

# Making The Modern World Materials And Dematerialization Vaclav Smil

WHEN PEOPLE SHOULD GO TO THE BOOKS STORES, SEARCH COMMENCEMENT BY SHOP, SHELF BY SHELF, IT IS IN REALITY PROBLEMATIC. THIS IS WHY WE OFFER THE BOOK COMPILATIONS IN THIS WEBSITE. IT WILL VERY EASE YOU TO LOOK GUIDE **MAKING THE MODERN WORLD MATERIALS AND DEMATERIALIZATION VACLAV SMIL** AS YOU SUCH AS.

BY SEARCHING THE TITLE, PUBLISHER, OR AUTHORS OF GUIDE YOU IN FACT WANT, YOU CAN DISCOVER THEM RAPIDLY. IN THE HOUSE, WORKPLACE, OR PERHAPS IN YOUR METHOD CAN BE ALL BEST PLACE WITHIN NET CONNECTIONS. IF YOU TRY TO DOWNLOAD AND INSTALL THE **MAKING THE MODERN WORLD MATERIALS AND DEMATERIALIZATION VACLAV SMIL**, IT IS TOTALLY SIMPLE THEN, BEFORE CURRENTLY WE EXTEND THE BELONG TO TO PURCHASE AND MAKE BARGAINS TO DOWNLOAD AND INSTALL **MAKING THE MODERN WORLD MATERIALS AND DEMATERIALIZATION VACLAV SMIL** CORRESPONDINGLY SIMPLE!

*SIX YEARS* - LUCY R. LIPPARD  
1997-04-30  
"MANY ARTISTS, CURATORS, AND CULTURAL CRITICS WILL BE INTERESTED IN THE REPUBLICATION OF THIS ANTHOLOGY SINCE THE MOVEMENT IT GIVES CONTOUR TO HAS HAD A TREMENDOUS INFLUENCE ON THE CONTEMPORARY ART OF THE LAST 25 YEARS, AND ON THE CRITICAL DISCUSSION SURROUNDING THE CONCEPT OF POSTMODERNISM."—ALEXANDER

ALBERRO, COAUTHOR OF *TRACING CULTURES*  
**ENERGY AND CIVILIZATION** - VACLAV SMIL 2018-11-13  
A COMPREHENSIVE ACCOUNT OF HOW ENERGY HAS SHAPED SOCIETY THROUGHOUT HISTORY, FROM PRE-AGRICULTURAL FORAGING SOCIETIES THROUGH TODAY'S FOSSIL FUEL-DRIVEN CIVILIZATION. "I WAIT FOR NEW SMIL BOOKS THE WAY SOME PEOPLE WAIT FOR THE NEXT 'STAR

WARS' MOVIE. IN HIS LATEST BOOK, ENERGY AND CIVILIZATION: A HISTORY, HE GOES DEEP AND BROAD TO EXPLAIN HOW INNOVATIONS IN HUMANS' ABILITY TO TURN ENERGY INTO HEAT, LIGHT, AND MOTION HAVE BEEN A DRIVING FORCE BEHIND OUR CULTURAL AND ECONOMIC PROGRESS OVER THE PAST 10,000 YEARS. —BILL GATES, GATES NOTES, BEST BOOKS OF THE YEAR ENERGY IS THE ONLY UNIVERSAL CURRENCY; IT IS NECESSARY FOR GETTING ANYTHING DONE. THE CONVERSION OF ENERGY ON EARTH RANGES FROM TERRA-FORMING FORCES OF PLATE TECTONICS TO CUMULATIVE EROSION EFFECTS OF RAINDROPS. LIFE ON EARTH DEPENDS ON THE PHOTOSYNTHETIC CONVERSION OF SOLAR ENERGY INTO PLANT BIOMASS. HUMANS HAVE COME TO RELY ON MANY MORE ENERGY FLOWS—RANGING FROM FOSSIL FUELS TO PHOTOVOLTAIC GENERATION OF ELECTRICITY—FOR THEIR CIVILIZED EXISTENCE. IN THIS MONUMENTAL HISTORY, VAACLAV SMIL PROVIDES A COMPREHENSIVE ACCOUNT OF HOW ENERGY HAS SHAPED SOCIETY, FROM PRE-AGRICULTURAL FORAGING SOCIETIES THROUGH TODAY'S FOSSIL FUEL-DRIVEN CIVILIZATION. HUMANS ARE THE ONLY SPECIES THAT CAN SYSTEMATICALLY HARNESS ENERGIES OUTSIDE THEIR BODIES, USING THE POWER OF THEIR INTELLECT AND AN ENORMOUS VARIETY OF ARTIFACTS—FROM THE SIMPLEST TOOLS TO INTERNAL COMBUSTION ENGINES AND NUCLEAR REACTORS. THE EPOCHAL TRANSITION TO FOSSIL FUELS

AFFECTED EVERYTHING: AGRICULTURE, INDUSTRY, TRANSPORTATION, WEAPONS, COMMUNICATION, ECONOMICS, URBANIZATION, QUALITY OF LIFE, POLITICS, AND THE ENVIRONMENT. SMIL DESCRIBES HUMANITY'S ENERGY ERAS IN PANORAMIC AND INTERDISCIPLINARY FASHION, OFFERING READERS A MAGISTERIAL OVERVIEW. THIS BOOK IS AN EXTENSIVELY UPDATED AND EXPANDED VERSION OF SMIL'S ENERGY IN WORLD HISTORY (1994). SMIL HAS INCORPORATED AN ENORMOUS AMOUNT OF NEW MATERIAL, REFLECTING THE DRAMATIC DEVELOPMENTS IN ENERGY STUDIES OVER THE LAST TWO DECADES AND HIS OWN RESEARCH OVER THAT TIME.

#### MATERIALS AND DEMATERIALIZATION - VAACLAV SMIL 2023-07-03

WORLD-RENOWNED SCIENTIST VAACLAV SMIL EXAMINES A CRITICAL TOPIC IN THE RESEARCH AND POLICY DOMAIN OF SUSTAINABLE RESOURCE USE OVER THE COURSE OF TIME, THE MODERN WORLD HAS BECOME DEPENDENT ON UNPRECEDENTED FLOWS OF MATERIALS. NOW EVEN THE MOST EFFICIENT PRODUCTION PROCESSES AND THE HIGHEST PRACTICAL RATES OF RECYCLING MAY NOT BE ENOUGH TO RESULT IN DEMATERIALIZATION RATES THAT WOULD BE HIGH ENOUGH TO NEGATE THE RISING DEMAND FOR MATERIALS GENERATED BY CONTINUING POPULATION GROWTH AND RISING STANDARDS OF LIVING. MATERIALS AND DEMATERIALIZATION CONSIDERS THE PRINCIPAL MATERIALS USED

THROUGHOUT HISTORY, FROM WOOD AND STONE, THROUGH TO METALS, ALLOYS, PLASTICS AND SILICON, DESCRIBING THEIR EXTRACTION AND PRODUCTION AS WELL AS THEIR DOMINANT APPLICATIONS. THE EVOLVING PRODUCTIVITIES OF MATERIAL EXTRACTION, PROCESSING, SYNTHESIS, FINISHING AND DISTRIBUTION, AND THE ENERGY COSTS AND ENVIRONMENTAL IMPACT OF RISING MATERIAL CONSUMPTION ARE EXAMINED IN DETAIL, ALONG WITH THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC DEVELOPMENT AND RESOURCE USE, INCLUDING MAJOR TECHNOLOGICAL AND INNOVATION ASPECTS. THE BOOK CONCLUDES WITH AN OUTLOOK FOR THE FUTURE, DISCUSSING THE PROSPECTS FOR DEMATERIALIZATION, POTENTIAL CONSTRAINTS ON MATERIALS, AND AN UPDATED APPRAISAL OF MATERIAL REQUIREMENTS AND PROSPECTS DURING THE COMING DECADES. BUILDING ON THE SUCCESS OF HIS 2013 BOOK, VACLAV SMIL HAS THOROUGHLY REVISED THIS LANDMARK TEXT TO HIGHLIGHT ADVANCES THAT HAVE TAKEN PLACE OVER THE LAST DECADE, INCLUDING A THOROUGH REVIEW OF STATISTICS AND REFERENCES TO 2022. THIS UPDATED EDITION ALSO INCLUDES NEW CONTENT TO EXPLICITLY ADDRESS MATERIAL FOR GLOBAL ENERGY TRANSITION AND FOR SECURING FOOD FOR A STILL GROWING GLOBAL POPULATION. PRAISE FOR THE 1ST EDITION “VACLAV SMIL KEEPS TURNING OUT AMAZING BOOKS. MAKING THE MODERN WORLD, I JUST FINISHED,

AND IT’S PRETTY FANTASTIC.”  
(INTERVIEW WITH BILL GATES,  
JANUARY 2014)

**MORE FROM LESS** - ANDREW McAFEE  
2019-10-08

FROM THE COAUTHOR OF THE NEW YORK TIMES BESTSELLER THE SECOND MACHINE AGE, A PARADIGM-SHIFTING ARGUMENT “FULL OF FASCINATING INFORMATION AND PROVOCATIVE INSIGHTS” (PUBLISHERS WEEKLY, STARRED REVIEW)—DEMONSTRATING THAT WE ARE INCREASING PROSPERITY WHILE USING FEWER NATURAL RESOURCES. THROUGHOUT HISTORY, THE ONLY WAY FOR HUMANITY TO GROW WAS BY DEGRADING THE EARTH: CHOPPING DOWN FORESTS, POLLUTING THE AIR AND WATER, AND ENDLESSLY USING UP RESOURCES. SINCE THE FIRST EARTH DAY IN 1970, THE FOCUS HAS BEEN ON RADICALLY CHANGING COURSE: REDUCING OUR CONSUMPTION, TIGHTENING OUR BELTS, AND LEARNING TO SHARE AND REUSE. IS THAT ARGUMENT CORRECT? ABSOLUTELY NOT. IN MORE FROM LESS, McAFEE ARGUES THAT TO SOLVE OUR ECOLOGICAL PROBLEMS WE SHOULD DO THE OPPOSITE OF WHAT A DECADE OF CONVENTIONAL WISDOM SUGGESTS. RATHER THAN REDUCE AND CONSERVE, WE SHOULD RELY ON THE COST-CONSCIOUSNESS BUILT INTO CAPITALISM AND THE STREAMLINING MIRACLES OF TECHNOLOGY TO CREATE A MORE EFFICIENT WORLD. AMERICA—A LARGE, HIGH-TECH COUNTRY THAT ACCOUNTS FOR ABOUT 25% OF THE GLOBAL ECONOMY—IS NOW GENERALLY

USING LESS OF MOST RESOURCES YEAR AFTER YEAR, EVEN AS ITS ECONOMY AND POPULATION CONTINUE TO GROW. WHAT'S MORE, THE US IS POLLUTING THE AIR AND WATER LESS, EMITTING FEWER GREENHOUSE GASES, AND REPLENISHING ENDANGERED ANIMAL POPULATIONS. AND, AS MCAFEE SHOWS, AMERICA IS NOT ALONE. OTHER COUNTRIES ARE ALSO TRANSFORMING THEMSELVES IN FUNDAMENTAL WAYS. WHAT HAS MADE THIS TURNABOUT POSSIBLE? ONE THING, PRIMARILY: THE COLLABORATION BETWEEN TECHNOLOGY AND CAPITALISM, ALTHOUGH GOOD GOVERNANCE AND PUBLIC AWARENESS HAVE ALSO BEEN CRITICAL. MCAFEE DOES WARN OF ISSUES THAT HAVEN'T BEEN SOLVED, LIKE GLOBAL WARMING, OVERFISHING, AND COMMUNITIES LEFT BEHIND AS CAPITALISM AND TECH PROGRESS RACE FORWARD. BUT OVERALL, MORE FROM LESS IS A REVELATORY AND "DEEPLY ENGAGING" (BOOKLIST) ACCOUNT OF HOW WE'VE STUMBLERD INTO AN UNEXPECTEDLY BETTER BALANCE WITH NATURE—ONE THAT HOLDS OUT THE PROMISE OF MORE ABUNDANT AND GREENER CENTURIES AHEAD.

### **How the World Really Works -**

Vaclav Smil 2022-01-27

WE HAVE NEVER HAD SO MUCH INFORMATION AT OUR FINGERTIPS AND YET MOST OF US DON'T KNOW HOW THE WORLD REALLY WORKS. THIS BOOK EXPLAINS SEVEN OF THE MOST FUNDAMENTAL REALITIES GOVERNING OUR SURVIVAL AND PROSPERITY. FROM

ENERGY AND FOOD PRODUCTION, THROUGH OUR MATERIAL WORLD AND ITS GLOBALIZATION, TO RISKS, OUR ENVIRONMENT AND ITS FUTURE, HOW THE WORLD REALLY WORKS OFFERS A MUCH-NEEDED REALITY CHECK - BECAUSE BEFORE WE CAN TACKLE PROBLEMS EFFECTIVELY, WE MUST UNDERSTAND THE FACTS. IN THIS AMBITIOUS AND THOUGHT-PROVOKING BOOK WE SEE, FOR EXAMPLE, THAT GLOBALIZATION ISN'T INEVITABLE AND THAT OUR SOCIETIES HAVE BEEN STEADILY INCREASING THEIR DEPENDENCE ON FOSSIL FUELS, MAKING THEIR COMPLETE AND RAPID ELIMINATION UNLIKELY. VAACLAV SMIL IS NEITHER A PESSIMIST NOR AN OPTIMIST, HE IS A SCIENTIST; HE IS THE WORLD-LEADING EXPERT ON ENERGY AND AN ASTONISHING POLYMATH. THIS IS HIS MAGNUM OPUS AND IS A CONTINUATION OF HIS QUEST TO MAKE FACTS MATTER. DRAWING ON THE LATEST SCIENCE, INCLUDING HIS OWN FASCINATING RESEARCH, AND TACKLING SOURCES OF MISINFORMATION HEAD ON - FROM YUVAL NOAH HARARI TO NOAM CHOMSKY - ULTIMATELY SMIL ANSWERS THE MOST PROFOUND QUESTION OF OUR AGE- ARE WE IRREVOCABLY DOOMED OR IS A BRIGHTER UTOPIA AHEAD?

### **MADE IN THE USA -**

Vaclav Smil 2013-08-23

AN ARGUMENT THAT AMERICA'S ECONOMY NEEDS A STRONG AND INNOVATIVE MANUFACTURING SECTOR AND THE JOBS IT CREATES.

### **MAKING THE MODERN WORLD -**

Vaclav Smil 2017-10-28

THE STORY OF HUMANITY - EVOLUTION OF OUR SPECIES; PREHISTORIC SHIFT FROM FORAGING TO PERMANENT AGRICULTURE; RISE AND FALL OF ANTIQUE, MEDIEVAL, AND EARLY MODERN CIVILIZATIONS; ECONOMIC ADVANCES OF THE PAST TWO CENTURIES; MECHANIZATION OF AGRICULTURE; DIVERSIFICATION AND AUTOMATION OF INDUSTRIAL PRODUCTION; ENORMOUS INCREASES IN ENERGY CONSUMPTION; DIFFUSION OF NEW COMMUNICATION AND INFORMATION NETWORKS; AND IMPRESSIVE GAINS IN QUALITY OF LIFE - WOULD NOT HAVE BEEN POSSIBLE WITHOUT AN EXPANDING AND INCREASINGLY INTRICATE AND COMPLEX USE OF MATERIALS. HUMAN INGENUITY HAS TURNED THESE MATERIALS FIRST INTO SIMPLE CLOTHES, TOOLS, WEAPONS, AND SHELTERS, LATER INTO MORE ELABORATE DWELLINGS, RELIGIOUS AND FUNERARY STRUCTURES, PURE AND ALLOYED METALS, AND IN RECENT GENERATIONS INTO EXTENSIVE INDUSTRIAL AND TRANSPORTATION INFRASTRUCTURES, MEGACITIES, SYNTHETIC AND COMPOSITE COMPOUNDS, AND INTO SUBSTRATES AND ENABLERS OF A NEW ELECTRONIC WORLD. THIS MATERIAL PROGRESS HAS NOT BEEN A LINEAR ADVANCE BUT HAS CONSISTED OF TWO UNEQUAL PERIODS. FIRST WAS THE VERY SLOW RISE THAT EXTENDED FROM PRE-HISTORY TO THE BEGINNINGS OF RAPID ECONOMIC MODERNIZATION, THAT IS, UNTIL THE EIGHTEENTH CENTURY IN MOST OF EUROPE, UNTIL THE NINETEENTH CENTURY IN THE USA,

CANADA, AND JAPAN, AND UNTIL THE LATTER HALF OF THE TWENTIETH CENTURY IN LATIN AMERICA, THE MIDDLE EAST, AND CHINA. AN OVERWHELMING MAJORITY OF PEOPLE LIVED IN THOSE PRE- MODERN SOCIETIES WITH ONLY LIMITED QUANTITIES OF SIMPLE POSSESSIONS THAT THEY MADE THEMSELVES OR THAT WERE PRODUCED BY ARTISANAL LABOR AS UNIQUE PIECES OR IN SMALL BATCHES - WHILE THE PRODUCTS MADE IN LARGER QUANTITIES, BE THEY METAL OBJECTS, FIRED BRICKS AND TILES, OR DRINKING GLASSES, WERE TOO EXPENSIVE TO BE WIDELY OWNED.

**PRACTICAL HANDBOOK OF MATERIAL FLOW ANALYSIS** - PAUL H. BRUNNER  
2016-04-19

THE FIRST-EVER BOOK ON THIS SUBJECT ESTABLISHES A RIGID, TRANSPARENT AND USEFUL METHODOLOGY FOR INVESTIGATING THE MATERIAL METABOLISM OF ANTHROPOGENIC SYSTEMS. USING MATERIAL FLOW ANALYSIS (MFA), THE MAIN SOURCES, FLOWS, STOCKS, AND EMISSIONS OF MAN-MADE AND NATURAL MATERIALS CAN BE DETERMINED. BY DEMONSTRATING THE APPLICATION OF MFA, THIS BOOK REVEALS HOW RESOURCES CAN BE CONSERVED AND THE ENVIRONMENT PROTECTED WITHIN COMPLEX SYSTEMS. THE FOURTEEN CASE STUDIES PRESENTED EXEMPLIFY THE POTENTIAL FOR MFA TO CONTRIBUTE TO SUSTAINABLE MATERIALS MANAGEMENT. EXERCISES THROUGHOUT THE BOOK DEEPEN COMPREHENSION AND EXPERTISE. THE AUTHORS HAVE HAD SUCCESS IN

APPLYING MFA TO VARIOUS FIELDS,  
AND NOW PROMOTE THE USE OF MFA  
SO THAT FUTURE ENGINEERS AND  
PLANNERS HAVE A COMMON METHOD FOR  
SOLVING RESOURCE-ORIENTED  
PROBLEMS.

*SUMMARY - MAKING THE MODERN  
WORLD: MATERIALS AND  
DEMATERIALIZATION BY VACLAV SMIL*  
- SHORTCUT EDITION

\* OUR SUMMARY IS SHORT, SIMPLE AND  
PRAGMATIC. IT ALLOWS YOU TO HAVE  
THE ESSENTIAL IDEAS OF A BIG BOOK IN  
LESS THAN 30 MINUTES. AS YOU READ  
THIS SUMMARY, YOU WILL LEARN THAT  
THE INCREASED CONSUMPTION OF  
MATERIALS IS THE MAJOR FEATURE OF  
THE MODERN WORLD. YOU WILL ALSO  
LEARN THAT : THE INVENTION OF THE  
STEAM ENGINE REVOLUTIONIZED  
MANKIND; A LONG-TERM  
DEMATERIALIZATION WITHOUT RADICAL  
CHANGES IN LIFESTYLE IS VERY  
UNLIKELY; HUMANITY'S MATERIAL  
PROGRESS IS EXPERIENCING TWO  
SUCCESSIVE AGES; ENERGY IS THE MOST  
IMPORTANT OF ALL MATERIALS; OUR  
CIVILIZATION IS AT A CROSSROADS IN  
TERMS OF OUR CONSUMPTION OF  
MATERIALS; THE CURRENT LEVEL OF  
MATERIAL CONSUMPTION IS VERY  
RECENT IF WE PLACE IT IN THE LONG  
HISTORICAL PERIOD. THE CONSUMPTION  
OF MATERIALS IS AT THE HEART OF  
ECONOMIC PRODUCTION, WITHOUT  
WHICH IT COULD NOT EXIST.  
MATERIALS OF ALL KINDS, BE THEY  
MINERAL, VEGETABLE, ETC., CONDITION  
OUR DAILY LIFE, MODERN LIFE, THAT OF  
INDUSTRIALIZED COUNTRIES WHOSE

SOCIETIES ARE CONSUMER SOCIETIES.  
THEIR PRODUCTION, USE AND  
DESTRUCTION, ONCE THEY HAVE BECOME  
WASTE, ARE THE SUBJECT OF THIS  
BOOK, WHICH EXAMINES THE COSTS OF  
OUR SOCIETY'S DEPENDENCE ON  
MATERIALS, AS WELL AS THE POSSIBLE  
PATHS TO A PROGRESSIVE  
DEMATERIALIZATION, WHICH THE  
THREATENED INTEGRITY OF THE  
BIOSPHERE MAKES INDISPENSABLE. \*BUY  
NOW THE SUMMARY OF THIS BOOK FOR  
THE MODEST PRICE OF A CUP OF COFFEE!  
GLOBALIZATION OF TECHNOLOGY -  
PROCEEDINGS OF THE SIXTH  
CONVOCATION OF THE COUNCIL OF  
ACADEMIES OF ENGINEERING AND  
TECHNOLOGICAL SCIENCES  
1988-02-01

THE TECHNOLOGICAL REVOLUTION HAS  
REACHED AROUND THE WORLD, WITH  
IMPORTANT CONSEQUENCES FOR  
BUSINESS, GOVERNMENT, AND THE  
LABOR MARKET. COMPUTER-AIDED  
DESIGN, TELECOMMUNICATIONS, AND  
OTHER DEVELOPMENTS ARE ALLOWING  
SMALL PLAYERS TO COMPETE WITH  
TRADITIONAL GIANTS IN  
MANUFACTURING AND OTHER FIELDS. IN  
THIS VOLUME, 16 ENGINEERING AND  
INDUSTRIAL EXPERTS REPRESENTING  
EIGHT COUNTRIES DISCUSS THE GROWTH  
OF TECHNOLOGICAL ADVANCES AND  
THEIR IMPACT ON SPECIFIC INDUSTRIES  
AND REGIONS OF THE WORLD. FROM  
VARIOUS PERSPECTIVES, THESE  
DISTINGUISHED COMMENTATORS  
DESCRIBE THE PRACTICAL ASPECTS OF  
TECHNOLOGY'S REACH INTO BUSINESS  
AND TRADE.

*FEEDING THE WORLD* - VACLAV SMIL  
2001-08-24

A REALISTIC YET ENCOURAGING LOOK AT HOW SOCIETY CAN CHANGE IN WAYS THAT WILL ALLOW US TO FEED AN EXPANDING GLOBAL POPULATION. THIS BOOK ADDRESSES THE QUESTION OF HOW WE CAN BEST FEED THE TEN BILLION OR SO PEOPLE WHO WILL LIKELY INHABIT THE EARTH BY THE MIDDLE OF THE TWENTY-FIRST CENTURY. HE ASKS WHETHER HUMAN INGENUITY CAN PRODUCE ENOUGH FOOD TO SUPPORT HEALTHY AND VIGOROUS LIVES FOR ALL THESE PEOPLE WITHOUT IRREPARABLY DAMAGING THE INTEGRITY OF THE BIOSPHERE. WHAT MAKES THIS BOOK DIFFERENT FROM OTHER BOOKS ON THE WORLD FOOD SITUATION IS ITS CONSIDERATION OF THE COMPLETE FOOD CYCLE, FROM AGRICULTURE TO POST-HARVEST LOSSES AND PROCESSING TO EATING AND DISCARDING. TAKING A SCIENTIFIC APPROACH, SMIL ESPOUSES NEITHER THE CATASTROPHIC VIEW THAT WIDESPREAD STARVATION IS IMMINENT NOR THE CORNUCOPIAN VIEW THAT WELCOMES LARGE POPULATION INCREASES AS THE SOURCE OF ENDLESS HUMAN INVENTIVENESS. HE SHOWS HOW WE CAN MAKE MORE EFFECTIVE USE OF CURRENT RESOURCES AND SUGGESTS THAT IF WE INCREASE FARMING EFFICIENCY, REDUCE WASTE, AND TRANSFORM OUR DIETS, FUTURE NEEDS MAY NOT BE AS GREAT AS WE ANTICIPATE. SMIL'S MESSAGE IS THAT THE PROSPECTS MAY NOT BE AS BRIGHT AS WE WOULD LIKE, BUT THE OUTLOOK IS HARDLY DISHEARTENING. ALTHOUGH

INACTION, LATE ACTION, OR MISPLACED EMPHASIS MAY BRING FUTURE TROUBLES, WE HAVE THE TOOLS TO STEER A MORE EFFICIENT COURSE. THERE ARE NO INSURMOUNTABLE BIOPHYSICAL REASONS WE CANNOT FEED HUMANITY IN THE DECADES TO COME WHILE EASING THE BURDEN THAT MODERN AGRICULTURE PUTS ON THE BIOSPHERE.

*THE ROSIE PROJECT* - GRAEME SIMSION  
2013-10-01

THE INTERNATIONAL BESTSELLING ROMANTIC COMEDY "BURSTING WITH WARMTH, EMOTIONAL DEPTH, AND...HUMOR," (ENTERTAINMENT WEEKLY) FEATURING THE ODDLY CHARMING, SOCIALLY CHALLENGED GENETICS PROFESSOR, DON, AS HE SEEKS TRUE LOVE. THE ART OF LOVE IS NEVER A SCIENCE: MEET DON TILLMAN, A BRILLIANT YET SOCIALLY INEPT PROFESSOR OF GENETICS, WHO'S DECIDED IT'S TIME HE FOUND A WIFE. IN THE ORDERLY, EVIDENCE-BASED MANNER WITH WHICH DON APPROACHES ALL THINGS, HE DESIGNS THE WIFE PROJECT TO FIND HIS PERFECT PARTNER: A SIXTEEN-PAGE, SCIENTIFICALLY VALID SURVEY TO FILTER OUT THE DRINKERS, THE SMOKERS, THE LATE ARRIVERS. ROSIE JARMAN POSSESSES ALL THESE QUALITIES. DON EASILY DISQUALIFIES HER AS A CANDIDATE FOR THE WIFE PROJECT (EVEN IF SHE IS "QUITE INTELLIGENT FOR A BARMAID"). BUT DON IS INTRIGUED BY ROSIE'S OWN QUEST TO IDENTIFY HER BIOLOGICAL FATHER. WHEN AN UNLIKELY RELATIONSHIP DEVELOPS AS THEY COLLABORATE ON THE FATHER

PROJECT, DON IS FORCED TO CONFRONT THE SPONTANEOUS WHIRLWIND THAT IS ROSIE—AND THE REALIZATION THAT, DESPITE YOUR BEST SCIENTIFIC EFFORTS, YOU DON'T FIND LOVE, IT FINDS YOU. ARRESTINGLY ENDEARING AND ENTIRELY UNCONVENTIONAL, GRAEME SIMSION'S DISTINCTIVE DEBUT "NAVIGATES THE CHOPPY WATERS OF ADULT RELATIONSHIPS, BOTH ROMANTIC AND PLATONIC, WITH A FRESH TAKE (USA TODAY). "FILLED WITH HUMOR AND PLENTY OF HEART, THE ROSIE PROJECT IS A DELIGHTFUL REMINDER THAT ALL OF US, NO MATTER HOW WE'RE WIRED, JUST WANT TO FIT IN" (CHICAGO TRIBUNE).

*SUMMARY* - EDITION SHORTCUT (AUTHOR) 1901

STILL THE IRON AGE - VACLAV SMIL  
2016-01-22

ALTHOUGH THE LAST TWO GENERATIONS HAVE SEEN AN ENORMOUS AMOUNT OF ATTENTION PAID TO ADVANCES IN ELECTRONICS, THE FACT REMAINS THAT HIGH-INCOME, HIGH-ENERGY SOCIETIES COULD THRIVE WITHOUT MICROCHIPS, ETC., BUT, BY CONTRAST, COULD NOT EXIST WITHOUT STEEL. BECAUSE OF THE IMPORTANCE OF THIS MATERIAL TO CONTEMPORARY CIVILIZATION, A COMPREHENSIVE RESOURCE IS NEEDED FOR METALLURGISTS, NON-METALLURGISTS, AND ANYONE WITH A BACKGROUND IN ENVIRONMENTAL STUDIES, INDUSTRY, MANUFACTURING, AND HISTORY, SEEKING A BROADER UNDERSTANDING OF THE HISTORY OF

IRON AND STEEL AND ITS CURRENT AND FUTURE IMPACT ON SOCIETY. GIVEN ITS COVERAGE OF THE HISTORY OF IRON AND STEEL FROM ITS GENESIS TO SLOW PRE-INDUSTRIAL PROGRESS, REVOLUTIONARY ADVANCES DURING THE 19TH CENTURY, MAGNIFICATION OF 19TH CENTURY ADVANCES DURING THE PAST FIVE GENERATIONS, PATTERNS OF MODERN STEEL PRODUCTION, THE UBIQUITOUS USES OF THE MATERIAL, POTENTIAL SUBSTITUTIONS, ADVANCES IN RELATIVE DEMATERIALIZATION, AND APPRAISAL OF STEEL'S POSSIBLE FUTURES, STILL THE IRON AGE: IRON AND STEEL IN THE MODERN WORLD BY WORLD-RENOWNED AUTHOR VACLAV SMIL MEETS THAT NEED. INCORPORATES AN INTERDISCIPLINARY DISCUSSION OF THE HISTORY AND EVOLUTION OF THE IRON- AND STEEL-MAKING INDUSTRY AND ITS IMPACT ON THE DEVELOPMENT OF THE MODERN WORLD SERVES AS A VALUABLE CONTRIBUTION BECAUSE OF ITS UNIQUE PERSPECTIVE THAT COMPARES STEEL TO TECHNOLOGICAL ADVANCES IN OTHER MATERIALS, PERCEIVED TO BE IMPORTANT DISCUSSES HOW WE CAN MANUFACTURE SMARTER RATHER THAN DENY DEMAND EXPLORES FUTURE OPPORTUNITIES AND NEW EFFORTS FOR SUSTAINABLE DEVELOPMENT IN THE INDUSTRY

**SUSTAINABLE MARKETING** - DONALD A. FULLER 1999-02-02

THERE HAS LONG BEEN A GAP FOR A TEXT THAT BRIDGES THE FUNDAMENTAL ECOLOGICAL ISSUES FACING SOCIETY AND MODERN MARKETING. THIS IS THAT



TEXT. FOLLOWING AN ECOLOGICAL IMPERATIVE, FULLER, EXPLORES THE REASONS FOR STUDYING SUSTAINABLE MARKETING IN 8 KEY CHAPTERS WHICH ENCOMPASS STRATEGY, PRODUCTS, CHANNEL NETWORKS, COMMUNICATIONS, PRICING AND MARKET DEVELOPMENT. AT A TIME WHEN ONE IS LOOKING AT GLOBAL WARMING, HYDROCARBON TAXES, AIR AND WATER POLLUTION AND INCREASED INCIDENCES OF RESPIRATORY DISEASES THIS IS A VERY OPPORTUNE TEXT. IN THE UK, BAA HAVE JUST LAUNCHED A SUSTAINABLE COMPANY STRATEGY FOR ITS BUSINESS AND THIS IS THE BOOK THAT OUTLINES WHAT THAT APPROACH MEANS FOR THE MODERN MARKETER.

**MATERIALITY** - PETRA LANGE-BERNDT 2015

"MATERIALITY HAS REAPPEARED AS A HIGHLY CONTESTED TOPIC IN RECENT ART. MODERNIST CRITICISM TENDED TO PRIVILEGE FORM OVER MATTER-- CONSIDERING MATERIAL AS THE ESSENTIALIZED BASIS OF MEDIUM SPECIFICITY--AND TECHNICALLY BASED APPROACHES IN ART HISTORY REINFORCED CONNOISSEURSHIP THROUGH THE SCIENCE OF ARTISTIC MATERIALS. BUT IN ORDER TO ENGAGE CRITICALLY WITH THE MEANING, FOR EXAMPLE, OF HAIR IN DAVID HAMMONS'S INSTALLATIONS, MILK IN THE WORK OF DIETER ROTH, OR LATEX IN THE SCULPTURES OF EVA HESSE, WE NEED A VERY DIFFERENT SET OF METHODOLOGICAL TOOLS. THIS ANTHOLOGY FOCUSES ON THE MOMENTS

WHEN MATERIALS BECOME WILLFUL ACTORS AND AGENTS WITHIN ARTISTIC PROCESSES, ENTANGLING THEIR AUDIENCE IN A WEB OF CONNECTIONS. IT INVESTIGATES THE ROLE OF MATERIALITY IN ART THAT ATTEMPTS TO EXPAND NOTIONS OF TIME, SPACE, PROCESS, OR PARTICIPATION. AND IT LOOKS AT THE WAYS IN WHICH MATERIALS OBSTRUCT, DISRUPT, OR INTERFERE WITH SOCIAL NORMS, EMERGING AS IMPURE FORMATIONS AND MESSY, UNSTABLE SUBSTANCES. IT REEXAMINES THE NOTION OF "DEMATERIALIZATION"; ADDRESSES MATERIALIST CRITIQUES OF ARTISTIC PRODUCTION; SURVEYS RELATIONSHIPS BETWEEN MATTER AND BODIES, FROM THE HIERARCHIES OF GENDER TO THE ABJECT AND PHOBIC; EXPLORES THE VITALITY OF SUBSTANCES; AND ADDRESSES THE CONCEPTS OF INTERMATERIALITY AND TRANSMATERIALITY EMERGING IN THE HYBRID ZONES OF DIGITAL EXPERIMENTATION." -- PUBLISHER'S DESCRIPTION.

**VAPORIZED** - ROBERT TERCEK 2015-09-08

VAPORIZED WAS SELECTED AS THE WINNER OF THE 2016 INTERNATIONAL BOOK OF THE YEAR PRIZE BY GETABSTRACT FROM A FIELD OF 10,000 BUSINESS AND STRATEGY TITLES. THE PRIZE WAS ANNOUNCED AT THE FRANKFURT BOOK FAIR ON OCTOBER 19, 2016 DIGITAL TECHNOLOGY HAS UPTURNED ENTIRE INDUSTRIES AND IRREVOCABLY ALTERED THE WAY WE LIVE, WORK AND DO

BUSINESS. NOW, IT IS SET TO TRANSFORM EVERY SECTOR AND ECONOMIC SYSTEM ON THE PLANET IN ALMOST UNIMAGINABLE WAYS — EVEN THOSE ONCE THOUGHT TO BE IMMUNE FROM ITS EFFECTS. IN HIS GROUNDBREAKING NEW BOOK *VAPORIZED*, DIGITAL PIONEER AND BUSINESS FUTURIST ROBERT TERCEK TAKES US INSIDE THE WORLD'S LARGEST CULTURAL AND ECONOMIC TRANSFORMATION SINCE THE INDUSTRIAL REVOLUTION, AND EXPLAINS WHAT IT MEANS TO CONSUMERS, EMPLOYERS AND POLICY MAKERS. DYNAMIC AND ENGAGING, TERCEK DOES FOR DIGITAL BUSINESS THEORY WHAT MALCOLM GLADWELL HAS DONE FOR SOCIOLOGY, TRANSLATING A COMPLEX, ARCAINE SUBJECT IN APPROACHABLE AND RELEVANT TERMS. IN CONTRAST TO THE DIGITAL-ERA DOOMSAYERS AND HAND-WRINGING PUNDITS, TERCEK OFFERS AN INSIGHTFUL, OPTIMISTIC ANALYSIS OF THE FUTURE AND A PRACTICAL BLUEPRINT FOR SURVIVAL THAT NO BUSINESS LEADER, FROM THE FORTUNE 500 CEO TO THE SMALL STARTUP OWNER, CAN AFFORD TO IGNORE.

HARVESTING THE BIOSPHERE - VACLAV SMIL 2015-08-21

AN INTERDISCIPLINARY AND QUANTITATIVE ACCOUNT OF HUMAN CLAIMS ON THE BIOSPHERE'S STORES OF LIVING MATTER, FROM PREHISTORIC HUNTING TO MODERN ENERGY PRODUCTION. THE BIOSPHERE—THE EARTH'S THIN LAYER OF LIFE—DATES FROM NEARLY FOUR BILLION YEARS AGO, WHEN THE FIRST SIMPLE ORGANISMS

APPEARED. MANY SPECIES HAVE EXERTED ENORMOUS INFLUENCE ON THE BIOSPHERE'S CHARACTER AND PRODUCTIVITY, BUT NONE HAS TRANSFORMED THE EARTH IN SO MANY WAYS AND ON SUCH A SCALE AS HOMO SAPIENS. IN *HARVESTING THE BIOSPHERE*, VACLAV SMIL OFFERS AN INTERDISCIPLINARY AND QUANTITATIVE ACCOUNT OF HUMAN CLAIMS ON THE BIOSPHERE'S STORES OF LIVING MATTER, FROM PREHISTORY TO THE PRESENT DAY. SMIL EXAMINES ALL HARVESTS—FROM PREHISTORIC MAN'S HUNTING OF MEGAFUNA TO MODERN CROP PRODUCTION—AND ALL USES OF HARVESTED BIOMASS, INCLUDING ENERGY, FOOD, AND RAW MATERIALS. WITHOUT HARVESTING OF THE BIOMASS, SMIL POINTS OUT, THERE WOULD BE NO STORY OF HUMAN EVOLUTION AND ADVANCING CIVILIZATION; BUT AT THE SAME TIME, THE INCREASING EXTENT AND INTENSITY OF PRESENT-DAY BIOMASS HARVESTS ARE CHANGING THE VERY FOUNDATIONS OF CIVILIZATION'S WELL-BEING. IN HIS DETAILED AND COMPREHENSIVE ACCOUNT, SMIL PRESENTS THE BEST POSSIBLE QUANTIFICATIONS OF PAST AND CURRENT GLOBAL LOSSES IN ORDER TO ASSESS THE EVOLUTION AND EXTENT OF BIOMASS HARVESTS. DRAWING ON THE LATEST WORK IN DISCIPLINES RANGING FROM ANTHROPOLOGY TO ENVIRONMENTAL SCIENCE, SMIL OFFERS A VALUABLE LONG-TERM, PLANET-WIDE PERSPECTIVE ON HUMAN-CAUSED ENVIRONMENTAL CHANGE.

**MATERIAL WORLD** - PETER MENZEL  
1994

A PHOTO-JOURNEY THROUGH THE HOMES AND LIVES OF 30 FAMILIES, REVEALING CULTURE AND ECONOMIC LEVELS AROUND THE WORLD.

**ENERGY IN WORLD HISTORY** - VACLAV SMIL  
2019-04-15

EVERY HUMAN ACTIVITY ENTAILS THE CONVERSION OF ENERGY. CHANGES IN THE FUNDAMENTAL SOURCES OF ENERGY, AND IN THE USE OF ENERGY SOURCES, ARE A BASIC DIMENSION OF THE EVOLUTION OF SOCIETY. OUR APPRECIATION OF THE SIGNIFICANCE OF THESE PROCESSES IS ESSENTIAL TO A FULLER UNDERSTANDING OF WORLD HISTORY. VACLAV SMIL OFFERS A COMPREHENSIVE LOOK AT THE ROLE

TAP DANCING TO WORK - CAROL J. LOOMIS  
2012-11-21

WARREN BUFFETT BUILT BERKSHIRE HATHAWAY INTO SOMETHING REMARKABLE— AND FORTUNE JOURNALIST CAROL LOOMIS HAD A FRONT-ROW SEAT FOR IT ALL. WHEN CAROL LOOMIS FIRST MENTIONED A LITTLE-KNOWN OMAHA HEDGE FUND MANAGER IN A 1966 FORTUNE ARTICLE, SHE DIDN'T DREAM THAT WARREN BUFFETT WOULD ONE DAY BE CONSIDERED THE WORLD'S GREATEST INVESTOR—NOR THAT SHE AND BUFFETT WOULD QUICKLY BECOME CLOSE PERSONAL FRIENDS. AS BUFFETT'S FORTUNE AND REPUTATION GREW OVER TIME, LOOMIS USED HER UNIQUE INSIGHT INTO BUFFETT'S THINKING TO CHRONICLE HIS WORK FOR FORTUNE, WRITING AND PROPOSING

SCORES OF STORIES THAT TRACKED HIS MANY ACCOMPLISHMENTS—AND ALSO HIS OCCASIONAL MISTAKES. NOW LOOMIS HAS COLLECTED AND UPDATED THE BEST BUFFETT ARTICLES FORTUNE PUBLISHED BETWEEN 1966 AND 2012, INCLUDING THIRTEEN COVER STORIES AND A DOZEN PIECES AUTHORED BY BUFFETT HIMSELF. LOOMIS HAS PROVIDED COMMENTARY ABOUT EACH MAJOR ARTICLE THAT SUPPLIES CONTEXT AND HER OWN INFORMED POINT OF VIEW. READERS WILL GAIN FRESH INSIGHTS INTO BUFFETT'S INVESTMENT STRATEGIES AND HIS THINKING ON MANAGEMENT, PHILANTHROPY, PUBLIC POLICY, AND EVEN PARENTING. SOME OF THE HIGHLIGHTS INCLUDE: THE 1966 A. W. JONES STORY IN WHICH FORTUNE FIRST MENTIONED BUFFETT. THE FIRST PIECE BUFFETT WROTE FOR THE MAGAZINE, 1977'S "HOW INFLATION SWINDLES THE EQUITY INVESTOR." ANDREW TOBIAS'S 1983 ARTICLE "LETTERS FROM CHAIRMAN BUFFETT," THE FIRST REVIEW OF HIS BERKSHIRE HATHAWAY SHAREHOLDER LETTERS. BUFFETT'S STUNNINGLY PRESICENT 2003 PIECE ABOUT DERIVATIVES, "AVOIDING A MEGA-CATASTROPHE." HIS UNCONVENTIONAL THOUGHTS ON INHERITANCE AND PHILANTHROPY, INCLUDING HIS INTENTION TO LEAVE HIS KIDS "ENOUGH MONEY SO THEY WOULD FEEL THEY COULD DO ANYTHING, BUT NOT SO MUCH THAT THEY COULD DO NOTHING." BILL GATES'S 1996 ARTICLE DESCRIBING HIS EARLY IMPRESSIONS OF BUFFETT AS THEY

STRUCK UP THEIR CLOSE FRIENDSHIP. SCORES OF BUFFETT BOOKS HAVE BEEN WRITTEN, BUT NONE CAN CLAIM THIS WORK'S COMBINATION OF TRUST BETWEEN TWO FRIENDS, THE WRITER'S DEEP UNDERSTANDING OF BUFFETT'S WORLD, AND A VERY LONG-TERM PERSPECTIVE.

*LIFE IS WHAT YOU MAKE IT* - PETER BUFFETT 2011-05-03

FROM COMPOSER, MUSICIAN, AND PHILANTHROPIST PETER BUFFETT COMES A WARM, WISE, AND INSPIRATIONAL BOOK THAT ASKS, WHICH WILL YOU CHOOSE: THE PATH OF LEAST RESISTANCE OR THE PATH OF POTENTIALLY GREATEST SATISFACTION? YOU MAY THINK THAT WITH A LAST NAME LIKE HIS, BUFFETT HAS ENJOYED A LIFE OF ENDLESS PRIVILEGE. BUT THE SON OF BILLIONAIRE INVESTOR WARREN BUFFETT SAYS THAT THE ONLY REAL INHERITANCE HANDED DOWN FROM HIS PARENTS WAS A PHILOSOPHY: FORGE YOUR OWN PATH IN LIFE. IT IS A CREED THAT HAS ALLOWED HIM TO FOLLOW HIS OWN PASSIONS, ESTABLISH HIS OWN IDENTITY, AND REAP HIS OWN SUCCESSSES. IN *LIFE IS WHAT YOU MAKE IT*, BUFFETT EXPOUNDS ON THE STRONG SET OF VALUES GIVEN TO HIM BY HIS TRUSTING AND BROADMINDED MOTHER, HIS INDUSTRIOUS AND TALENTED FATHER, AND THE MANY LIFE TEACHERS HE HAS MET ALONG THE WAY. TODAY'S SOCIETY, BUFFETT POSITS, HAS BEGUN TO REPLACE A WORK ETHIC, RELISHING WHAT YOU DO, WITH A WEALTH ETHIC, HONORING THE PAYOFF

INSTEAD OF THE PROCESS. WE CONFUSE PRIVILEGE WITH MATERIAL ACCUMULATION, CHARACTER WITH EXTERNAL VALIDATION. YET, BY FOCUSING MORE ON SUBSTANCE AND LESS ON REWARD, WE CAN OPEN DOORS OF OPPORTUNITY AND STRIVE TOWARD A GREATER SENSE OF FULFILLMENT. IN CLEAR AND CONCISE TERMS, BUFFETT REVEALS A GREAT TRUTH: LIFE IS RANDOM, NEITHER FAIR NOR UNFAIR. FROM THERE IT BECOMES EASY TO RECOGNIZE THE EQUAL DIGNITY AND VALUE OF EVERY HUMAN LIFE—OUR CIRCUMSTANCES MAY VARY BUT OUR ESSENCES DO NOT. WE SEE THAT OUR JOURNEY IN LIFE RARELY FOLLOWS A STRAIGHT LINE BUT IS OFTEN MET WITH FALSE STARTS, CRISES, AND BLUNDERS. HOW WE PUSH THROUGH AND PERSEVERE IN THESE CHALLENGING MOMENTS IS WHERE WE BEGIN TO CREATE THE LIFE OF OUR DREAMS—FROM DISCOVERING OUR VOCATIONS TO LIVING OUT OUR BLISS TO GIVING BACK TO OTHERS. PERSONAL AND REVEALING, INSTRUCTIVE AND INTUITIVE, *LIFE IS WHAT YOU MAKE IT* IS ABOUT TRANSCENDING YOUR CIRCUMSTANCES, TAKING UP THE REINS OF YOUR DESTINY, AND LIVING YOUR LIFE TO THE FULLEST.

**ENERGY TRANSITIONS: GLOBAL AND NATIONAL PERSPECTIVES, 2ND EDITION**

- VACLAV SMIL 2016-12-05

THIS BOOK PROVIDES A DETAILED, GLOBAL EXAMINATION OF ENERGY TRANSITIONS, SUPPLYING A LONG-TERM HISTORICAL PERSPECTIVE, AN UP-TO-DATE ASSESSMENT OF RECENT AND

NEAR-TERM ADVANCES IN ENERGY PRODUCTION TECHNOLOGY AND IMPLEMENTATION, AND AN EXPLANATION OF WHY EFFORTS TO LIMIT GLOBAL WARMING AND TO SHIFT AWAY FROM FOSSIL FUELS HAVE BEEN GRADUAL. • PRESENTS HISTORICAL COVERAGE OF ENERGY PRODUCTION, ENERGY USE, AND KEY TECHNICAL AND ECONOMIC FACTORS THAT AFFECT THE CURRENTLY UNFOLDING TRANSITIONS • OFFERS INSIGHTFUL ANALYSIS OF ENERGY TRANSITIONS ON BOTH THE NATIONAL AND GLOBAL SCALE TO EXPLAIN THE POSSIBILITIES AND LIMITATIONS OF THE PROCESS • SUPPLIES A CRITICAL APPRAISAL OF NEW RENEWABLE CONVERSIONS THAT MAKES CLEAR THEIR ADVANTAGES AND POTENTIAL BENEFITS AS WELL AS THEIR INHERENT UNAVOIDABLE LIMITATIONS • ENABLES GENERAL READERS TO GAIN AN IN-DEPTH UNDERSTANDING OF ENERGY TRANSITIONS FROM THE PERSPECTIVE OF AN ACCLAIMED SCIENTIST WITH EXPERTISE IN THE FIELDS OF ENERGY, ENVIRONMENTAL AND POPULATION CHANGE, TECHNICAL INNOVATION, AND PUBLIC POLICY

**SUMMARY OF MAKING THE MODERN WORLD – [REVIEW KEYPOINTS AND TAKE-AWAYS]** - PENZEN SUMMARIES 2022-11-28

THE SUMMARY OF MAKING THE MODERN WORLD – MATERIALS AND DEMATERIALIZATION PRESENTED HERE INCLUDE A SHORT REVIEW OF THE BOOK AT THE START FOLLOWED BY QUICK OVERVIEW OF MAIN POINTS AND A LIST OF IMPORTANT TAKE-AWAYS AT THE

END OF THE SUMMARY. THE SUMMARY OF THE BOOK "MAKING THE MODERN WORLD" WAS PUBLISHED IN 2014 AND IS A GUIDE TO THE MATERIAL CONSUMPTION OF HUMANITY THROUGHOUT HISTORY AND INTO THE FUTURE. THESE IDEAS EXPLAIN THE MOST IMPORTANT MATERIAL CATEGORIES OF OUR TIME AND THE WAYS IN WHICH WE CAN SUCCESSFULLY MANAGE THEM MOVING FORWARD. MAKING THE MODERN WORLD SUMMARY INCLUDES THE KEY POINTS AND IMPORTANT TAKEAWAYS FROM THE BOOK MAKING THE MODERN WORLD BY VAACLAV SMIL. DISCLAIMER:

1. THIS SUMMARY IS MEANT TO PREVIEW AND NOT TO SUBSTITUTE THE ORIGINAL BOOK. 2. WE RECOMMEND, FOR IN-DEPTH STUDY PURCHASE THE EXCELLENT ORIGINAL BOOK. 3. IN THIS SUMMARY KEY POINTS ARE REWRITTEN AND RECREATED AND NO PART/TEXT IS DIRECTLY TAKEN OR COPIED FROM ORIGINAL BOOK. 4. IF ORIGINAL AUTHOR/PUBLISHER WANTS US TO REMOVE THIS SUMMARY, PLEASE CONTACT US AT [SUPPORT@TMOCKTIME.COM](mailto:SUPPORT@TMOCKTIME.COM). HOW THE WORLD REALLY WORKS - VAACLAV SMIL 2022-05-10 INSTANT NEW YORK TIMES BESTSELLER "A NEW MASTERPIECE FROM ONE OF MY FAVORITE AUTHORS... [HOW THE WORLD REALLY WORKS] IS A COMPELLING AND HIGHLY READABLE BOOK THAT LEAVES READERS WITH THE FUNDAMENTAL GROUNDING NEEDED TO HELP SOLVE THE WORLD'S TOUGHEST CHALLENGES."—BILL GATES

“PROVOCATIVE BUT PERCEPTIVE . . . YOU CAN AGREE OR DISAGREE WITH SMIL—ACCEPT OR DOUBT HIS ‘JUST THE FACTS’ POSTURE—BUT YOU PROBABLY SHOULDN’T IGNORE HIM.”—THE WASHINGTON POST AN ESSENTIAL ANALYSIS OF THE MODERN SCIENCE AND TECHNOLOGY THAT MAKES OUR TWENTY-FIRST CENTURY LIVES POSSIBLE—A SCIENTIST’S INVESTIGATION INTO WHAT SCIENCE REALLY DOES, AND DOES NOT, ACCOMPLISH. WE HAVE NEVER HAD SO MUCH INFORMATION AT OUR FINGERTIPS AND YET MOST OF US DON’T KNOW HOW THE WORLD REALLY WORKS. THIS BOOK EXPLAINS SEVEN OF THE MOST FUNDAMENTAL REALITIES GOVERNING OUR SURVIVAL AND PROSPERITY. FROM ENERGY AND FOOD PRODUCTION, THROUGH OUR MATERIAL WORLD AND ITS GLOBALIZATION, TO RISKS, OUR ENVIRONMENT AND ITS FUTURE, HOW THE WORLD REALLY WORKS OFFERS A MUCH-NEEDED REALITY CHECK—BECAUSE BEFORE WE CAN TACKLE PROBLEMS EFFECTIVELY, WE MUST UNDERSTAND THE FACTS. IN THIS AMBITIOUS AND THOUGHT-PROVOKING BOOK WE SEE, FOR EXAMPLE, THAT GLOBALIZATION ISN’T INEVITABLE—THE FOOLISHNESS OF ALLOWING 70 PER CENT OF THE WORLD’S RUBBER GLOVES TO BE MADE IN JUST ONE FACTORY BECAME GLARINGLY OBVIOUS IN 2020—AND THAT OUR SOCIETIES HAVE BEEN STEADILY INCREASING THEIR DEPENDENCE ON FOSSIL FUELS, SUCH THAT ANY PROMISES OF DECARBONIZATION BY 2050 ARE A

FAIRY TALE. FOR EXAMPLE, EACH GREENHOUSE-GROWN SUPERMARKET-BUGHT TOMATO HAS THE EQUIVALENT OF FIVE TABLESPOONS OF DIESEL EMBEDDED IN ITS PRODUCTION, AND WE HAVE NO WAY OF PRODUCING STEEL, CEMENT OR PLASTICS AT REQUIRED SCALES WITHOUT HUGE CARBON EMISSIONS. ULTIMATELY, SMIL ANSWERS THE MOST PROFOUND QUESTION OF OUR AGE: ARE WE IRREVOCABLY DOOMED OR IS A BRIGHTER UTOPIA AHEAD? COMPELLING, DATA-RICH AND REVISIONIST, THIS WONDERFULLY BROAD, INTERDISCIPLINARY GUIDE FINDS FAULTS WITH BOTH EXTREMES. LOOKING AT THE WORLD THROUGH THIS QUANTITATIVE LENS REVEALS HIDDEN TRUTHS THAT CHANGE THE WAY WE SEE OUR PAST, PRESENT AND UNCERTAIN FUTURE.

**100% CLEAN, RENEWABLE ENERGY AND STORAGE FOR EVERYTHING** - MARK Z. JACOBSON 2020-10  
TEXTBOOK ON THE SCIENCE AND METHODS BEHIND A GLOBAL TRANSITION TO 100% CLEAN, RENEWABLE ENERGY FOR SCIENCE, ENGINEERING, AND SOCIAL SCIENCE STUDENTS.

**GRAPHIC DESIGN THEORY** - HELEN ARMSTRONG 2012-08-10  
GRAPHIC DESIGN THEORY IS ORGANIZED IN THREE SECTIONS: “CREATING THE FIELD” TRACES THE EVOLUTION OF GRAPHIC DESIGN OVER THE COURSE OF THE EARLY 1900s, INCLUDING INFLUENTIAL AVANT-GARDE IDEAS OF FUTURISM, CONSTRUCTIVISM, AND THE BAUHAUS; “BUILDING ON SUCCESS” COVERS THE MID- TO LATE TWENTIETH

CENTURY AND CONSIDERS THE INTERNATIONAL STYLE, MODERNISM, AND POSTMODERNISM; AND "MAPPING THE FUTURE" OPENS AT THE END OF THE LAST CENTURY AND INCLUDES CURRENT DISCUSSIONS ON LEGIBILITY, SOCIAL RESPONSIBILITY, AND NEW MEDIA. STRIKING COLOR IMAGES ILLUSTRATE EACH OF THE MOVEMENTS DISCUSSED AND DEMONSTRATE THE ONGOING RELATIONSHIP BETWEEN THEORY AND PRACTICE. A BRIEF COMMENTARY PREFACES EACH TEXT, PROVIDING A CULTURAL AND HISTORICAL FRAMEWORK THROUGH WHICH THE WORK CAN BE EVALUATED. AUTHORS INCLUDE SUCH INFLUENTIAL DESIGNERS AS HERBERT BAYER, L' SZLO MOHOLY-NAGY, KARL GERSTNER, KATHERINE MCCOY, MICHAEL ROCK, LEV MANOVICH, ELLEN LUPTON, AND LORRAINE WILD. ADDITIONAL FEATURES INCLUDE A TIMELINE, GLOSSARY, AND BIBLIOGRAPHY FOR FURTHER READING. A MUST-HAVE SURVEY FOR GRADUATE AND UNDERGRADUATE COURSES IN DESIGN HISTORY, THEORY, AND CONTEMPORARY ISSUES, GRAPHIC DESIGN THEORY INVITES DESIGNERS AND INTERESTED READERS OF ALL LEVELS TO PLUNGE INTO THE WORLD OF DESIGN DISCOURSE.

*WHY AMERICA IS NOT A NEW ROME* -  
VACLAV SMIL 2010-01-29  
AN INVESTIGATION OF THE AMERICA-  
ROME ANALOGY THAT GOES DEEPER  
THAN THE FACILE COMPARISONS MADE  
ON TALK SHOWS AND IN GLOSSY  
MAGAZINE ARTICLES. AMERICA'S  
POST-COLD WAR STRATEGIC

DOMINANCE AND ITS PRE-RECESSION AFFLUENCE INSPIRED PUNDITS TO MAKE CELEBRATORY COMPARISONS TO ANCIENT ROME AT ITS MOST POWERFUL. NOW, WITH AMERICA NO LONGER PERCEIVED AS INVULNERABLE, ENGAGED IN PROTRACTED FIGHTING IN IRAQ AND AFGHANISTAN, AND SUFFERING THE WORST ECONOMIC DOWNTURN SINCE THE GREAT DEPRESSION, COMPARISONS ARE TO THE BLOATED, DECADENT, INEFFECTUAL LATER EMPIRE. IN *WHY AMERICA IS NOT A NEW ROME*, VACLAV SMIL LOOKS AT THESE COMPARISONS IN DETAIL, GOING DEEPER THAN THE FACILE ANALOGY-MAKING OF TALK SHOWS AND GLOSSY MAGAZINE ARTICLES. HE FINDS PROFOUND DIFFERENCES. SMIL, A SCIENTIST AND A LIFELONG STUDENT OF ROMAN HISTORY, FOCUSES ON SEVERAL FUNDAMENTAL CONCERNS: THE VERY MEANING OF EMPIRE; THE ACTUAL EXTENT AND NATURE OF ROMAN AND AMERICAN POWER; THE ROLE OF KNOWLEDGE AND INNOVATION; AND DEMOGRAPHIC AND ECONOMIC BASICS—POPULATION DYNAMICS, ILLNESS, DEATH, WEALTH, AND MISERY. AMERICA IS NOT A LATTER-DAY ROME, SMIL FINDS, AND WE NEED TO UNDERSTAND THIS IN ORDER TO LOOK AHEAD WITHOUT THE BURDEN OF COUNTERPRODUCTIVE ANALOGIES. SUPERFICIAL SIMILARITIES DO NOT IMPLY LONG-TERM POLITICAL, DEMOGRAPHIC, OR ECONOMIC OUTCOMES IDENTICAL TO ROME'S.

**A HANDBOOK OF INDUSTRIAL ECOLOGY**  
- ROBERT U. AYRES 2002-01-01  
'THE EDITORS OF THIS HANDBOOK HAVE

BROUGHT TOGETHER 58 OF THE WORLD'S GREATEST ENVIRONMENTAL SYSTEMS EXPERTS. THESE PROFESSIONALS HAVE, IN 46 SPECIFIC TOPIC HEADINGS, DIVIDED INTO SIX MAJOR SECTIONS, PROVIDED VERY INSIGHTFUL INFORMATION AND GUIDANCE AS TO WHAT INDUSTRIAL ECOLOGY ENTAILS, HOW IT CAN BE IMPLEMENTED, AND ITS BENEFITS . . . A VERY VALUABLE TOOL . . . THIS BOOK PROVIDES ESSENTIAL INFORMATION TO MID- AND TOP-LEVEL MANAGEMENT THAT CAN ENABLE INDUSTRY TO MAKE MORE PRUDENT BUSINESS DECISIONS REGARDING THE MANUFACTURING OF ITS PRODUCTS.' - ROBERT JOHN KLANCKO, ENVIRONMENTAL PRACTICE INDUSTRIAL ECOLOGY IS COMING OF AGE AND THIS SUPERB BOOK BRINGS TOGETHER LEADING SCHOLARS TO PRESENT A STATE-OF-THE-ART OVERVIEWS OF THE SUBJECT.

**ALL THAT IS SOLID MELTS INTO AIR - MARSHALL BERMAN 1983**

THE EXPERIENCE OF MODERNIZATION -- THE DIZZYING SOCIAL CHANGES THAT SWEEPED MILLIONS OF PEOPLE INTO THE CAPITALIST WORLD -- AND MODERNISM IN ART, LITERATURE AND ARCHITECTURE ARE BRILLIANTLY INTEGRATED IN THIS ACCOUNT.

**POWER DENSITY - VAACLAV SMIL 2015-06-05**

THE FIRST SYSTEMATIC, QUANTITATIVE APPRAISAL OF POWER DENSITY, OFFERING DETAILED REVIEWS OF POWER DENSITIES OF RENEWABLE ENERGY FLOWS, FOSSIL FUELS, AND ALL COMMON ENERGY USES. "THERE'S NO

AUTHOR WHOSE BOOKS I LOOK FORWARD TO MORE THAN VAACLAV SMIL." —BILL GATES IN THIS BOOK, VAACLAV SMIL ARGUES THAT POWER DENSITY IS A KEY DETERMINANT OF THE NATURE AND DYNAMICS OF ENERGY SYSTEMS. ANY UNDERSTANDING OF COMPLEX ENERGY SYSTEMS MUST RELY ON QUANTITATIVE MEASURES OF MANY FUNDAMENTAL VARIABLES. POWER DENSITY—THE RATE OF ENERGY FLUX PER UNIT OF AREA—IS AN IMPORTANT BUT LARGELY OVERLOOKED MEASURE. SMIL PROVIDES THE FIRST SYSTEMATIC, QUANTITATIVE APPRAISAL OF POWER DENSITY, OFFERING DETAILED REVIEWS OF THE POWER DENSITIES OF RENEWABLE ENERGY FLOWS, FOSSIL FUELS, THERMAL ELECTRICITY GENERATION, AND ALL COMMON ENERGY USES. SMIL SHOWS THAT CAREFUL QUANTIFICATION, CRITICAL APPRAISALS, AND REVEALING COMPARISONS OF POWER DENSITIES MAKE POSSIBLE A DEEPER UNDERSTANDING OF THE WAYS WE HARNESS, CONVERT, AND USE ENERGIES. CONSCIENTIOUS ASSESSMENT OF POWER DENSITIES, HE ARGUES, PROVES PARTICULARLY REVEALING WHEN CONTRASTING THE FOSSIL FUEL-BASED ENERGY SYSTEM WITH RENEWABLE ENERGY CONVERSIONS. SMIL EXPLAINS THAT MODERN CIVILIZATION HAS EVOLVED AS A DIRECT EXPRESSION OF THE HIGH POWER DENSITIES OF FOSSIL FUEL EXTRACTION. HE ARGUES THAT OUR INEVITABLE (AND DESIRABLE) MOVE TO NEW ENERGY ARRANGEMENTS INVOLVING CONVERSIONS OF LOWER-DENSITY RENEWABLE ENERGY SOURCES



WILL REQUIRE OUR SOCIETY—CURRENTLY DOMINATED BY MEGACITIES AND CONCENTRATED INDUSTRIAL PRODUCTION—TO UNDERGO A PROFOUND SPATIAL RESTRUCTURING OF ITS ENERGY SYSTEM.

*THE LATE AGE OF PRINT* - THEODORE G. STRIPHAS 2011

HERE, THE AUTHOR ASSESSES OUR MODERN BOOK CULTURE BY FOCUSING ON FIVE KEY ELEMENTS INCLUDING THE EXPLOSION OF RETAIL BOOKSTORES LIKE BARNES & NOBLE AND BORDERS, AND THE FORMATION OF THE OPRAH BOOK CLUB.

*MAKING THE MODERN WORLD: MATERIALS AND DEMATERIALIZATION* - VACLAV SMIL 2016-12-04

HOW MUCH FURTHER SHOULD THE AFFLUENT WORLD PUSH ITS MATERIAL CONSUMPTION? DOES RELATIVE DEMATERIALIZATION LEAD TO ABSOLUTE DECLINE IN DEMAND FOR MATERIALS? THESE AND MANY OTHER QUESTIONS ARE DISCUSSED AND ANSWERED IN *MAKING THE MODERN WORLD: MATERIALS AND DEMATERIALIZATION*. OVER THE COURSE OF TIME, THE MODERN WORLD HAS BECOME DEPENDENT ON UNPRECEDENTED FLOWS OF MATERIALS. NOW EVEN THE MOST EFFICIENT PRODUCTION PROCESSES AND THE HIGHEST PRACTICAL RATES OF RECYCLING MAY NOT BE ENOUGH TO RESULT IN DEMATERIALIZATION RATES THAT WOULD BE HIGH ENOUGH TO NEGATE THE RISING DEMAND FOR MATERIALS GENERATED BY CONTINUING POPULATION GROWTH AND RISING STANDARDS OF

LIVING. THIS BOOK EXPLORES THE COSTS OF THIS DEPENDENCE AND THE POTENTIAL FOR SUBSTANTIAL DEMATERIALIZATION OF MODERN ECONOMIES. *MAKING THE MODERN WORLD: MATERIALS AND DEMATERIALIZATION* CONSIDERS THE PRINCIPAL MATERIALS USED THROUGHOUT HISTORY, FROM WOOD AND STONE, THROUGH TO METALS, ALLOYS, PLASTICS AND SILICON, DESCRIBING THEIR EXTRACTION AND PRODUCTION.

*GOD'S JURY* - CULLEN MURPHY 2012  
EXAMINES HOW THE INQUISITION'S SENTIMENTS ARE THRIVING IN TODAY'S WORLD, TRACING THE HISTORY OF ITS LEGACY THROUGH STORIES THAT LEAD TO MODERN INCARNATIONS LIKE VATICAN EDICTS, THE THIRD REICH, AND GUANTANAMO'S DETENTION CAMPS.

*GROWTH* - VACLAV SMIL  
2020-12-08

A SYSTEMATIC INVESTIGATION OF GROWTH IN NATURE AND SOCIETY, FROM TINY ORGANISMS TO THE TRAJECTORIES OF EMPIRES AND CIVILIZATIONS. GROWTH HAS BEEN BOTH AN UNSPOKEN AND AN EXPLICIT AIM OF OUR INDIVIDUAL AND COLLECTIVE STRIVING. IT GOVERNS THE LIVES OF MICROORGANISMS AND GALAXIES; IT SHAPES THE CAPABILITIES OF OUR EXTRAORDINARILY LARGE BRAINS AND THE FORTUNES OF OUR ECONOMIES. GROWTH IS MANIFESTED IN ANNUAL INCREMENTS OF CONTINENTAL CRUST, A RISING GROSS DOMESTIC PRODUCT, A CHILD'S GROWTH CHART,

THE SPREAD OF CANCEROUS CELLS. IN THIS MAGISTERIAL BOOK, VAACLAV SMIL OFFERS SYSTEMATIC INVESTIGATION OF GROWTH IN NATURE AND SOCIETY, FROM TINY ORGANISMS TO THE TRAJECTORIES OF EMPIRES AND CIVILIZATIONS. SMIL TAKES READERS FROM BACTERIAL INVASIONS THROUGH ANIMAL METABOLISMS TO MEGACITIES AND THE GLOBAL ECONOMY. HE BEGINS WITH ORGANISMS WHOSE MATURE SIZES RANGE FROM MICROSCOPIC TO ENORMOUS, LOOKING AT DISEASE-CAUSING MICROBES, THE CULTIVATION OF STAPLE CROPS, AND HUMAN GROWTH FROM INFANCY TO ADULTHOOD. HE EXAMINES THE GROWTH OF ENERGY CONVERSIONS AND MAN-MADE OBJECTS THAT ENABLE ECONOMIC ACTIVITIES—DEVELOPMENTS THAT HAVE BEEN ESSENTIAL TO CIVILIZATION. FINALLY, HE LOOKS AT GROWTH IN COMPLEX SYSTEMS, BEGINNING WITH THE GROWTH OF HUMAN POPULATIONS AND PROCEEDING TO THE GROWTH OF CITIES. HE CONSIDERS THE CHALLENGES OF TRACING THE GROWTH OF EMPIRES AND CIVILIZATIONS, EXPLAINING THAT WE CAN CHART THE GROWTH OF ORGANISMS ACROSS INDIVIDUAL AND EVOLUTIONARY TIME, BUT THAT THE PROGRESS OF SOCIETIES AND ECONOMIES, NOT SO LINEAR, ENCOMPASSES BOTH DECLINE AND RENEWAL. THE TRAJECTORY OF MODERN CIVILIZATION, DRIVEN BY COMPETING IMPERATIVES OF MATERIAL GROWTH AND BIOSPHERIC LIMITS, SMIL TELLS US, REMAINS UNCERTAIN.

### **THE KID-FRIENDLY ADHD & AUTISM**

### **COOKBOOK, UPDATED AND REVISED -**

PAMELA COMPART 2012-04

A GUIDE TO COOKING FOR CHILDREN WITH ADHD AND AUTISM FEATURES RECIPES FOR GLUTEN-, CASEIN-, AND MILK-FREE MEALS AND PROVIDES INFORMATION ON FOOD SENSITIVITIES VERSUS FOOD ALLERGIES, GETTING RID OF JUNK FOOD, AND PLEASING PICKY EATERS.

### **GRAND TRANSITIONS - VAACLAV SMIL 2021-02-12**

WHAT MAKES THE MODERN WORLD WORK? THE ANSWER TO THIS DECEPTIVELY SIMPLE QUESTION LIES IN FOUR "GRAND TRANSITIONS" OF CIVILIZATION--IN POPULATIONS, AGRICULTURE, ENERGY, AND ECONOMICS--WHICH HAVE TRANSFORMED THE WAY WE LIVE. SOCIETIES THAT HAVE UNDERGONE ALL FOUR TRANSITIONS EMERGE INTO AN ERA OF RADICALLY DIFFERENT POPULATION DYNAMICS, FOOD SURPLUSES (AND WASTE), ABUNDANT ENERGY USE, AND EXPANDING ECONOMIC OPPORTUNITIES. SIMULTANEOUSLY, IN OTHER PARTS OF THE WORLD, HUNDREDS OF MILLIONS REMAIN LARGELY UNTOUCHED BY THESE DEVELOPMENTS. THROUGH ERUDITE STORYTELLING, VAACLAV SMIL INVESTIGATES THE FASCINATING AND COMPLEX INTERACTIONS OF THESE TRANSITIONS. HE ARGUES THAT THE MORAL IMPERATIVE TO SHARE MODERNITY'S BENEFITS HAS BECOME MORE ACUTE WITH INCREASING ECONOMIC INEQUALITY, BUT ADDRESSING THIS IMBALANCE WOULD MAKE IT EXCEEDINGLY DIFFICULT TO

IMPLEMENT THE CHANGES NECESSARY FOR THE LONG-TERM PRESERVATION OF THE ENVIRONMENT. THUS, MANAGING THE FIFTH TRANSITION--ENVIRONMENTAL CHANGES FROM NATURAL-RESOURCE DEPLETION, BIODIVERSITY LOSS, AND GLOBAL WARMING--WILL DETERMINE THE SUCCESS OR EVENTUAL FAILURE OF THE GRAND TRANSITIONS THAT HAVE MADE THE WORLD WE LIVE IN TODAY.

MAKING THE MODERN WORLD -

VACLAV SMIL 2013-12-16

HOW MUCH FURTHER SHOULD THE AFFLUENT WORLD PUSH ITS MATERIAL CONSUMPTION? DOES RELATIVE DEMATERIALIZATION LEAD TO ABSOLUTE DECLINE IN DEMAND FOR MATERIALS? THESE AND MANY OTHER QUESTIONS ARE DISCUSSED AND ANSWERED IN MAKING THE MODERN WORLD: MATERIALS AND DEMATERIALIZATION. OVER THE COURSE OF TIME, THE MODERN WORLD HAS BECOME DEPENDENT ON UNPRECEDENTED FLOWS OF MATERIALS. NOW EVEN THE MOST EFFICIENT PRODUCTION PROCESSES AND THE HIGHEST PRACTICAL RATES OF RECYCLING MAY NOT BE ENOUGH TO RESULT IN DEMATERIALIZATION RATES THAT WOULD BE HIGH ENOUGH TO NEGATE THE RISING DEMAND FOR MATERIALS GENERATED BY CONTINUING POPULATION GROWTH AND RISING STANDARDS OF LIVING. THIS BOOK EXPLORES THE COSTS OF THIS DEPENDENCE AND THE POTENTIAL FOR SUBSTANTIAL DEMATERIALIZATION OF MODERN ECONOMIES. MAKING THE MODERN WORLD: MATERIALS AND

DEMATERIALIZATION CONSIDERS THE PRINCIPAL MATERIALS USED THROUGHOUT HISTORY, FROM WOOD AND STONE, THROUGH TO METALS, ALLOYS, PLASTICS AND SILICON, DESCRIBING THEIR EXTRACTION AND PRODUCTION AS WELL AS THEIR DOMINANT APPLICATIONS. THE EVOLVING PRODUCTIVITIES OF MATERIAL EXTRACTION, PROCESSING, SYNTHESIS, FINISHING AND DISTRIBUTION, AND THE ENERGY COSTS AND ENVIRONMENTAL IMPACT OF RISING MATERIAL CONSUMPTION ARE EXAMINED IN DETAIL. THE BOOK CONCLUDES WITH AN OUTLOOK FOR THE FUTURE, DISCUSSING THE PROSPECTS FOR DEMATERIALIZATION AND POTENTIAL CONSTRAINTS ON MATERIALS. THIS INTERDISCIPLINARY TEXT PROVIDES USEFUL PERSPECTIVES FOR READERS WITH BACKGROUNDS INCLUDING RESOURCE ECONOMICS, ENVIRONMENTAL STUDIES, ENERGY ANALYSIS, MINERAL GEOLOGY, INDUSTRIAL ORGANIZATION, MANUFACTURING AND MATERIAL SCIENCE.

*MATERIALS MATTER -* KEN GEISER  
2001-05-25

THE PRODUCTS WE PURCHASE AND USE ARE ASSEMBLED FROM A WIDE RANGE OF NATURALLY OCCURRING AND MANUFACTURED MATERIALS. BUT TOO OFTEN WE CREATE HAZARDS FOR THE ECOSYSTEM AND HUMAN HEALTH AS WE MINE, PROCESS, DISTRIBUTE, USE, AND DISPOSE OF THESE MATERIALS. UNTIL RECENTLY, MOST RESEARCH HAS FOCUSED ON THE WASTE END OF MATERIAL CYCLES. THIS BOOK ARGUES

THAT THE SAFEST AND LEAST COSTLY POINT AT WHICH TO AVOID ENVIRONMENTAL DAMAGE IS WHEN MATERIALS ARE FIRST DESIGNED AND SELECTED FOR USE IN INDUSTRIAL PRODUCTION. MATERIALS MATTER PRESENTS CONVINCING EVIDENCE THAT WE CAN USE FEWER MATERIALS AND ELIMINATE THE USE OF MANY TOXIC CHEMICALS BY FOCUSING DIRECTLY ON MATERIAL (CHEMICAL) USE WHEN PRODUCTS ARE DESIGNED. IT ALSO SHOWS HOW MANUFACTURERS CAN SAVE MONEY BY INCREASING THE EFFECTIVENESS OF MATERIAL USE AND REDUCING THE USE OF TOXIC CHEMICALS. IT ADVOCATES NEW DIRECTIONS FOR THE MATERIAL SCIENCES AND GOVERNMENT POLICIES ON MATERIALS. AND IT ARGUES THAT MANUFACTURERS, SUPPLIERS, AND

CUSTOMERS NEED TO SET MORE SOCIALLY RESPONSIBLE POLICIES FOR PRODUCTS AND SERVICES TO ACHIEVE HIGHER ENVIRONMENTAL AND HEALTH GOALS.

- LEON

F. HESSER 2006  
THE MAN WHO FED THE WORLD PROVIDES A LOVING AND RESPECTFUL PORTRAIT OF ONE OF AMERICA'S GREATEST HEROES. NOBEL PEACE PRIZE RECIPIENT FOR AVERTING HUNGER AND FAMINE, DR. NORMAN BORLANG IS CREDITED WITH SAVING HUNDREDS OF MILLIONS OF LIVES FROM STARVATION- MORE THAN ANY OTHER PERSON IN HISTORY? LOVED BY MILLIONS AROUND THE WORLD, DR. BORLANG IS RECOGNIZED AS ONE OF THE MOST INFLUENTIAL MEN OF THE TWENTIETH CENTURY.

*THE MAN WHO FED THE WORLD*