

sex in an mri for science

Sex in an MRI for Science: Exploring Intimacy Through Advanced Imaging

sex in an mri for science might sound like the premise of a quirky documentary or a provocative headline, but it actually represents a fascinating intersection of human intimacy and cutting-edge medical technology. Researchers have long been intrigued by the mysteries of human sexuality, and using magnetic resonance imaging (MRI) to study sex allows scientists to observe the physiological and neurological dynamics of sexual activity in real time. This innovative approach offers valuable insights into anatomy, function, and even psychological responses that were previously difficult to capture.

In this article, we'll delve into what sex in an MRI for science entails, why researchers are interested in it, the challenges involved, and what discoveries have been made so far. Whether you're curious about the science behind sexual function or the technology that makes such studies possible, this exploration will shed light on a unique and intimate domain of scientific inquiry.

Understanding the Concept of Sex in an MRI for Science

Sex in an MRI for science refers to the practice of conducting sexual activity while participants are inside an MRI scanner. Unlike traditional studies that rely on self-reports or external observations, using MRI technology allows researchers to observe detailed, real-time images of internal structures and brain activity during sexual arousal and intercourse.

Why Use MRI to Study Sexual Activity?

MRI stands out because it provides high-resolution images of soft tissues, blood flow, and neural activity without radiation exposure. Researchers interested in sexual health and function use functional MRI (fMRI) to see how different areas of the brain respond during sexual stimulation, while anatomical MRI scans reveal the changes in genital tissues and pelvic muscles.

This method helps:

- Understand physiological mechanisms behind arousal and orgasm.
- Investigate sexual dysfunctions such as erectile dysfunction or anorgasmia.
- Study the effects of psychological factors like stress or anxiety on sexual response.
- Explore gender differences in sexual anatomy and brain function.

The Science Behind the Scenes

During these studies, participants might engage in various forms of sexual activity—ranging from masturbation to partnered sex—while lying inside the MRI machine. The scanner captures images at

different stages, including rest, arousal, and orgasm, enabling scientists to compare physiological changes across these phases.

The data collected can include:

- Blood oxygenation levels in specific brain regions.
- Muscle contractions in the pelvic floor.
- Changes in genital blood flow and tissue engorgement.

By analyzing this information, researchers can better understand the complex interplay between the nervous system, cardiovascular system, and reproductive organs during sexual activity.

Challenges of Conducting Sex in an MRI for Science

While the idea of sex in an MRI for science is intriguing, it comes with significant logistical and ethical challenges that researchers must carefully navigate.

Physical Constraints of the MRI Machine

MRI scanners are notoriously confined spaces, often resembling narrow tubes just wide enough for a person to lie down comfortably. This limited space makes it difficult for couples to engage in sexual activity naturally. Additionally, participants must remain relatively still to ensure clear imaging, which conflicts with the movement typically involved in sex.

Some studies have addressed this by:

- Using specially designed open MRI machines with more space.
- Focusing on solo sexual activity like masturbation, which is easier to perform in a confined setting.
- Employing creative positioning techniques to accommodate partnered activity.

Noise and Environment

MRIs are loud, producing knocking and humming sounds during scans. This noise can be distracting or inhibit relaxation, which is counterproductive when studying sexual arousal. Researchers often provide earplugs or headphones with music to help participants remain comfortable.

Moreover, the clinical environment and presence of researchers or technicians can add psychological pressure or embarrassment, impacting the naturalness of the experience.

Privacy and Ethical Considerations

Conducting sex in an MRI for science raises sensitive ethical questions about privacy, consent, and data protection. Participants must give informed consent, understanding how their images and data

will be used and stored. Maintaining anonymity is crucial, especially given the intimate nature of the subject.

Ethics committees closely review such studies to ensure participants' dignity and safety are upheld throughout the research process.

Key Discoveries from MRI Studies on Sexual Activity

Despite the challenges, sex in an MRI for science has yielded remarkable findings that deepen our understanding of human sexuality.

Brain Activity During Sexual Arousal and Orgasm

Functional MRI studies have mapped brain regions activated during sexual arousal and orgasm. Key areas include:

- The limbic system, responsible for emotion and motivation.
- The hypothalamus, involved in hormone regulation.
- The prefrontal cortex, which plays a role in decision-making and inhibition.
- The reward system, including the nucleus accumbens, associated with pleasure.

Interestingly, MRI data reveal that orgasm involves a complex mix of activation and deactivation in various brain regions, explaining the intense but transient nature of the experience.

Physiological Insights into Sexual Function

MRI scans have shown how genital tissues respond during sexual arousal, such as increased blood flow to the clitoris and penis, and pelvic floor muscle contractions. These insights help clarify the biological basis of sexual response and dysfunction.

For example, imaging has provided evidence for how erectile tissue engorges and how vaginal walls expand, information valuable for treating sexual disorders.

Impact on Sexual Dysfunction Treatments

By visualizing physiological changes during sex, MRI research informs new approaches to treating conditions like erectile dysfunction, premature ejaculation, and female sexual arousal disorder. Clinicians can better understand the underlying causes—whether neurological, vascular, or psychological—and tailor interventions accordingly.

The Future of Sex Research Using MRI Technology

As MRI technology evolves, so do the possibilities for more nuanced and comprehensive studies of human sexuality.

Advances in MRI Equipment

Newer MRI machines offer larger bores (the opening of the scanner), quieter operation, and faster scanning times, all of which can make sex in an MRI for science more feasible and comfortable. Open and upright MRI systems may allow more naturalistic sexual activity, enhancing the quality of data.

Integrating Other Technologies

Combining MRI with other techniques like electroencephalography (EEG), near-infrared spectroscopy (NIRS), or hormone level monitoring could provide a multi-dimensional view of sexual response. This integrative approach might reveal the synchronization between brain waves, hormonal changes, and anatomical responses during intimacy.

Broader Applications

Beyond studying healthy sexual function, sex in an MRI for science can extend to understanding the effects of medications, psychological therapies, or surgeries on sexual health. It may also contribute to sex education by demystifying the biological processes involved in human intimacy.

What It Means for Society and Sexual Health

Exploring sex in an MRI for science challenges societal taboos and promotes open, evidence-based conversations about sexuality. By grounding discussions in scientific data rather than myths or stigma, such research helps normalize sexual health as a vital aspect of overall well-being.

Moreover, these studies encourage empathy and understanding across diverse sexual experiences, contributing to more inclusive healthcare and better support for people facing sexual difficulties.

Sex in an MRI for science is a remarkable testament to how far technology can go in illuminating the most personal aspects of human life. While it might seem unconventional, this research opens new doors to understanding intimacy, enhancing sexual health, and appreciating the complex beauty of human connection.

Frequently Asked Questions

Why do scientists study sex using MRI technology?

Scientists use MRI technology to study sex in order to understand the brain activity and physiological responses during sexual arousal and activity, providing insights into human sexuality and related health conditions.

How does an MRI machine work during sex research?

An MRI machine uses magnetic fields and radio waves to create detailed images of the body's internal structures, allowing researchers to observe brain regions and other organs involved in sexual response in real time.

Is it safe to have sex inside an MRI scanner for scientific studies?

Yes, it is generally safe to have sex inside an MRI scanner during scientific studies as long as safety protocols are followed and no metal objects are present; however, the confined space and noise can make it challenging.

What have researchers learned about the brain during sex from MRI studies?

MRI studies have shown that sexual activity activates areas of the brain related to reward, motivation, emotion, and sensory processing, helping to better understand the neural basis of sexual pleasure and desire.

Can MRI scans during sex help diagnose sexual dysfunction?

Yes, MRI scans can help identify abnormalities in brain activity or blood flow related to sexual dysfunction, aiding in diagnosis and the development of targeted treatments.

What challenges do researchers face when conducting sex studies in an MRI scanner?

Challenges include limited space inside the scanner, noise interference, maintaining participant comfort and privacy, and ensuring naturalistic conditions during the study.

Have there been any notable scientific publications about sex in MRI scanners?

Yes, several studies published in neuroscience and sexual medicine journals have documented findings on brain activity and physiological responses during sex using MRI technology.

How do researchers ensure participant consent and comfort during MRI sex studies?

Researchers obtain informed consent, explain procedures thoroughly, maintain confidentiality, and provide supportive environments to ensure participant comfort and ethical standards.

What is the significance of studying sex with MRI in understanding human behavior?

Studying sex with MRI helps reveal the complex interplay between brain function and sexual behavior, contributing to knowledge about human motivation, emotions, and interpersonal relationships.

Are there any alternatives to MRI for studying sex scientifically?

Yes, alternatives include functional near-infrared spectroscopy (fNIRS), electroencephalography (EEG), and physiological monitoring techniques, though MRI provides superior spatial resolution for brain imaging.

Additional Resources

Sex in an MRI for Science: Exploring the Intersection of Human Intimacy and Medical Imaging

sex in an mri for science is a topic that merges the realms of human sexuality and advanced medical technology, revealing new insights into the physiological and neurological aspects of intimacy. As researchers continuously strive to understand the complexities of human behavior, the use of Magnetic Resonance Imaging (MRI) to study sexual activity offers a unique window into the dynamic processes occurring within the body and brain during such moments. This investigative review delves into the scientific endeavors involving sex in an MRI scanner, the challenges and breakthroughs in this niche field, and the implications for both medicine and human sexuality research.

The Science Behind Sex in an MRI Scanner

Magnetic Resonance Imaging is traditionally known for its role in diagnostic medicine—offering detailed images of organs, tissues, and neural structures without the use of ionizing radiation. Its capacity to provide real-time, high-resolution images has made it an invaluable tool for neuroscientists and medical researchers alike. Extending the application of MRI to observe sexual activity is a relatively recent development, aiming to elucidate the physiological changes and neurological activations that occur during intimate encounters.

Sex in an MRI for science is primarily leveraged to study blood flow, muscle contractions, and brain activity during sexual arousal and orgasm. Functional MRI (fMRI), which measures changes in blood oxygenation and flow, allows researchers to identify regions of the brain activated by sexual stimuli.

These insights contribute to a more comprehensive understanding of sexual health, dysfunction, and the interplay between psychological and physical elements of sexual response.

Historical Context and Evolution of Research

Initial investigations into human sexuality using imaging technologies date back several decades but were limited by the constraints of equipment and social taboos. Early studies relied on less sophisticated methods or indirect measurements such as penile plethysmography or subjective surveys. The advent of fMRI and advancements in MRI scanner design have facilitated more direct observation.

A landmark study in the early 2010s demonstrated the feasibility of capturing sexual activity within an MRI scanner, albeit with significant logistical hurdles. Since then, incremental improvements in scanner design, participant comfort, and imaging speed have expanded the scope of research. Today, studies often explore not only the mechanics of sexual intercourse but also the neurological correlates of desire, satisfaction, and emotional connection.

Technical and Ethical Challenges of Sex in an MRI Scanner

Conducting sex in an MRI for science is not without its challenges. The MRI environment imposes physical constraints, including a narrow bore (the tube where the participant lies), loud noises from the scanner, and the necessity for participants to remain relatively still to avoid image distortion. These factors complicate the naturalness of sexual activity and require careful experimental design.

Scanner Design and Participant Positioning

Most clinical MRI machines have a bore diameter of approximately 60 centimeters, which restricts movement and positioning. Researchers have adapted by using specialized open MRI systems or by designing protocols involving non-penetrative sexual activity or stimulation to study physiological responses. Open MRI scanners offer greater flexibility but often at the cost of lower image resolution.

To counteract movement artifacts, participants may be instructed to engage in specific, controlled motions that simulate sexual activity or to focus on sexual stimuli while remaining still. These compromises affect the ecological validity of the studies but are necessary to obtain usable data.

Ethical Considerations and Participant Privacy

Sex in an MRI for science also raises significant ethical questions regarding participant consent, privacy, and psychological comfort. Researchers must ensure that participants are fully informed about the nature of the study and potential discomforts. Strict confidentiality measures are

paramount to protect sensitive data, especially given the deeply personal nature of the subject matter.

Institutional review boards (IRBs) often scrutinize such studies rigorously. The challenge lies in balancing scientific inquiry with respect for participant dignity and autonomy, ensuring that the research does not exploit or harm individuals.

Key Findings and Insights from MRI-Based Sexual Research

Despite the hurdles, studies involving sex in an MRI scanner have yielded valuable insights into the human sexual response cycle. Functional MRI data have mapped brain regions implicated in sexual arousal, including the hypothalamus, amygdala, and prefrontal cortex. These findings enhance understanding of how emotional and cognitive processes integrate with physiological responses.

Neurological Correlates of Sexual Activity

Research shows that during sexual arousal and orgasm, there is increased activity in areas associated with reward and pleasure, such as the ventral striatum and nucleus accumbens. Conversely, regions involved in self-control and social judgment, like the prefrontal cortex, often exhibit decreased activity, which may explain the diminished inhibition experienced during sexual climax.

Additionally, MRI studies have highlighted differences in brain activation patterns between genders and among individuals with sexual dysfunctions, providing potential pathways for targeted therapies.

Physiological Observations

MRI imaging has allowed visualization of genital blood flow and muscular contractions during sexual activity, contributing to a better understanding of physical mechanisms underlying arousal and orgasm. This data supplements traditional physiological measurements and offers a non-invasive method to monitor these processes in vivo.

Pros and Cons of Using MRI to Study Human Sexuality

The adoption of MRI for research on sex brings distinct advantages and limitations that researchers must weigh carefully.

Advantages

- **Non-invasive and radiation-free:** MRI offers a safe method to observe internal physiological changes without exposure to harmful radiation.
- **High spatial resolution:** The detailed images allow precise localization of brain activity and anatomical changes during sexual arousal.
- **Real-time functional insights:** Functional MRI can capture dynamic changes in blood flow, illuminating neurological processes as they occur.
- **Multimodal data:** MRI can be combined with other physiological measurements to provide a holistic view of sexual response.

Limitations

- **Physical constraints:** The confined space and noise of the MRI scanner limit natural sexual behavior.
- **Participant discomfort:** Psychological discomfort or embarrassment may affect the authenticity of results.
- **High costs and resource intensity:** MRI studies require expensive equipment and specialized personnel.
- **Movement artifacts:** Sexual activity involves movement that can degrade image quality, complicating data analysis.

Future Directions and Technological Innovations

The field of sex research using MRI is poised for growth as technology and methodology evolve. Innovations such as quieter MRI sequences, larger bore scanners, and enhanced motion correction algorithms may mitigate current limitations. Moreover, combining MRI with other neuroimaging techniques like PET scans or EEG could enrich understanding of the temporal dynamics of sexual arousal.

Virtual reality (VR) and augmented reality (AR) integration are also being explored to simulate sexual stimuli within the scanner, enabling controlled experimental conditions that maintain participant engagement without physical activity.

Meanwhile, the growing acceptance of sexuality as a legitimate scientific subject encourages more

comprehensive studies that could inform treatments for sexual dysfunction, improve sexual health education, and deepen appreciation of human intimacy's biological underpinnings.

The exploration of sex in an MRI for science is a compelling testament to the intersection of human curiosity, technological advancement, and the quest to decode one of the most fundamental aspects of human life. As research progresses, it promises to illuminate not only the mechanics of sex but also the profound connections between mind, body, and emotion that define human intimacy.

Sex In An Mri For Science

sex in an mri for science: The Art, Science, and Spirituality of the Female Orgasm Nicole Daedone, Teresa Diaz, M.D., 2025-06-01 What if orgasm isn't a fleeting experience? What if you could access its elemental power—for energy, for healing, for connecting, for creating, for joy—and live inside it? In this bold and transformative book, visionary and author Nicole Daedone and OB/GYN Teresa Diaz, MD, draw from cutting-edge neuroscience, spiritual insight, and decades of embodied experience to redefine female orgasm as an essential, sustained state of being, not a moment of climax. They introduce Orgasmic Meditation (OM), a simple yet profound practice that expands individuals' capacity to stay present in high sensation, trains the nervous system in emotional regulation, supports healing, and unlocks a deep current of vitality that transforms lives. Despite all society tells us to suppress, orgasmic power is our birthright, ours to reclaim and use as we choose. Daedone and Diaz provide us with the tools to pursue our true selves and to gain access to mystical states and a life of flourishing. This book is an invitation to awaken your body, liberate your desire, clear your mind, and live in the state of flow—every single day.

sex in an mri for science: Gender and the Science of Difference Jill A. Fisher, 2011 How does contemporary science contribute to our understanding about what it means to be women or men? What are the social implications of scientific claims about differences between male and female brains, hormones, and genes? How does culture influence scientific and medical research and its findings about human sexuality, especially so-called normal and deviant desires and behaviors? Gender and the Science of Difference examines how contemporary science shapes and is shaped by gender ideals and images. Prior scholarship has illustrated how past cultures of science were infused with patriarchal norms and values that influenced the kinds of research that was conducted and the interpretation of findings about differences between men and women. This interdisciplinary volume presents empirical inquiries into today's science, including examples of gendered scientific inquiry and medical interventions and research. It analyzes how scientific and medical knowledge produces gender norms through an emphasis on sex differences, and includes both U.S. and non-U.S. cases and examples.

sex in an mri for science: On Gender, from Science to the Possibility of Gender Politics Ian Rory Owen, 2024-08-27 The book provides the intellectual tools to understand the existential dimensions of what it is to be gendered. Classical phenomenology began qualitative studies, in a self-aware self-critical approach to qualitative appearances of being. This book applies the thought of Husserl and Heidegger and introduces Simone De Beauvoir's analysis of the masculine-feminine balance of power. It understands conceptual meaning as referring to qualitative wholes, in a variety of settings. Simply put, the meaningful space of everyday life is one in which families, culture and society develop the next generation. This is also the space in which qualitative meaning exists. Understanding arises out of sensuality; one example is the way genders arise against the background of everyday social life: gendered expressions of roles and identities exist through identifying with the social type gender. Specifically, in relation to gender, it is argued that trouble cases and inter-gender boundary dynamics show aspects of gender roles. This work is a commentary

on a judicious selection of a number of empirical studies in the disciplines of individual psychology, personality theory, social psychology, cultural anthropology, biology, behavioural genetics and neuroscience. It considers a number of reputable empirical sources for understanding gender and inter-gender relating, and explains how nature and nurture co-occur developmentally, in relation to what it is to have an identity and identify with the social type gender. The work also provides findings about natal gender research in unity with empirical studies of transgender experiences. This serves the function of moving towards suitable gender equity as a political outcome. Views from empirical research on gender and transgender research are provided that highlight the large number of similarities and small differences between masculinity and femininity.

sex in an mri for science: *Fake Science* Austin Ruse, 2017-07-17 If you listen to any political argument, you're eventually bound to hear something like: The science is settled on this. Or: Just look at the statistics! Or: There have been studies that say... You'd think we were living in the golden age of science and reason. But the truth is far more sinister, says Austin Ruse. We're actually living in the age of the low information voter, easily misled by all-too-convincing false statistics and studies. In *Fake Science*, Ruse debunks so-called facts used to advance political causes one after the other, revealing how poorly they stand up to actual science.

sex in an mri for science: *The Science of Romantic Relationships* Theresa DiDonato, Brett Jakubiak, 2023-08-31 Following the lifecycle of romantic relationships, this textbook offers a fresh, diversity-infused introduction to relationship science.

sex in an mri for science: **Human Intelligence** Robert J. Sternberg, 2019-09-19 The most comprehensive, up-to-date, and readable textbook on human intelligence, written by leading experts in the field.

sex in an mri for science: *The Anterior Cruciate Ligament: Reconstruction and Basic Science E-Book* Chadwick Prodromos, 2017-05-31 *The Anterior Cruciate Ligament: Reconstruction and Basic Science*, 2nd Edition, by Dr. Chadwick Prodromos, provides the expert guidance you need to effectively select the right procedure and equipment, prevent complications, and improve outcomes for every patient. Written and edited by world leaders in hamstring, allograft, and bone-patellar tendon-bone (BTB) ACL reconstruction, this revised reference is a must-have resource for the full range of anterior cruciate ligament reconstruction techniques, plus fixation devices, rehabilitation, revision ACLR surgery, and much more! - Covers the latest clinical and technical information on pain control, genetics and biologics, the use of ultrasound, and much more. - EBook access features an exhaustive ACL bibliography database more than 5000 available articles. - Features dozens of new chapters that offer up-to-date information on pain control after ACLR, single vs. double bundle repairs, genetics and collagen type, all-inside techniques, biologics, pediatrics, ACL ganglion cysts, prognosis for ACLR success, allografts vs. autografts, and more. - Provides the experience and insight of a dream team of ACL experts, including James Andrews on sports medicine, Frank Noyes on HTO and ACLR, and Andrew Amis on the benefits of the older femoral tunnel placement technique. - Expert Consult™ eBook version included with purchase. This enhanced eBook experience allows you to search all of the text, figures, Q&As, and references from the book on a variety of devices.

sex in an mri for science: **Machine Learning and Knowledge Discovery in Databases. Applied Data Science and Demo Track** Yuxiao Dong, Georgiana Ifrim, Dunja Mladenić, Craig Saunders, Sofie Van Hoecke, 2021-02-24 The 5-volume proceedings, LNAI 12457 until 12461 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2020, which was held during September 14-18, 2020. The conference was planned to take place in Ghent, Belgium, but had to change to an online format due to the COVID-19 pandemic. The 232 full papers and 10 demo papers presented in this volume were carefully reviewed and selected for inclusion in the proceedings. The volumes are organized in topical sections as follows: Part I: Pattern Mining; clustering; privacy and fairness; (social) network analysis and computational social science; dimensionality reduction and autoencoders; domain adaptation; sketching, sampling, and binary projections; graphical models and

causality; (spatio-) temporal data and recurrent neural networks; collaborative filtering and matrix completion. Part II: deep learning optimization and theory; active learning; adversarial learning; federated learning; Kernel methods and online learning; partial label learning; reinforcement learning; transfer and multi-task learning; Bayesian optimization and few-shot learning. Part III: Combinatorial optimization; large-scale optimization and differential privacy; boosting and ensemble methods; Bayesian methods; architecture of neural networks; graph neural networks; Gaussian processes; computer vision and image processing; natural language processing; bioinformatics. Part IV: applied data science: recommendation; applied data science: anomaly detection; applied data science: Web mining; applied data science: transportation; applied data science: activity recognition; applied data science: hardware and manufacturing; applied data science: spatiotemporal data. Part V: applied data science: social good; applied data science: healthcare; applied data science: e-commerce and finance; applied data science: computational social science; applied data science: sports; demo track.

sex in an mri for science: Neural Circuit Development and Function in the Healthy and Diseased Brain , 2013-05-06 The genetic, molecular, and cellular mechanisms of neural development are essential for understanding evolution and disorders of neural systems. Recent advances in genetic, molecular, and cell biological methods have generated a massive increase in new information, but there is a paucity of comprehensive and up-to-date syntheses, references, and historical perspectives on this important subject. The Comprehensive Developmental Neuroscience series is designed to fill this gap, offering the most thorough coverage of this field on the market today and addressing all aspects of how the nervous system and its components develop. Particular attention is paid to the effects of abnormal development and on new psychiatric/neurological treatments being developed based on our increased understanding of developmental mechanisms. Each volume in the series consists of review style articles that average 15-20pp and feature numerous illustrations and full references. Volume 3 offers 40 high level articles devoted mainly to anatomical and functional development of neural circuits and neural systems, as well as those that address neurodevelopmental disorders in humans and experimental organisms. - Series offers 144 articles for 2904 full color pages addressing ways in which the nervous system and its components develop - Features leading experts in various subfields as Section Editors and article Authors - All articles peer reviewed by Section Editors to ensure accuracy, thoroughness, and scholarship - Volume 3 sections include coverage of: mechanisms that control the assembly of neural circuits in specific regions of the nervous system, multiple aspects of cognitive development, and disorders of the nervous system arising through defects in neural development

sex in an mri for science: The Routledge Handbook of Feminist Philosophy of Science Sharon Crasnow, Kristen Intemann, 2020-11-30 The Routledge Handbook of Feminist Philosophy of Science is a comprehensive resource for feminist thinking about and in the sciences. Its 33 chapters were written exclusively for this Handbook by a group of leading international philosophers as well as scholars in gender studies, women's studies, psychology, economics, and political science. The chapters of the Handbook are organized into four main parts: I. Hidden Figures and Historical Critique II. Theoretical Frameworks III. Key Concepts and Issues IV. Feminist Philosophy of Science in Practice. The chapters in this extensive, fourth part examine the relevance of feminist philosophical thought for a range of scientific and professional disciplines, including biology and biomedical sciences; psychology, cognitive science, and neuroscience; the social sciences; physics; and public policy. The Handbook gives a snapshot of the current state of feminist philosophy of science, allowing students and other newcomers to get up to speed quickly in the subfield and providing a handy reference for many different kinds of researchers.

sex in an mri for science: Neuroimaging II Erin D. Bigler, 2013-11-11 The focus of Volume I of the Handbook of Human Brain Function was on basic scientific principles of brain imaging as it relates to the study of human brain function. Once the scientific bases for a particular discipline are established, follow. Such is the status of brain imaging in the study of clinical applications human brain function. It is of interest to note that the 1952 Nobel Prize for Physics was awarded to Felix

Bloch and Edward Purcell, who discovered that nuclei precessing in the radiofrequency range could emit a radiofrequency signal detected by a radio receiver. Their findings initiated a series of very basic research studies on the characteristics of nuclear magnetic resonance. It would take over 25 years of basic research before findings began to point toward truly biomedical applications. However, once realized, clinical applications became standard fare for nuclear magnetic resonance. The example of Bloch and Purcell's work in an area of very basic science expanding to clinical application has been repeated throughout the medical and neurological sciences. This type of progress is what drives science. As a benefit from these scientific advances, research, clinical, and diagnostic imaging from a variety of modalities, not just computerized tomography or magnetic resonance imaging, can be performed. This volume focuses on the clinical applications of various neuroimaging methods. Chapter 1 introduces the topic of clinical neuroimaging in the study of human brain function.

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sex in an mri for science: Reproductive Medicine and the Life Sciences in the Contemporary Economy Alexander Styhre, 2016-04-08 In Reproductive Medicine and the Life Sciences in the Contemporary Economy, Alexander Styhre and Rebecka Arman illuminate issues that have given rise to terms such as 'the bioeconomy' and 'the baby business'. The life sciences play an increasing role in providing services and commodities consumed by businesses and the public. Based on an in-depth study of clinics offering assisted fertilization in Sweden, this book is the first to examine the commercialization and commodification of know-how derived from the life sciences, from the point of view of organization theory. In the field of reproductive medicine there has been significant growth of both public and private clinical work. Clinics are places where individual interests and concerns and social and institutional arrangements intersect. With a front office where patients encounter various professional groups and a back office comprising the laboratories wherein human reproductive materials are handled and stored, they are more than just places in which medicine is applied in a clinical setting. Clinicians in this field actively influence policy-making and the regulatory frameworks that monitor and set the boundaries for their work. These are places where social and cultural interests and concerns are translated into policies and practice. The clinics are open social systems, responding to and influencing discussions. This book combines organization theory, sociological theory, gender theory, science and technology studies, and philosophy. It emphasises the critical importance of a sociomaterial perspective on organization, stressing how material and social resources are always of necessity folded into each other in day-to-day organizing.

sex in an mri for science: Paediatric Exercise Science and Medicine Neil Armstrong, Willem van Mechelen, 2008-10-23 This text explains the principles of developmental exercise science, assessment of performance, the promotion of young people's health and well-being, and the clinical

diagnosis and management of sports injuries in children and adolescents.

sex in an mri for science: The Science on Women and Science Christina Hoff Sommers, 2009 Women have achieved or exceeded parity with men in most academic fields but continue to be outnumbered in the physical sciences, engineering, and math. For many equity activists, this imbalance constitutes a serious problem, even a crisis, necessitating federal oversight to prevent gender bias in higher education and scientific industries. Congress, the Obama administration, and many science and education leaders are considering dramatic measures to improve women's prospects in the sciences. But what if claims of gender bias have been exaggerated? In 2007, the National Academy of Sciences (NAS) released *Beyond Bias and Barriers: Fulfilling the Promise of Women in Academic Science and Engineering*, an influential study suggesting that women face a hostile environment in the laboratory. The NAS report dismissed the possibility that gender disparities in scientific fields might be attributable to biological differences and called for immediate remedial action in education, government, and business. This volume examines the research behind the NAS's claims and presents a more balanced analysis of the gender gap. Scientific research on the relationship between gender and vocation is complex, vibrant, and full of reasonable disagreements. Some scholars agree that discrimination is the best explanation for the current configuration of men and women in science, but others, perhaps a majority, suggest that biology and considered preference explain why men and women follow different career paths. *The Science on Women and Science* is a lively, readable, and balanced collection of articles by distinguished scholars from sides of an often-contentious debate.

sex in an mri for science: Advances in Tomography Research and Application: 2012 Edition, 2012-12-26 *Advances in Tomography Research and Application / 2012 Edition* is a ScholarlyBrief™ that delivers timely, authoritative, comprehensive, and specialized information about Tomography in a concise format. The editors have built *Advances in Tomography Research and Application / 2012 Edition* on the vast information databases of ScholarlyNews.™ You can expect the information about Tomography in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of *Advances in Tomography Research and Application / 2012 Edition* has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

sex in an mri for science: Dyslexia and Development Albert M. Galaburda, 1993 The distinguished contributors to this volume examine epidemiologic and clinical issues that may make the developing brain more vulnerable to environmental and genetic influences, which can in turn lead to abnormal brain plasticity and behavior. Although major forms of brain malformation have been clearly associated with functional deficits, mild forms have historically been ignored or trivialized; this book supports the hypothesis that several types of such malformation reflect brain injury during critical stages of development, and also the premise that more and more disturbances of thought and behavior stem from abnormalities of brain organization.

sex in an mri for science: Gender Through the Prism of Difference Maxine Baca Zinn, Pierrette Hondagneu-Sotelo, Michael A. Messner, 2016 *Gender Through the Prism of Difference* adopts a global, transnational perspective on how race, class, and sexual diversity are central to the study of sex and gender. In contrast with other books in this area--which tend to focus on U.S. or European viewpoints--this wide-ranging anthology features many articles based on research done elsewhere throughout the world. Now in its fifth edition, the book opens with a revised and updated Introduction that sets the stage for understanding gender as a socially constructed experience. Featuring twenty-eight new readings, this edition covers compelling subjects like transgendered people, intersex issues, men and masculinity, sexual and gender violence, disabilities, obesity, reproductive technologies, educational testing, aging and ageism, and Occupy Wall Street.

sex in an mri for science: *Biological, Social, and Organizational Components of Success for Women in Academic Science and Engineering* Institute of Medicine, National Academy of Engineering, National Academy of Sciences, Committee on Science, Engineering, and Public Policy, Committee on Maximizing the Potential of Women in Academic Science and Engineering, 2006-12-08 During the last 40 years, the number of women studying science and engineering (S&E) has increased dramatically. Nevertheless, women do not hold academic faculty positions in numbers that commensurate with their increasing share of the S&E talent pool. The discrepancy exists at both the junior and senior faculty levels. In December 2005, the National Research Council held a workshop to explore these issues. Experts in a number of disciplines met to address what sex-differences research tells us about capability, behavior, career decisions, and achievement; the role of organizational structures and institutional policy; cross-cutting issues of race and ethnicity; key research needs and experimental paradigms and tools; and the ramifications of their research for policy, particularly for evaluating current and potential academic faculty. Biological, Social, and Organizational Components of Success for Women in Academic Science and Engineering consists of three elements: an introduction, summaries of panel discussions including public comment sessions, and poster abstracts.

sex in an mri for science: America Anonymous Benoit Denizet-Lewis, 2009-01-06 America Anonymous is the unforgettable story of eight men and women from around the country -- including a grandmother, a college student, a bodybuilder, and a housewife -- struggling with addictions. For nearly three years, acclaimed journalist Benoit Denizet-Lewis immersed himself in their lives as they battled drug and alcohol abuse, overeating, and compulsive gambling and sexuality. Alternating with their stories is Denizet-Lewis's candid account of his own recovery from sexual addiction and his compelling examination of our culture of addiction, where we obsessively search for new and innovative ways to escape the reality of the present moment and make ourselves feel better. Addiction is arguably this country's biggest public-health crisis, triggering and exacerbating many of our most pressing social problems (crime, poverty, skyrocketing health-care costs, and childhood abuse and neglect). But while cancer and AIDS survivors have taken to the streets -- and to the halls of Congress -- demanding to be counted, millions of addicts with successful long-term recovery talk only to each other in the confines of anonymous Twelve Step meetings. (A notable exception is the addicted celebrity, who often enters and exits rehab with great fanfare.) Through the riveting stories of Americans in various stages of recovery and relapse, Denizet-Lewis shines a spotlight on our most misunderstood health problem (is addiction a brain disease? A spiritual malady? A moral failing?) and breaks through the shame and denial that still shape our cultural understanding of it -- and hamper our ability to treat it. Are Americans more addicted than people in other countries, or does it just seem that way? Can food or sex be as addictive as alcohol and drugs? And will we ever be able to treat addiction with a pill? These are just a few of the questions Denizet-Lewis explores during his remarkable journey inside the lives of men and women struggling to become, or stay, sober. As the addicts in this book stumble, fall, and try again to make a different and better life, Denizet-Lewis records their struggles -- and his own -- with honesty and empathy.

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