Shock

Granular forms of common materials such as metals and ceramics, sands and soils, porous energetic materials (explosives, reactive mixtures), and foams exhibit interesting behaviors due to their heterogeneity and critical length scale, typically commensurate with the grain or pore size. Under extreme conditions of impact, granular and porous materials display highly localized phenomena such as fracture, inelastic deformation, and the closure of voids, which in turn strongly influence the bulk response. Due to the complex nature of these interactions and the short time scales involved, computational methods have proven to be powerful tools to investigate these

phenomena. Thus, the coupled use of experiment, theory, and simulation is critical to advancing our understanding of shock processes in initially porous and granular materials. This is a comprehensive volume on granular and porous materials for researchers working in the area of shock and impact physics. The book is divided into three sections, where the first presents the fundamentals of shock physics as it pertains to the equation of state, compaction, and strength properties of porous materials. Building on these fundamentals, the next section examines several applications where dynamic processes involving initially porous materials are prevalent, focusing on the areas of penetration,

planetary impact, and reactive munitions. The final section provides a look at emerging areas in the field, where the expansion of experimental and computational capabilities are opening the door for new opportunities in the areas of advanced light sources, molecular dynamics modeling, and additively manufactured porous structures. By intermixing experiment, theory, and simulation throughout, this book serves as an excellent, up-to-date desk reference for those in the field of shock compression science of porous and granular materials.

The book contains 12 chapters written by well-known shock wave researchers from seven different countries. Each researcher provides a brief description of his main research interests and

results, thereby providing the readers with an excellent view of shock wave research conducted in the past fifty years. It also provides hints as to what still needs further investigation. It will be an excellent guide for young researchers entering the field of shock wave phenomena. Among the described investigations are the following topics: Blast wave interaction with a body when the body is in the area of interference of two blast waves moving in different directions; equation of state for water based on the shock Hugoniot data; Mach waves occurring over a backward facing edge in supersonic flow; shock waves in dusty gas; shock wave interaction with various bodies; three shock interactions.

The shock reflection coefficient, R sub

w, is defined here as the ratio of pressure drop across a reflected disturbance from a shock wave to that across the incident disturbance wave (which is generated downstream of the shock). The treatment of shock reflection coefficients in the work of previous investigators is reviewed briefly. A derivation is given of a general expression for R sub w in terms of shock curvature for nonequilibrium axisymmetric flow. Sample computations show the effects of nonequilibrium flow and three-dimensionality on the behavior of R sub w. It is shown that R sub w can become infinite in these situations, although for two-dimensional ideal gas flow its magnitude is always finite and usually very small.

Examines an international shipboard educational program and seeks to identify specific insights resulting from informal extracurricular contact between students and host nationals in the context of culture shock experiences.

Shipboard Shock and Navy Devices for Its Simulation

In Shock

Its Causes and Its Prevention

Shock and Awe

Present Shock

Jesus Shock

This book provides current, comprehensive, and clear explanations of the physics behind medical and biomedical applications of shock waves. Extracorporeal shock wave lithotripsy is one of the greatest medical advances of our time, and its techniques and clinical

devices are continuously evolving. Further research continues to improve the understanding of calculi fragmentation and tissue-damaging mechanisms. Shock waves are also used in orthopedics and traumatology. Possible applications in oncology, cardiology, dentistry, gene therapy, cell transfection, transformation of fungi and bacteria, as well as the inactivation of microorganisms are promising approaches for clinical treatment, industrial applications and research. Medical and Biomedical Applications of Shock Waves is useful as a guide for students, technicians and researchers working in universities and laboratories. Chemists, biologists, physicians and veterinarians, involved in research or clinical practice will find useful advice, but also engineers and physicists may benefit from the

overview of current research endeavors and future directions. Furthermore, it may also serve to direct manufacturers towards the design of more efficient and safer clinical, industrial and laboratory equipment.

Shock tube test time limitation due to the premature arrival of the contact surface is analytically investigated for wholly turbulent wall boundary layers. The results are compared with those for wholly laminar wall boundary layers. Working curves are presented for more accurate estimates of test time in specific cases. (Author) -- NTRL website.

This book highlights how the properties and structure of materials are affected by dynamic high pressures generated by explosions, projectile impacts, laser compression, electric discharge or ball milling. Starting with the basics of

shock-wave physics and an outline of experimental techniques, it then surveys dynamic compressibility and equations of state of various substances, phase transitions and syntheses of novel compounds under shock. It covers various industrial applications including hardening of metals and grinding (fragmentation) of solids, saturation of solids with defects for use as catalysts, production of superhard materials (synthetic diamond, BN (boron nitride)) and nanomaterials, especially nanodiamond, and discusses state-of-the-art techniques such as combining dynamic and static compression to obtain monolithic materials.

Shock PointPenguin

Shock Focussing Effect in Medical Science and Sonoluminescence

30th International Symposium on

Shock Waves 2
Astounding Artwork from the Video Nasty Era
Shock and Materials
Medical and Biomedical Applications of Shock Waves
Shock

'It's rare for a book to make you see the world differently, but this ... does exactly that on almost every page' Guardian Standard histories of technology give tired accounts of the usual inventions, inventors, and dates, framing technology as the inevitable march of progress. They split history into ages - electrification, motorisation, and

computerisation - and rarely ask whether anyone bothered to use these inventions at the time. Shock of the Old is not one of those histories. I Letters exist alongside emails and outlasted telegrams; we still make physical books and magazines despite the rise of the Internet - a belated rise considering that the technologies that made it possible was invented in 1965, and bookshops thrive despite Amazon. More horses were used in the Second World War than any other war in history and

propeller planes continue to take off from the same runways as jets. Shock of the Old forces us to reassess the significance of old inventions such as corrugated iron and sewing machines and rethink the relative importance we place on the invention of something new, its application, and its widespread adoption. It challenges the idea that we live in an era of ever increasing change and, interweaving political, economic and cultural history, teaches us to think critically about technology.

One of the main goals of investigations of shock-wave phenomena in condensed matter is to develop methods for predicting effects of explosions, high-velocity collisions, and other kinds of intense dynamic loading of materials and structures. Based on the results of international research conducted over the past 30 years, this book is addressed not only to experts in shock-wave physics, but also to interested representatives from adjacent fields of activity and to students who

seek an introduction to the current issues. With that goal in mind, the book opens with a brief account of the theoretical background and a short description of experimental techniques. The authors then progress to a systematic treatment of special topics, some of which have not been fully addressed in the literature to date.

This interdisciplinary collection brings together the fundamental research in shock focusing and sonoluminescence. The authors report on their

studies on shock focusing and related bubble dynamics, as well as their applications in medical science.

My intent in writing this book is to present an introduction to the thermo- chanical theory required to conduct research and pursue applications of shock physics in solid materials. Emphasis is on the range of moderate compression that can be produced by high-velocity impact or detonation of chemical exp- sives and in which elastoplastic responses are observed and

simple equations of state are applicable. In the interest of simplicity, the presentation is restricted to plane waves producing uniaxial deformation. Although applications often - volve complex multidimensional deformation fields it is necessary to begin with the simpler case. This is also the most important case because it is the usual setting of experimental research. The presentation is also restricted to theories of material response that are simple enough to permit illustrative problems to be

solved with minimal recourse to numerical analysis. The discussions are set in the context of established continuum-mechanical principles. I have endeavored to define the quantities encountered with some care and to provide equations in several convenient forms and in a way that lends itself to easy reference. Thermodynamic analysis plays an important role in continuum mechanics, and I have included a presentation of aspects of this subject that are particularly relevant to

shock physics. The notation adopted is that conventional in expositions of modern continuum mechanics, insofar as possible, and variables are explained as they are encountered. Those experienced in shock physics may find some of the notation unconventional.
A Publication of the Shock and Vibration Information Center, Naval Research Laboratory
Population Shock
When Everything Happens Now
A Study of Fundamental Shock Noise Mechanisms

Are Health Shocks Different? Evidence from a Multi-Shock Survey in Laos

Fundamentals of Shock Wave Propagation in Solids

This paper investigates two mechanisms fundamental to sound generation in shocked flows: shock motion and shock deformation. Shock motion is modeled numerically by examining the interaction of a sound wave with a shock. This numerical approach is validated by comparison with results obtained by linear theory for a small-disturbance case. Analysis of the perturbation energy with Myers' energy corollary

demonstrates that acoustic energy is generated by the interaction of acoustic disturbances with shocks. This analysis suggests that shock motion generates acoustic and entropy disturbance energy. Shock deformation is modeled numerically by examining the interaction of a vortex ring with a shock. These numerical simulations demonstrate the generation of both an acoustic wave and contact surfaces. The acoustic wave spreads cylindrically. The sound intensity is highly directional and the sound pressure increases with increasing shock strength.

The numerically determined relationship between the sound pressure and the Mach number is found to be consistent with experimental observations of shock noise. This consistency implies that a dominant physical process in the generation of shock noise is modeled in this study. Meadows, Kristine R. Langley Research Center SHOCK WAVES; AERODYNAMIC NOISE; ACOUSTIC EMISSION; VORTEX RINGS; NOISE GENERATORS; ENTROPY; SOUND INTENSITY; SOUND PRESSURE; DEFORMATION; PERTURBATION...

This book presents the fundamentals of the shock wave theory. The first part

of the book, Chapters 1 through 5, covers the basic elements of the shock wave theory by analyzing the scalar conservation laws. The main focus of the analysis is on the explicit solution behavior. This first part of the book requires only a course in multi-variable calculus, and can be used as a text for an undergraduate topics course. In the second part of the book, Chapters 6 through 9, this general theory is used to study systems of hyperbolic conservation laws. This is a most significant well-posedness theory for weak solutions of quasilinear evolutionary

partial differential equations. The final part of the book, Chapters 10 through 14, returns to the original subject of the shock wave theory by focusing on specific physical models. Potentially interesting questions and research directions are also raised in these chapters. The book can serve as an introductory text for advanced undergraduate students and for graduate students in mathematics, engineering, and physical sciences. Each chapter ends with suggestions for further reading and exercises for students.

People spent the twentieth

century obsessed with the future. We created technologies that would help connect us faster, gather news, map the planet, and compile knowledge. We strove for an instantaneous network where time and space could be compressed. Well, the future's arrived. We live in a continuous now enabled by Twitter, email, and a so-called real-time technological shift. Yet this "now" is an elusive goal that we can never quite reach. And the dissonance between our digital selves and our analog bodies has thrown us into a new state of anxiety: present shock. Illustrated tales designed

to shock! Enjoy the complete run of Shock Illustrated, an innovative "Picto-Fiction" magazine containing illustrated prose stories of switch parties, thrill killers, and more of society's dark underbelly--written and illustrated by Daniel Keyes (Flowers for Algernon), Jack Kamen, Reed Crandall, Graham Ingels, and more! Features the lost fourth issue, with pencils from Frank Frazetta! This archive volume contains Shock Illustrated issues 1 though 4.

Shock! Horror!

Multiphase Flows I

Future Shock

The EC Archives: Shock

Illustrated
The Shock of the Old
The Shock and Vibration Bulletin

One of the most damaging aspects of the combat environment to which Navy ships are exposed is the mechanical shock resulting from the explosion of warheads. The detonation of a large weapon at a considerable distance from the ship produces a shipboard shock environment throughout the entire ship which is potentially damaging to all shipboard equipment and systems. Information has

been accumulated on the characteristics and operation of the devices specified by MIL-S-901 for the shock testing of shipboard equipment--the Navy HI Class Shock Machines and the Floating Shock Platform. Other shock machines are also used by the Navy and other services but are not considered here. This material has been gathered from many sources, most of which are not readily accessible, and is intended to provide background information. Equipments are accepted for shipboard use if

they comply satisfactorily with the shock test and design procedures prescribed by MIL-S-901.

Ever since Keith Ridgway published his landmark cult novel Hawthorn & Child, his ardent fans have yearned for more Finally, Ridgway gives us A Shock, his thrilling and unsparing, slippery and shockingly good new novel.

Formed as a rondel of interlocking stories with a clutch of more or less loosely connected repeating characters, it ' s at once deracinated yet potent with place, druggy yet

frighteningly shot through with reality. His people appear, disappear, and reappear. They ' re on the fringes of London, clinging to sanity or solvency or a story by their fingernails, consumed by emotions and anxieties in fuzzily understood situations. A deft, high-wire act, full of imprecise yet sharp dialog as well as witchy sleights of hand reminiscent of Muriel Spark, A Shock delivers a knockout punch of an ending. Perhaps Ridgway ' s most breathtaking quality is his scintillating stealthiness: you can never quite put your

finger on how he casts his spell—he delivers the shock of a master jewel thief (already far-off and scot-free) stealing your watch: when at some point you look down at your wrist, all you see is that in more than one way you don ' t know what time it is···

Offers a global account of the place of technology in twentieth century history.

A riveting first-hand account of a physician who's suddenly a dying patient, In Shock "searches for a glimmer of hope in life ' s darkest moments, and finds it. " —The Washington Post Dr. Rana

Awdish never imagined that an emergency trip to the hospital would result in hemorrhaging nearly all of her blood volume and losing her unborn first child. But after her first visit, Dr. Awdish spent months fighting for her life, enduring consecutive major surgeries and experiencing multiple overlapping organ failures. At each step of the recovery process, Awdish was faced with something even more unexpected: repeated cavalier behavior from her fellow physicians—indifference following human loss,

disregard for anguish and suffering, and an exacting emotional distance. Hauntingly perceptive and beautifully written, In Shock allows the reader to transform alongside Awidsh and watch what she discovers in our carefully-cultivated, yet often misguided, standard of care. Awdish comes to understand the fatal flaws in her profession and in her own past actions as a physician while achieving, through unflinching presence, a crystalline vision of a new and better possibility for us all. As Dr. Awdish finds

herself up against the same self-protective partitions she was trained to construct as a medical student and physician, she artfully illuminates the dysfunction of disconnection. Shatteringly personal, and yet wholly universal, she offers a brave road map for anyone navigating illness while presenting physicians with a new paradigm and rationale for embracing the emotional bond between doctor and patient.

Shock and Damage Models in Reliability Theory

Probability of Shock and the

Maintenance of Avoidance CR Shock Of The Old
Fundamentals
Handbook of Shock Waves: Shock wave interactions and propagation
Shock Phenomena in Granular and Porous Materials

Long-term population directions, in terms of both size and age composition, drive the destiny of all nations. While for decades we have worried about global overpopulation, it is far more likely that the period 1950-2050 will be an extraordinary population growth shock, culminating in severe population ageing and

then decline. This shock will have four stages aligned with the stages of the life cycle of the baby boomers: childhood, adulthood, old age and death. Around ten years ago, the developed world as a whole entered the third stage of the population shock - old age. Over the next ten to twenty years, most of continental Europe, China, Russia and South Korea will join Japan as nations with sharply declining populations. The world and modern capitalism have never before been in such a situation. While Australia's population will continue to grow over the

next forty years, we will age significantly. Economic growth will slow, government and household debt will rise, and inequality will accelerate. Against that background, how will government chart our population and economic future?

This is the first volume of a two volume set which presents the results of the 31st International Symposium on Shock Waves (ISSW31), held in Nagoya, Japan in 2017. It was organized with support from the International Shock Wave Institute (ISWI), Shock Wave Research Society of Japan, School of Engineering of

Nagoya University, and other societies, organizations, governments and industry. The ISSW31 focused on the following areas: Blast waves, chemical reacting flows, chemical kinetics, detonation and combustion, ignition, facilities, diagnostics, flow visualization, spectroscopy, numerical methods, shock waves in rarefied flows, shock waves in dense gases, shock waves in liquids, shock waves in solids, impact and compaction, supersonic jet, multiphase flow, plasmas, magnetohyrdrodynamics, propulsion, shock waves in internal flows, pseudo-shock

wave and shock train, nozzle flow, re-entry gasdynamics, shock waves in space, Richtmyer-Meshkov instability, shock/boundary layer interaction, shock/vortex interaction, shock wave reflection/interaction, shock wave interaction with dusty media, shock wave interaction with granular media, shock wave interaction with porous media, shock wave interaction with obstacles, supersonic and hypersonic flows, sonic boom, shock wave focusing, safety against shock loading, shock waves for material processing, shock-like

phenomena, and shock wave education. These proceedings contain the papers presented at the symposium and serve as a reference for the participants of the ISSW 31 and individuals interested in these fields.
Great Britain, 1980: the dawn of the video age. With new video companies appearing on a weekly basis, competition for shelf space was fierce. Eye-catching cover designs were essential to succeed in this saturated marketplace. Video was new, unregulated and out of control. These were the outlaw years. These glory days spanned just five years, before a legal

crackdown in 1984 bannished most of these outrageous videos from the shelves forever. Marc Morris was one of the few to rescue these covers from obscurity, and this book delves deep into his unrivalled collection.
Fifteen-year-old Cassie Streng is determined to expose her stepfather after learning that he is giving a dangerous experimental drug to his teenaged psychiatric patients, but he sends her to a boot camp for troubled teens in Mexico in order to keep her quiet.
A Shock
Electric Shock
Note on Shock Reflection Coefficient

Shock Tube Test Time Limitation Due to Turbulent Wall Boundary Layer
Shock Waves Made Simple
Shock Waves

Kitty Dukakis has battled debilitating depression for more than twenty years. Coupled with drug and alcohol addictions that both hid and fueled her suffering, Kitty's despair was overwhelming. She tried every medication and treatment available; none worked for long. It wasn't until she tried electroconvulsive therapy, or ECT, that she could reclaim her life. Kitty's dramatic first-person account of how ECT keeps her illness at bay is half the story of Shock. The other half, by award winning medical reporter Larry Tye, is an engrossing look at the science behind ECT and its dramatic yet subterranean comeback. This book

presents a full picture of ECT, analyzing the treatment's risks along with its benefits. ECT, it turns out, is neither a panacea nor a scourge but a serious option for treating life threatening and disabling mental diseases, like depression, bipolar disorder, and others. Through Kitty Dukakis's moving narrative, and interviews with more than one hundred other ECT patients, Shock: The Healing Power of Electroconvulsive Therapy separates scare from promise, real complications from lurid headlines. In the process Shock offers practical guidance to prospective patients and their families, boldly addressing the controversy surrounding ECT and awakening millions to its capacity to heal.

Examines the effects of rapid

industrial and technological changes upon the individual, the family, and society. Copyright © Libri GmbH. All rights reserved.

This is the first monograph which presents shock and damage models in reliability from introduction to application. Stochastic processes are introduced before current developments are surveyed. The practical applications of shock and damage models are demonstrated using case studies. The author is a leading researcher in this field with more than thirty years of experience. Reliability engineers and managers of maintenance work will find this book a broad reference.

If you don ' t know what to say about global war, you need a dictionary. Shock and Awe: War on Words is just that: a keywords book that

participates in a battle over the imagination, acknowledging the force of words, concepts, and images in framing our everyday lives. Located in the borderlands between scholarship and public culture, it re-appropriates our vocabularies by exploring the political trajectories of world-making words, projects, and images. You hear yourself use the word terrorism, and uncannily find yourself participating in its life, its proliferation, its reality. Willy-nilly you ' ve become a participant in a world-making project of anxiety and antagonism. While it is impossible to completely give up on terms like peace, family, and security, to use them is to become a stranger in one ' s own world. Yet how can we envision an alternative if our very imagination, the very definition of " the social " and the shape of " the

political " are under attack? Rather than being merely shocked and awed, a group of more than seventy scholars, artists and public intellectuals put their writings on the line. They present fragile genealogies, situated vocabularies, visual provocations and poetry. Tearing apart powerful representations or reclaiming them from being instruments of discipline, exclusion and imperialism, these short interventions populate, recapture, and enliven our sense of the political. The project concludes that there is hope for the most overused words, and life for the most neutral-sounding concepts, such as: America (as imagined from elsewhere), anti-terror legislation, barbarian, chicken, civilization, consumer, democracy, economic recovery, exit, family of

patriots, fear, fences, homeland, iRaq, Islamic Feminism, lip, military-industrial complex, nomads, patriot, peace, pirate, race, security, speech, streamline, them, time, us, we, words.

Shock-Wave Phenomena and the Properties of Condensed Matter

The Shock Doctrine

The Five Stages of Culture Shock

Technology and Global History since 1900

The Rise of Disaster Capitalism

My Journey from Death to Recovery and the Redemptive Power of Hope

The effect of high dynamic presures generated by strong shock waves on the metallrgical properties of selected iron based alloys was investigated. this investigation incuded a

sudy of the effects of shock wave duration, repeated shocks on a single test specimen, inreasing shock wave intensity, and post shock heat treatment on the yield and tensile stren ths of H-11 tool steel and 25% nickel steel. As a result of explosive shock hardening, H-11 steel increased in yield strength from 235 ksi in the preshocked condition to 340 ksi in the asshocked (360 ilobrs) condition, while the 25% nickel steel showed yield strength increases from

235 ksi in the austenitized-plusaged condition to 255 ksi in the shocked-plusaged condition. These increases in yield strength were brought about wthout any significant macroscopic plastic deformtion. (Author).

This book offers a timely reference on shock waves in multiphase flows, including new viewpoints and burgeoning developments. This volume treats shock and expansion waves in complex, bubbly liquids and cryogenic liquids. It also examines

the relationship of shock waves with phase transitions and induced phase transitions as well as their interaction with solid foams, textiles, porous and granular media.
NEW YORK TIMES BESTSELLER • The classic work that predicted the anxieties of a world upended by rapidly emerging technologies—and now provides a road map to solving many of our most pressing crises. “Explosive . . . brilliantly formulated.” —The Wall Street Journal Future Shock is the classic that changed our

view of tomorrow. Its startling insights into accelerating change led a president to ask his advisers for a special report, inspired composers to write symphonies and rock music, gave a powerful new concept to social science, and added a phrase to our language. Published in over fifty countries, Future Shock is the most important study of change and adaptation in our time. In many ways, Future Shock is about the present. It is about what is happening today to people and groups who are

overwhelmed by change. Change affects our products, communities, organizations—even our patterns of friendship and love. But Future Shock also illuminates the world of tomorrow by exploding countless clichés about today. It vividly describes the emerging global civilization: the rise of new businesses, subcultures, lifestyles, and human relationships—all of them temporary. Future Shock will intrigue, provoke, frighten, encourage, and, above all, change everyone

who reads it.
An introduction to the concept of "disaster capitalism" offers an expose of how the global "free market" has exploited crises, violence, and shock over the past three decades to promote radical privatization that benefits large corporations and powerfuli
Critical Incidents Around the World
The Shock and Vibration Digest
Effect of Shock-induced High Dynamic Pressures on Iron-base Alloys

ISSW30 - Volume 2

Shock Point

The book aims to inculcate interest and provie basic knowledge on Shock Wave Physics to students and researchers and is written with more emphasis on physical explanations rather than the mathematical formulations.

These proceedings collect the papers presented at the 30th International Symposium on Shock Waves (ISSW30), which was held in Tel-Aviv Israel from July 19 to July 24, 2015. The Symposium was organized by Ortra Ltd. The ISSW30 focused on the state of knowledge of the

following areas: Nozzle Flow, Supersonic and Hypersonic Flows with Shocks, Supersonic Jets, Chemical Kinetics, Chemical Reacting Flows, Detonation, Combustion, Ignition, Shock Wave Reflection and Interaction, Shock Wave Interaction with Obstacles, Shock Wave Interaction with Porous Media, Shock Wave Interaction with Granular Media, Shock Wave Interaction with Dusty Media, Plasma, Magnetohyrdrodynamics, Re-entry to Earth Atmosphere, Shock Waves in Rarefied Gases, Shock Waves in Condensed Matter (Solids and Liquids), Shock Waves in

Dense Gases, Shock Wave Focusing, Richtmyer-Meshkov Instability, Shock Boundary Layer Interaction, Multiphase Flow, Blast Waves, Facilities, Flow Visualization, and Numerical Methods. The two volumes serve as a reference for the participants of the ISSW30 and anyone interested in these fields.

In Laos health shocks are more common than most other shocks and more concentrated among the poor. They tend to be more idiosyncratic than non-health shocks, and are more costly, partly because they lead to high medical expenses, but also because they lead to income losses

that are sizeable compared with the income losses associated with non-health shocks. Health shocks also stand out from other shocks in the number of coping strategies they trigger: they are more likely than non-health shocks to trigger assistance from a nongovernmental organization and other households, dis-saving, borrowing, asset sales, an early harvest, the pawning of possessions, and the delaying of plans; by contrast, they are less likely to trigger assistance from government. Consumption regressions point to only limited evidence of households not being able to

smooth consumption in the face of any shock. However, these results contrast with households' own assessments of the welfare impacts of shocks. The majority said they had to cut back consumption following a shock and that shocks considerably affected their welfare. Only health shocks are worse than a drought in terms of the likelihood of a family being forced to cut back consumption and in terms of the shock affecting a family's well-being "a lot." The poor are especially disadvantaged in terms of the greater damage that health shocks inflict on household well-being.

Health shocks stand out too in leading to a loss of human capital: household members experiencing a health shock did not recover their former subjective health following the health shock, losing, on average, 0.6 points on a 5-point scale. The wealthier and better educated are better able to limit the health impacts of a health shock; the data are consistent with this being due to their greater proximity to a health facility.
Technology and Global History Since 1900
31st International Symposium on Shock Waves 1
Frontiers of Shock Wave

Research
War on Words
Shock Wave Science and Technology Reference Library, Vol. 1