . The delusion of control , or the assumption that experts were in control , led to overconfidence in an economic system that was not well understood . Homer Dixon finds that the experts are just as susceptible to groupthink as non-experts and that they have boundless capacity for hindsight rationalization of unexpected movements .

As older problems are solved , more complexities are being introduced , like adding additional parts to an engine . Interaction of these new parts , or niches , create emergent properties , like time-

saving office devices ( e.g. email , mobile computers , etc . ) make communication more efficient but also expand the network of contacts and increase the amount of time spent on such duties . Homer @-@ Dixon relates this to complexity theory explaining that as new niches are filled there is a synergistic burst of simplicity . However , this can also lead to less control or freedom as emergent properties are created , like a new government program leading to a sprawling bureaucracy . Information theory is touched upon relating the amount of information required to describe a system and the degree of that system 's complexity . Chaos theory is used to describe how small changes can lead to widely varying results and path dependence .

Homer @-@ Dixon explains how his theory was influenced by endogenous or new growth theory in which ideas are a factor of production independent of labour and capital . He distinguishes his stance from Neo @-@ Malthusianism which seeks to manage systems by controlling demand and from market fundamentalism which believe free markets can provide timely solutions to any problem . Several problems in advancing basic science are identified : human cognitive limits , intrinsic complexity of field , limits of scientific institutions , and social and cultural values regarding science .

= = Style = =

The Ingenuity Gap is a popular science book . Homer @-@ Dixon takes an inter @-@ disciplinary approach connecting political science with sociology , economics , history , biology , and ecology . The narrative is structured as a travelogue as the author travels to meet experts and construct his theory . His observations along the way illustrate the concepts he is explaining and supplement interviews and research . Collecting pieces of his theory from each of his interviews and destinations appears as a recurring metaphor . He includes anecdotes and social commentary .

= = Publication and reception = =

The book was published in September 2000 as a hardcover , and Homer @-@ Dixon shortly after began a 10 @-@ city tour across Canada with stops in Toronto , Ottawa , Kingston , Hamilton , London , Winnipeg , Calgary , Edmonton , Vancouver , and Victoria , amongst several other smaller venues . Promotional events were also held in the United States and England . It was published by Knopf in North America and by Jonathan Cape in the United Kingdom . An excerpt was published in the October issue of Report on Business Magazine . In the Canadian market , the book spent seven weeks on the Maclean 's nonfiction best sellers ' list , including three weeks at the # 1 spot . It did not sell well in the United States . Homer @-@ Dixon was awarded the 2001 Governor General 's Award for English language non @-@ fiction for the book . The trade paperback was released a year after the hardcover edition . It was translated into French and published in 2002 by Éditions du Boréal . A Spanish version was published by Espasa in 2003 . Homer @-@ Dixon went on to write a similar book , The Upside of Down : Catastrophe , Creativity , and the Renewal of Civilization , in which he elaborates upon the idea that societies are becoming less able to cope with problems , like global warming or population imbalances , as complexities compound each other and the readily available resources , like fossil fuels , are rapidly consumed .

The book 's scholarship was very well received by critics . The research behind the book was called impressive for its breadth , and its presentation was said to be straightforward and thought @-@ provoking . Critics called Homer @-@ Dixon 's writing clear , accessible , and engaging . In his review in the Quill & Quire , Mark Shainblum wrote " [ d ] espite the book 's serious import and prodigious endnotes , The Ingenuity Gap is a surprisingly engaging and even exciting read . Homer @-@ Dixon spins parables masterfully , using comprehensible examples to represent the almost incomprehensible complexity of our social system . " The Library Journal highly recommended it for academic and general public libraries . Several critics were disappointed by the lack of recommendations to address the problems he raises . The reviewers for Books in Canada , The Canadian Geographer , and the National Post found Homer @-@ Dixon 's writing self @-@ indulgent because it overly details his travels and experiences , and because of his overly authoritative tone that compliments people that agree with him and shows little consideration of

differing perspectives .