



EDITOR IN CHIEF & DESIGN DIRECTOR- BOB GUCCIONE

debate over flag burn Should there be

Artificial Intelligence

knows how to

Lower back parr? A new

Explorations By John Gmssmann

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MUJI

Continuum

Why Can't a Man Be

More Like a Woman . and Vice Yersa

Danoing in Dreemiline

Dictarial: Tracing the Masters' Strokes





Interview II a. 1990. go you know

Blurring the Lines. . .

Dy Barriel Floris

Star Tech



Lord Word

Eletion: Comething About a Death. mething About a Fire

By Peter Straub

Inside Story

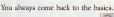














FIRST WORD

WAIVING THE FLAG. Is our nation entitled to one symbol that must remain undefiled?

Robert H. Bark is a ferrore federal court of appeals pulpe and sucher of The Temping of America: The Polylical Seduction of the Law (The Free Prins, 1995).



The Suprema Court's recent five to four declarers elbowing the flux ing of the Aminisan flag as a right produced by the First American flag as a right produced by the First American declarer have all the nember of the both the response for confused should be responsed behind the declarers and about the raperpin we emprose to them.

give response to them. The majority operands in Taxas y Johnson and Wellah States v Johnson and Wellah States v Schman, both without by Janicia Wellam J. Breason rest upon one control argument. If them is a bedease, principle underlying the First Ancientamy, it is that the poerrment may not profess the argument precious of an idea samely because society finds the idea staff clienters or designación.

Although this statistisment is qualitated in arrelevent in both of the legit parining cases conclete of any sort was being aup persond. The legit parining earlier in a thin parining to the service in a thin parining to great yellowing the parining the parining yellowing the parining the parining parining

To wan promouded for a destry of the control of the

no limits on those acts. Item not slicins in my discoprement with the Court's contribution. The most slicins is my discoprement with the Court source and and processed authors. Hope Black and Aber Fatika, throse of the most libland Suppress Court stopies in our haday shall oringar contribution specially and court special special properties and properties and the special properties and the special properties and the special special properties and processed. The government is postvantely accusived that 48 states and the location government and written statistics or twen profibility described in the Alexander Hope special properties and contribution of the profibility court and the Alexander properties and contribution of the special contribution of the special contribution of properties.

tures—If they choose—to proteet the flag against deferment. Many others have opposed this wow. Unfortunately, the public defends conducted in stagers that down out sensitive discussion.

Some opponents of an extend, extending the first Amendment. A constitution of the public defends of the public defends of the public defends on the public defends of the public defends of the public defends on the public defends on

the government to protect the flag, however would not diminish the First Amendment. Instead, if, would restore the amendment to insucception before the court made its emonacus rulings.

One opported of the americand congruent of the americand congruent of the affect is storill by december to the americand progression of the americand progression of the american operation operation of the american operation op

Still deless said that allowers lessabaries to prevent his desecration is equal to desecrating the Constitution Waters. Back, and Factas must have been Constitution desegration, not become to be considered to the constitution of the constitution of the old of the constitution of the old of the constitution of the constitution of the constitution of the desertion of the constitution of the last which by definition restricts have which by definition restricts

guad that we should not set a precision of operationing Supremo Court discosions with assendments to see Consolution. The president househers has already book set, in the United States, on mercas occasions we have adopted amendments to overturn. Supremo Court judgments. Ultimately, the question is which the nations is entitled to 0.00 set.

bol first must remain undefed think so. To say that the freedo of speech requires that no syn between secrosance is to so something demecrating about the First Amendment, stanf DO.

CIMMIBUS

RREAKING THE BARRIERS One writer cracks down on stereatypes: another reports on nature in stereo

s we celebrate our twelth apprentiery, we solute helped make our very first issue such a ruccests—pioneers in the Rack in 1978, Kathloen Stein

asked the question "Can we live forever?" with her article. Some of the May Newer Dig " More than

came about "I have always refused to accept the stoneotypes. the results and all the postsbillters

White: Douglas Stein negotiatat UCLA to meet with endocrinologst Roger Gorela (Interview page 700. He is such a requier may save Stem I loved his atthade of it's really important work I'm dong, but lets not be pre-

resent "Insade Story" (page 95) by James Oberg, who also led the way in our October 1978 mane times in our pages (as has his wife. Alcussed. This time he were konut up closs-a mission that would have been represented hack in the pre-pletroasters of the

In the forefront of governing the expect of artificial posity, author her wetten artoles for Popular Scsance and New York magazine Peter County (Body, page 24)

nettis ending up with back strain "I'm grateful to be on friend-Every scientist Kathryn Phillips In terms with the cuys who divisit could the Muscle Fatigue Monfor Alay England Monthly and Bos-

Lindestand the importance of all

sounds of return. My guide dampresented the power of letterang. Grossmann skys: "As we drove Peter Straub (Something

a Fire page 90) consured un partly Mystery Houses Without Fiction writer Scott Russell Sap-

ders if Dancing in Dreamtime name 52) is lineiting work on a seiber Company (Tor Books) DO

switch cur roles, our pender, as Don Manherski







Don Monkerud (Blumna the Lines Androgyny on first page 90). "Ruterquety is what grouped has written for The New York ask and other publications Editional assistant Shan Rudaysky (Wind, page 18) majowol son I was etempted in such a sub-

in a sightly different your use.



READERS WRITES The many faces of Mars-what you think about the red planet While I found your coverage of the

A Minaton Boyond Our Dreams

obtions of available century technolic

Your July 1990 article "Radors of the I not Anchews," incorrectly stated that a

Joseph Forbes

I read with interest the article that disand offers who have shown that there ents the geology of Mars and that they

Denver DO

it's not uncommon to find the unrealistic attracks that space exploration can Groen (Froum July 1990) on whose side the usual hops of ignorance Thank concinese Spain dight sowet on attaining Utopia in 1492 before under teking any new enterprises

planned mission to Mars well reported day-to-day struggle for survival

incredible (And Incredulous?) Journey agency's but However after reading

The July 1960 Climb was your worst to cost of a Mara masson over 30 years to 1980 no one could have guessed a

John E. Over Resorts Former replet Unfortunately

those worderful things outside of the-

PRELUDE TO A KISS Mating strategies are the same worldwide, but man and women went different things

my gded soul. Enclose photo me new to a sumptious castle." snouse? Smoh. sava David M seek mates who exhibit trust as looks ambition drive Unition armstyer appoblologists before him, Buse an associate prolessor at the University of Michroan, set out to prove these cref-

compelling empirical data that exam a maje attorney in my early ist," says Buss. Regardless of culfunal beginground, he adds wom-Researchers gathered basic bo-

Solpants and asked them to race the importance of 18 varieties including "good triancial prospects" and "good looks." In all but one country women valued mate more than men old Similar N. in 92 perpent of the samples women rated emblers and inche-When it came to appearance, the ery culture, make placed great or emphases on appearance Inhorators spread throughout 33 neetly into the reproductive puzda-helped Buss out information

gurned species have two types of ocked usis one with musty arrisk gemetes (meles) and one with few er, larger pametes (formalws). A mize his success with quantity navino less attention to quality quality, not quantity. With a limned number of tertilization opporwho helds ensure that the few off-

have suggested that biological dif

cally different reproductive strat-

eges Timers a biology profes-

Buse's 1989 study bore out the theory "Males and females

have laced different ponetrants in our past," Buse explains "Fomakes are imped by access to reto reproductive females:

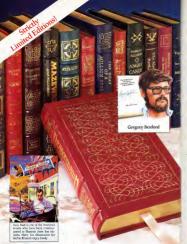
appearance to deterrine a potenals of businy help men ascertain a woman's age-often an indicefor of her ability to bear aucousstal offspring. Women play the who will donate resources to their kids. Under the rubnic of Westnt students on women's name."

But should people who buck Just because something is evothings, if you want to it doesn't meen, however, if a every -Shan Budaysiy DO



about more than 10,000 men and

shoose file mates on do Men profes reunz bedies warren sock out men with pedded wallets.



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Appendix and to the a tirelic and England to my electric as money ander for \$47. Englades abaying and handling; control to The Basin Press, for not first volume. Flower bull and for each additional volume as

ARTIFICIAL INTELLIGENCE

MIND GAMES For this Soviet scientist, there's more to computer games than graphics

player enthusiasm? Why by its "playability" But that can Phindry with say bends: They society relevent.

must have appeal "Each game must ex pione different human possibilgraphics ses," says Pathitrov a scientific They must also popped to us and the LISSR's most successful





computer game dasigner them to land where you want may rows accumulate and reach the game will end

Lére Tems, Westing FBM PC well as depth and spetis percepfalling bricks And Faces (BMPC)

Pazhitnov bagan designing new computer hardware. But as Pathingy resigned he was on

Strategy is the most intellectu and operating challenges must goals can be achieved "The best games are balanced with at ben " he says

Human physiology of course interacts with an electronic games hardware. The operating evel is defined by the astress in terface, whether you design the

board, a lovrack, or a mouse " Pazhitney says: "You must take into account the speed of play the difyou must stree the legys, how swit-

Phogress and adversement are measured on the tectical level laboriterm) goals that must be frame,"he says, citing examples a particular destination 'The

the game's conclusion" he saysnetten beword a perian pointer's personality trace. "Your Nacpres depends, for example, on whether you re rigid or floxible whether you can focus or dissipate your attention," he says

"This is where you find out how to

His personal strateget goal sion "I don't measure a game's levels during the greative process "he says. "I look at from latideas on three principal design or and make adjustments after I'm done? When causing about for game ideas, however, he does consider a game's potential appeal "A good computer game tionship to the players life." Porecognition. The sense of accom-

> be just the sweet small of succers.—Keith Ferral DO

BODY

BACK TRACK TO FITNESS Using the new Muscle Fatique Monitor, doctors will tailor physical therapy to the individual

til now, doctors degnason the subjective testimones of their patients Scon however marbine called a Muerta Fatraus back function by messuring the cently by Boston University's NeuroMuzcular Research Center ance Company (the nation's largexperimentally at Boston City

the MFM is positioned in the units pedded strap, which he is matrix's Two years not NAFIC research

Their results showed that the ery rates, or the amount of medianrest period. Using that measure,

As a screening tool for jobs uny the MFM could save money vide their compensation. Liberty Minual estimates that 31 milion favi Moreover, Labor Department teem from Boston University reported companies on cases. In

> amounts paid out would reduce der negotiation could result in NAMEC researcher Remo Boy occupedes that it may take a few MFM as a chaptrotic loci. He be fore and after speceflights to sturby the effect of spaces travel or

> > "Five years from now," he one. We might even throw ou -- Poter Cassick DC

device should what DNA Spino did for suiter provide definitive proof



EARTH

ast spring, when scientist

ONE GIANT LEAP

From and other amphibians are telling us something about our environment-they're crosking

Thunks to its outset alternity eopard frog our be safe from axtinction

Dwyd Wake was hiking al Park, he had the feeling that nomething was arrise. He fried with green algae. Where once a nythmic crowing filed the right sir, a strange quest proviséed. The problem. No chyping frogs, no algae-eeting trudpoles Waks, dirac-Zoology at the University of Call forms Renkeley, spon began to hear similar strokes from other researchers. In fact, evidence collected shows that amphibiansmenders of the Galona Lake/Mox Igan Preserve in Colorado's Eli-Mountains sunite from a popusays John Harte, professor of ensty of California, Berkeley Other recent casualtes the terrous surpifornis, which has disappeared since 1981, and the golden toac

Monteverde Cloud Forest Preserve, whose numbers drooped

siffwey. Wake says, frogs may proing ecological dangers-among them the extraction of species on a scale never seen before ity absorb toxic substances that have accumulated in the emvironment And most species of amphibians lay their eggs in open water where they first unattended and vulnerable to outside forces What really puzzles Wake and other biologists, however, is the amenders from such pristing sanctupries as the mountain wider-

dured incomerable plobal shifts

planet Earth, they are highly sensilve to upnetural phances in

their habitist. Because of their sen-

Cascages of Oregon and Washing light from the sun is by-product of the through gapne, may be a Female frogs in cooler cames lay their eggs close to the surface now get an extre zap of UV light. enough to push these species

over the edge Not all scientists agree with ple attributes amphibian losses the spring acid-laden snow melts into lakes and ponds—sat when eggs. In liaboratory studies, Harte says, meny from and salamen-

Even so Wake believes the long-lived amphiblens are tough enough to stick out even the

matter what happens," says Winker "we are not coing to have a frog-free Earth " -Cathy Spencer DO



be eble to hide

tal changes throughout the histofrom and secompoters are extremely hardy species," says Hemid Morowitz, ornivesor of ballogy at George Mason University in Harfax, Virginia "Yet amphibians

Although dramatic declines begen showing up in research studlast year that biologists identified a trend. By then the losses were three years, according to Harte once abundant throughout Colo rado and Westing, is dwindling drop-off in species abound Wiete and other scientsts, Includ

ing Harte and hernetplools! Marc. part to these fectors. the drain ing of swamps, contamination from pesticides the introduction of explic fish that prey on tedduce acid rain and pollution Although emphipians have en

SPACE

COMPLITERIZED TOLIR GLIDES Virtual reality for Day Trippers—the safer. easier way to travel

ant to fly like Super man to the moon? Just streich out your or and closer point to the spot where you want to land instantly

Your ourney has been syntheof "virtual reality"-a realistic 3-D artificial world-created in rethat senses your hand move ments and a head-mounted wid position and feeds you images ready coasts to achieve virtual lourem," but NASA has a more practical goal for if planning

manned and unmanned plane tary missions. NASA scientists could survey potential landing sites and plot exploration paths sions they could save untold

face features of the moon. Mors. and perhaps Mercury begause they would be generated from deto already collected by space probes The day nino twik of comif to create planetary environ Planetary Exploration project

and planets" says Michael Mo-

Groow, director of the project McGreev's Human Interface Re-Arres Research Center at Motfott artificial reality and will study the see what detail can be mapped from them

placed upon these arthresi coaltes will be the proposed pint. sion. McGreevy predicts that by the year 2008, unmanned Mars planet, which Will be used to pan-

overcome before these virtual re-Skitus pan sest McGreevy cites a 1958 Wolf Street Journal article at only 10 perpent of the data the Earth and closely analyzed only

NASA almosty has all the data the whole moon, but the tape regradically impossible to find. Algured recently from the Air Force: Professor Miss Matri of Arthat it will one: \$500,000 to process the tapes, whereas a new

more than \$250 milion. Artificial resility oldine imput devices and imaging software will for with virtual tourism may help boost public and congressional tapes as data sources

-Steve Dation FX

or even explore the moon's errain withou donning a exi-fus soso moint 150 Den De Distr honins



EXPLORATIONS

EARLY BIRD CATCHER: The hills are alive with the sound of music if you can bear it above all the noise

uniday 4.50 AM The nght is clear and colin and in the nght is clear and colin and a whippocowell crase is a rame in A whippocowell crase is a rame in A whippocowell crase is a rame in a colling and the new and a collection of the collection of th

Valley Kenses, and Seattle, where he lives But the portrait of deart across America is only a he heared for his more ambitious project—capturing whether cells "the muse of the paned."

The goal the creation of Taxon Chours' is A Memorition as

the mast of the plant I don
The goal the creation of
the "Dawn Choust a 26-minute nasea have symphony that will also
serve as a database of sounds by
of creature great and small—white
out they all enal.

out they said east.

Colubbioting with resture worthing to easy. Increasingly, harriar may be easy. Increasingly, harriar may be easy. Increasingly, harriar may be easy. Increasing the easy for easy to be easy. In compare the easy to be increased to definition, not only to provide the easy of the easy of

you've gother sevey from the einbent light of the out," he says. Hempton has discovered only 20 mosailess atte in the einter state of Machington. Even nation of parks, he points out, other only the Husbon of quet religious Charseas noor. Trucks gain their ongines. Jets pass overhead. All this noise hindest Hampton's of-

on forms and nood smudo for only a proment to but an percondage Phadaenar coemissance among Phadaenar coemissance among with the ear of an antimal. Once a valley the heard one by one be major atherens and the 18 to 20 minute roms that fact the like for bollow 1 actually heard the sound agranter of the extra valtions are up and the air state sours or up and the air state sours, you might not here even one age, you might not here even one.

When socuring for potential recording sites Hempton first uses his eyes, sciarring the forest from ground cover to caropy "I look for a contrast in virgetation

poper and foliago is exturent for difterest inseem in the composition in Not ten merry, or it becomes clustered in the composition in the composition of the composition of sound well Of it could be gross, and with the composition of the composition of the warring cherus also prefer to the warring cherus also prefer to and reproduced to the composition of and reproduced to the composition of the composition of the composition of and reproduced to the composition of the composit

ment for sourception to the control of the control

unedsed neure.
The senes—a bland of science and poetry—bears the recommendation of the American Museum of Natural History and includes such titles as "Dedar Greek" and "Tempasses Nightwals."

Himpton has planned his put, and of the global dawn chonus to progress from peologically young landscapes to motive unes, firms proposed from peologically young landscapes to motive uses, firms simple to complex consistents in firms y Hawaii, Authorities, for Lands, Albrice Scherger, January, and the firms of the fi

up with a less artificial version of Dawn Chans: Institut of one person following the dawn over many morths, he envisions singing the glow with a relivious of secondary to appear the wive of sound generated by the planet is rotation so that Grossmann DQ



ARTS

THINGS TO COME:

Aliens and robots invade Hollywood—
Moviemakers held hostage

Aust when you is thought it of thought it of

in 1977 the critical and magabox office success of Close Encountees of the Therd And and Star Wilers aspend scalene fection with suddlen respect. In its new age of high budget, high hich supleasting and henter films has comsenated 25 to 35 percent of ticket cales. And in the cosmig monthly, obods, destinativements, and eventually were closed drivours willingher air ob sums as asyours willingher air ob sums as asence-fotion drame about a Watnam veteran who suffers from hallucinations, a result of covert modical experiments conducted during the war. In December Johnny Depp

in December Johnny Depp graces the screen as a man-machine in Esthand Scascohards, directed by Bathnarks. Tim Button. Avalatings, starring Ribbert De Nino and Robin Wallarra, as ganexity valued due a science-diction tim, although its story a based on manufacture and a screen control.

grammat to kell humans on ught. Billed as if high etch actor, and written with a processive payd-feligral bears, "Few of Dedutation legical bears," Few of Dedutation between 50 commonsurgerory season terror acts is diregory. Here see an artifecture of commonsurgerory season thereon 50 commonsurgerory season, who creates a Charaged outling to settle part of the commonsurgerory season that the commonsurgerory season that the commonsurgerory season that the commonsurgerous desirable of seating and "seeding with Semmons" for proceed season that its season as while each of section that the salesce and while each of section 1.

and a second control of the control

and which responsible for such ficks? Could it be. Satar? Well, maybe—all least for two firm. Case 2 returns to the back yard where suburbantes coginally discovered the proteil to hill. And the young hero in Fighway be riskillatedly goes to hell to reccue his gritherd. All the, however, is just the be-

gaming. Fillimmakers are involved investigation. Several Specialists Most instability. Several Specialists Most instability. Several Specialists with Juneson Perk Lesand on Michael Charten in new noeth about the cloning of dimosars. Sylvester Stations is working on a move set in this year 2017, and scredning next year. Seen Charten with set of the plantation of the control of the second new year and the second new year and the second new years of the control of the second new years.

harrod -- A J S Revi DO

robot to be. But it
is one of the
root of cheresters
in this fell's
hast of actions
former time.

The fall season excides the premovas of Stephen King is Genemovas of Stephen King is Genepart Shit, based on this short setyer liding a Night Shit, and Night of the Living Dead, George A Remels new version of the Izelf Bashcust to The NeverShiring Storp, Bead on returns to once again save the land of Fishtian. Danny is re-relaxating the audiovalual menterpace, Paristees And Advidiction (Living the Control of the old Jobbs of Lidinity and Shiring and all Jobbs (Lidinity and Shiring) is re-

to the 1967 blockbuster this time stemp Damy Glove Photable 27 messor. Since Los Angeles an urban jungle where the Photable short has green to Thart game. Such lets as The Termination and Robocop Issanched a new breed of light-tech villams and horses. This year's ortion and hotbock book disposed by Re-Anney Los Angeles and Robocot Los disposed by Re-Anney Los Angeles and Robocot Los disposed by Re-Anney Los Angeles and Robocot Los disposed by Re-Anney Los Angeles and Robot Los disposed by Re-Anney Los disposed by Re-Anney Los disposed by Re-Anney Los disposed by Re-Anney Robot Los disposed by

Robotular directed by Re-Animator's Stuart Gordon. Eve of Deservation, and Harokara, who pits the cost against Mark 13, is self-repairing military weapon pro-



CONTINUUM

PICTURE THIS.

Discovering your better half, shopping with a conscience, and the trashing of NASA

It may be the most productive business advistrage since coporate power breaks or the contract of advistrage since coporate power breaks or the contract of any some of the biggest companies in Ansanca—IBM, Du Port Coopinal State of the contract of the contract line at the co

Called the titig Picture, it's the latest way for a company to peer into a crystal ball, ensuring a bright financial tu ture Take Brinny & Carch.

begit Inanced to true Table 19 and 19

resistant with patential and lade would buy our crisponer; soryal Britd Dricker, modes communications manager for Casylos. "Parents werrand the classic soly four for notating sea. Most wanted to chackle cut the laws classics." You got the Big Picture if you've got a whole brain. You got the Big Picture if you've got a whole brain, to you program developer filed freemann. A plaqueat inin the Sobas, Hermann thought the left (analytical) and notific (marked) beam classics you got if you for except AP-

nght (mastev) bram dichotory dich't go the enough. As bet dichotory with Paul Melicani i homo y di stimu te baratireo bram in one, regolitani, ribino; adoctivatireo bram in one, regolitani, ribino, nedocitis-Tirrik o'l the bram in a cercide and devel of the box act less upper left (A) analytical, quantitative, and fostbased in irride griller, lesser ingli (E) amplication and acquartati (tester gift (C) amplication in disposariosis proportional control of the control of the control of [Each of us less a dominist specific, Hermann says, but Well, Issue's how it, good when we try to tak to each other Countries As communication best with open and the countries and the countries of the countries and the countries and the countries and the countries best dominante using, of countries the Hermann Brain Dominance using, of countries the Hermann Brain Dominance in the Hermann Brain Dominance in the Hermanne Countries and the Hermanne Count

without interpreters

and teaks. You write in your beding write in your beding ward subjects, colloge major, colling and the subjects of the colling affects, seeks or many? Whot's you strong sur? President solving, organisational or admiration the authlies? There are even presents of the way you might hold your pend while this good the Hermann Nateopers Survey Form "you rold your pond without at It."

With the 16 you've right brained Andy Satin, an alsocate of the right and procedure. Andy Satin, an alsocate of the right partnership, wide with companies beling far the big podure. He plus openwhich brain stems and helps offering dominances to communicate and create commodifies thereing device to communicate and create commodifies thereing shifes more right-brain creations, whereas men want, just the ficar. "Them build restorable thereing want, just the ficar. "Bottom build restorable baster than man," says.

State: They're battle at consisting a deal their man but when it comes to design a sele man atternor a succeptiful. What about the clacks that access we man smoothed that main? This is a way let from why of bolding a ingle brown person. States ago. Being encland redly means being more inflation and including as you when with the work, which is desirable in the copicale outing?



WHAT JANE FONDA

Some people seem disstined to be unit in fact. some unfortunate souls are they I used and Albert L School in Boston studied 199 patients with such swelling, and fainting spells exprose-induced anaphyobserved in 1989, Since then a total of 500 cases a patients, however, carrie The researchers found that estro pertan foodsor cabbage—a few hours.

before exercising appears To sword sysrcise allergy refrain from sating before exercising and to avoid advises those prone in EIA along don't work out alone. and stop exercising at the

Boys get more than 90 perpent of the perfect 800 scores on the methematics M CMNI



grafted to the grow

UILDING A BETTER

Ten years ago women who wanted to make the big transsexual leap into chaluses, reconstructed usand begun from the patient's

nervous somulation in reconstructive and microsurgical techniques drawloand to regar penises demoned by insity classes. I estofaction, says Gottleb. or birth defects—are enabling doctors to fashion a nerve that cames erotic and

sensitive phalus Dry Laurence Gotfeb the University of Chicago are property in a technique collect racked foregreen flag surgery in which skin foreerm are removed and The key to increased user

other sensory messages from the gentalis to the brain-into the new Isansnaryo extends inside the ing at a rate of about a millimeter a day Sensation in the new penis. Gottleb

says, appears in about three

Later a manually operat ed pump or semrigid silicore rod is inserted to make intercourse possible

"Hodging up the nerve has really been the critical development in phalic reconstruction," says Levins. "That increased geopticity has greatly improved patient selection."

—Jack Mason.

THE CASPIAN WILL RISE AGAIN

or Astrochast. Makinachisala and Baku are seeping within on the Caspain Sea. The Caspain Sea. The Caspain's wider level has resen livis feet aircs. 1976, if it is as another five feet by the sum of the century, it would spell dissater for more than 1.5.

its shores.
"The whole situation there is a mystery, a grant question mark "says Charles
Fletcher, a geologist who is studying the Caspian Ses

assavas " Some biame the Sovets, who diverted the Weiga River for agrouthus impation in the Fifties, but Retcher says the Sovets are not responsible. "That program has ended," he says "Beades, the amount of water diverted obeant account for the nex."

The many landocked sea perfect model

The rising landlocked secould be a perfect model of what may happen if the predicted greenhouse effect coorus. Retuber will spend part of the need three years studying the problem aboved a Sowel research visual. The pint U.S.—Sowel growth me if our sowel.

coests lifets, enoding blufts and burner elands to and burner elands to understand the effects of rapid oper-level to "If it's real and the computer models are fight, then we had better be prepared for it," says Flotcher "The Cappun provides an opportunity to

coserve in three years what may be a drastic global situation within sulty." —George Nicobe



Hip deep in it. The Sover Ution may feel the effects of sea level rise before the gradient coverhouse effect actually access:

HOT SHOTS

Never play goff with a man named Wilbert Cohen, especially if you notice him reaching ratio an insulated save to not out a holf.

as assist to pull out a both under the control of t

consultation them as a comment total to 100° Feb at ineast eighthours. Slow bak, right in the feet eighthours slow bak, right the key, says Cohen. "This ill-wading until can give a golfer a transactious advantage, although l'contil helib your game if you isapp sicing shots into the water," says Cohen Depending on outdoor tampenturus, head golf balls retain than degit balls retain than

ed golf balls retain their warms for 90 miles to be hours. These carried in an insulated sack should get you through a total Chest's claims have been confirmed by independent studies at the National Testing Laborations in Long Island City, New

been confirmed by independent studies at the National Teating Laboratones is Long Stand City, New York where respectives recorded the rebound characteristics of heated and unbested golf barls. The higher than temperature, the greater the rebound, Cohen says. He disease or more than 8 percent improvement for mainleful reasons.

th a Rohen, se han lasted short will



makes a cylindroal homebesting unit called Thereah boating with called Thereah Datance that electrically warms golf balls to their very cores, baking them at a constant 100" to 125" Flor att least earth hours. Slow balk With the number of rec-

restant gatter expected to reach 40 miles to the and of the century. Others says he would be content ust in maste? I person shared to sell the heating units and massist leaves for 550 vis mail order and eventually through got shope. The United States Gatting Association confirms Calles's claims but son't box some fow cricket the heated ball are

Existing rules bar players from heating bells diving play, but they clon't say anything about professing —George Nobbe Ar birth the skaletons of gala are alightly more mature.

are slightly more mature than boyd: Some souches and newborn gats are slightly more responsive to touch, and infant boys spend more time awake

OH SO SWEET THE HUNGER it a a standard line in

reening: "No sweets before anneste " Well, science has apart, and it turns out that cree to which one's appetite the kind of award one sports

Rodin's subjects were 24 seked each of them to dark liquids plan water or suger (glucose), or fruit sug-

utes later the volunteers More of the volumeers are drinking the aspartame water After drinking the corrades. These who drank fructose ate a whopcong 20

growing kids who need their same? Not wel. We haven I term, she says. And that

-Bill Lawren Susant that help you blue pigment in many



RI HE ROSE OF

toeydus feed

Screntists at Calgare ate of Calgere Inc. of Davis, California, believe

flowers but is mysteriously the project, and his colinserted into the cell tasks of rose bushes to produce a The process must fest be

gat food into it. "We tested it one of them right next to It will take some time to

goal to develop a rose that company hopes to be selling blue roses by 1993 Calgeno scientists are

substance that makes flowers will so rapidly -- George Nobbe

SHITTI E DUMPSTER

Who takes gut the reads

astrogerbade-and its

Fotor the Space Age trash compactor a 48pound unit small enough to med deck looker NASA's Recently J B Thomas a

bodies Man a top fear







ses and arrifacts that

FOO TIMERS

Stone Age people pazed meals, but the shells made for a different reason. These important clues in erchaeolo-Popular regiocerbon defino rehable dating system, starts

mains. This leaves a word of

seems that ownch equipment

36 OWN

dating method to measure acids and arrive at a date. arefacts, says Edgar Hare, a.

eggs, which could vary well help grack the mystery of -Gregory T Pope | reach, nuclear power, South

SHOPPING FOR A BETTER WORLD

or fine women and minority

The shopping quick lets

ferent areas rafts to charity. testing disclasure of infor-

In the Snacks category Borden Inc., maker of

company is making progpower, and scores high in

members are on its board of reveals that the company does no enmel testing. difference? In some cases it already has "Ben and Jerry's did not do well in the sating for the promotion of women," says Leslie Gotta search for women on the

> number of minorates in top the guide was a factor in that." The guide is available from the CEP (cell 1-800-

-Down Pro Wirmso ask more grantings



TRANSSEXUAL FROGS

While many humana go to to male all on its own artichange operation came

makes-rare behavior for this reproper, Grafe says, because Terreles don't fight." females, producing perfect-

wild. Grate, now at Cornell doing this in the laboratory

metron - R&I awent Mary and more pessuady

intiglately if a man distortes discovers her husband women, after as more



rod technology--a coteo

keeping lightning at bey Lightning Master Corpora

FOOLING LIGHTNING because the Teether dust in effect, stop lightneng from recent advance in holdenic

cherces build up on the ton of 2,000 years thin steel target' to aim for But the mager a lightning strike. reducing the likelihood of

That's comiaring to know, considering that there are 1,800 active ruin your whole day," as

-George Nobbe



She is got it all. Ferrale head froze don't need makes

WHY CANT A MAN BE MORE LIKE A WOMAN... AND VICE VERSA

Male and female brains aren't the same. Does this mean that sexual differences are biologically determined?

BY KATHRYN PHILLIPS

boarnering-shaped band of fibers connects the morgue and collect another brain. Evertually the

the early Eightes would Toxas Southwestern Medica

Certies, where she was



came a "branded" woman Owenight (withough there was considerable confusion about which sex that was? "I'd opposed to enhancing t," comments De Lacoste, row at Yele Medical on that paper and not always favorvery young it made me an infameur

a held of research but strode into a mine field of contentious debate. That stuff is hokey," says Anne Fausto-Sterling, a Brown University biologist and prominers onto of the brain research. The confence that there are differences in so fragmentary and so week it ought acentate may have handed society a meens to justify sexual disprimination

I was gwing a seminar at an East differences may not stop at the nack but reach into the brain spell, effecting plan some-not all-of the differences.

Current theory-and battlegroundpropounds that boys seem to excel in meth and computational skills where as girls are superior in language, sposortal variation—the ability to see manipulate and compute the position

Although the typical cognitive profile men. frem is a huon overlap. Many womtests, and vice versa. In large groups ence." says Sandra Witelson, professor seets of an instantion. That is you can t

real-life tasks such as running a com-

pany or an experiment. Still, when man

tons that they brains on about it in

in the last decade neurobiologists

mind's big Telephone cable, connectnaurors between the two hemispheres basic behavioral patterns—from temper ature regulation and appetre to see functions. Neuroendoonne research sitem differences begin as sex hormones bathe the developing fetus in the throughout childhood-and perhaps even through adult life-effect brean ectwity and reads performance. Other studpropess the same information different-

⊆Differences in language processing in warnen suggest

something more alobal—that women recruit areas of the brain that enable

them to use more strategies than men.9

N and yet come to the same or smiles refront new finding cornes the researchor a coverat. No one knows for sure CORPUS CALLOSUM LEFT BRAIN.

RIGHT BRAIN costs studied the aplentum. Shaped gallosum, is a pathway connecting the well as associational areas that serve complex coontive functions. She disthan men, relative to brain weight. She

back at least to the famous "split-

brain differences. Male brains—with fewlosum-are more lateralized than those of ferrales. This increased latergreater right-brain performancevaluespecial skills. Women, with their their

cross communication. They have deering brains from the Dallas morque ten year study correlating people's hand preference-right; or left-handed-with enatomical managements in their brains. Hand preference is a behawaral index of, or 'window' into, the tween left- and natichanders, since aligation. Among right handers, the left these functions. Also in psychological

briggeral function. Since the corpus calshe micht see the differences there. how to do behavioral anatomy in living ously if and wanted to make a continbutton to science were asked to partic-

ingle in a study. They were given determined whether each patient was consistently hight-, left-, or mixed-hand-

brains surprised her She discovered that among men, the istimus, a seqcortoes, was larger in the left- or mixed er she found there was no difference among women in inthmus size based mus was larger in women across the board I did not suspect-there would be no seeson to predict-this dif-Worlson says. 'The idea was that the calling an might be bioner for left-than right-handers, not specifically for men

The supplicance of a larger eithmus? One passibility is a greater total number of fibers." Witelson save, "or the fr or studies to find the snowers." A great-

was published?" she muses "surrur the sense that it is complex but not sub-

harrier to find, or smaller Without found the variation in isthmen. That means the neurobiological

ference," says Western. Although men and women do a lot parts of the brain. This could relate to by the temporal and panetal lobes of their fibers through the isthmus. "If one part of a package is different, there could be a domino effect. There must be other perts that are different as well." Do Witelson's Indings mean one

woods befor or secree 'Whet's bedge, an apple or an orange? THE LANGUAGE MAKER

Cecile Naylor, a neuropsychologist at n Winston-Salem, North Carolina, saummost accidentally as she was studying hindheid" by neurological problems She gave them an oral spelling test that required them to identify whether a word was specify four letters long. To table, westing what Naylor describes as She found no essential difference in on the spelling test. An analysis of blood flow hawever, showed sex differ

livity seemed to occur in a tight linkmyolyed in language and verbal com-

er number of or thicker fibers could be sness are connected by a thick band of fibers. The standard model for language holds that language making and comprehension area in Warnicke's ac-Broca's, where they call up the program

> such interes coupling between the two gross Ironad Wemicke's was actively hard it in the left territorial lone Warracke's was also triked to its "metor" aron in the aight temporal labe. Without further research, Naylor is losth to say what these starting differences mean. primary vaual and auditory regions

Some of these early behaviors, such as playing with Lincoln Logs, may lead to changes in

cognitive function-you miaht develop hattar visual ematral exille.

on opposite Werrycke's in the night

pect of language. If this region is enprocesses a tropcal woman brings a richnent into play than most men do In men, as language moulses move toward speech only Broca's area is enthings going on between Broca's and lots of different regions." Is it almost as La women's brain is "ableze" duning len cusps processing? "Will! Nevior re-

thing more globel-that women are recruting areas of the boars that enable The male arrangement follows the the brain," she says adding that most

classic for only about 50 percent of the human population. Neyfor's work may also explain why according to some studies women recover faster than men the core language regions

THE MASTER CONTROLLER

ed deep within the hypothalamus, the Ggesle (see Interview, page 709 discovconc area of the male rat. This area, lo-

In 1985 Dick Swaab, a Dutch reurohat showed sex differences. One was gated shape. Because there's a difference in shape. The nucleus can make might have a different function," he

Swaab also looked at the preceits an group. And last year a fear lied by Gorski reported a sex difference in two The UCLA scientists stopped short of nave to those of the rat. 'We don't know if either of these (Swiisb's or dates for it." says Melissa Hines, a neuresciented then on Goraki's team tion might be a function of the cell

Swarb noted in one rat study that the her of mounts and the size of the SDN The bigger the nucleus, the more the mounts Implicators for men? Agen uncaution in making rat to-man leape in

"There is nothing wrong with your TV set. Do not attempt to adjust the picture."

Explore THE OUTER LIMITS with Robert Duvall, Martin Sheen, William Shatner and more! -delivered over 90 minutes of suggestrating to











those seen in rats and lower arimals. says Bruce McEwen, a leading Rock efeller University neuroscentral

Based on aramal models screntists are increasingly convinced. further more, that prenatal hormone exposure my and helpayonal differences between the seems. For the last several years, graduate work on physical aggression and its causes. But her interest soon

Swamb a and Gorski's respends has en-

to the question of hormonsi influence on

studied two special groups women (DES) an estragen or "female" hormone, during pregnency, and grill who had conpental adversal hyperplacia mele" hormones in animal studies

or. We think of estropen as a female ed into estractor fan estrogen) before

masculmae human female brains So. she cave dichetic leavang tests to DES been exposed to DES in the texts off neously to each ear Because of the brain's circuity, the word going in the right ear is recorded by the left harrier

ear recorded by the right homisphere Because ther left homsphere is don Hones explains. "They're better at recear. And there is a sex difference. Men en tend to be more bilateral. Himes

More recently Hines and psychologris ages two and a helf to eight, to

type toys; male-type foys, and neutral lovs. Then one by one the childrenobserved. We found that more offeras the control boys, the and openized gets played with caps, trucks, Lincoln

less with dolls. Hineo cays I was cute succeed " she admits. "because you don't think of there be-

risted exposure to androgens helped orepiece. "There may be other steps in the

6The way the brain develops anatomically, then functionally, has a

large hormonal component One thing it develops is sexual orientation. It's one

of many variations within each genetic sex 9

I'm looking at that now. And of course these could be early behaviors, such as function-you might develop better vi-

qual-operal aids Barbara i ince chief of nedigino endoornalogy at UCLA Medical School is skeptical of suggestions, based on studies of hormoselly abnormal people. masculinized or feminized brain func-'abnormal' expenences in the words are more often than not coupled with abnormal hormonal levels postnatally, and it's different to senarate them out? she treated "So it is a difficult model to use

shape your brain and behavior can it turns you on? Could if answer the rid

havior. The scientists created a play believes this may be a factor. In testing this, she and her colleagues found er-fran-overage left-handighoss We don't think the increased left-

learned or socially induced factors she says. 'In contrast, because left related to a typical pattern of brain organzation, we feel there must be a neucohological factor to homosysuality." Witelson suspects that in women higher levels of masquiriting horentation." In men, the process may work a little differently. 'We'd cuerts fouror androgene in utero leads to increased left-handedness and homosex-

fright brain compared to the general population " It does suggest, however, ferently in men and women Shelton F. Henridicks, a University of Nebraska psychologist who studies sex-

ual orientation, says Witelson's research, while interesting, in weakened pare with the homosexual croups. She uned a deneral population collected by compare with an Eightee homogenual population in Canada. The rate of lefthundedness varies with the population."

Handricks says, and factors such as Witelson has also found evidence of differences in thicking pullerns between tong, suggesting that the differences between the two proups—on average—

tume them on Last year Wilelson's than heterosexual men and better than heterosposal women—who bypically do Whiten and Chant McComick will re-

The difference in the pattern of skills augnosts something different in the organ of thought, the brain," aha

says. She products that difference may raffasum "Unfortunately, we don't have MRIs of the brains of people we DESCRIPTION OF TRANSPORTED

DANCING IN DREAMTIME

BY SCOUT BUSSELL SANDERS



The changes are features swepting to the master Lowest Market Plans scancely have registed that they are making such a heliculated Weetering a creak project of the change of the change





divising their private brew since we parked in orbit, but most - at the sky, saying, "The Great Spirit" Was he smirling? Local appear to be giddy from the dance itself. How am I supposed to navigate in the midst of this pendemonium? Fortunately, there is little havigating to be done until the she-

mans decide, in their shaggy wisdom, to begin following the dream paths. So I am free to set here and observe the whiring dence. I large the shamans do not see me at all, this unpoweted woman, com-silk har in a ponytoit, meager body multied in a Mec jumpsuit, fingers flickering on the legs of an instrument they cannot understand. Above my head, they exchange girro and yells across the circle. They are old, too old for carousing. facus weathered like driftwood. For amplicity, I think of

their facility weathered and distributed. For simplicity, I think of them all as sharmans, yet among their tribes they go by meny titles: with doctors, sorcerers, maggians, waterds, healers, soothasyers, prophets. The catalog of supersistens is long. There are section of these worthers abound, no doubt a mystcal number, nine growtheards and seven coopes. In their great age, some plamp and others willered, they seem to have

umes and the shades of their skin are as varied as their tiles. The Every is the darkest, a dasty charcost, closely rivoled by the Bushmen and the aborgress. The Lapland is the police. The tyreen those extremes of the earthy garger of the steppo, the Hops and Nove own pottory, the Estemo is

During trunch, strapped in seeks and diselved in pressure suits. Trey looked like ordnary passengers. They might have been a load of tourists, or physicians con-versing in orbit, or bureouon a surext. But the back to normal, they all spand free of the suits

cioths, necklaces of bones

anabox, beaded veets ned heroidresses, and ters, bowler hats, patched blue scans, fuendos, a menagene of Some have bits of mirror sown into their garments, which Sare as they court under the lights. Others wear me being and chains of copper amulois, small bestol shapes that clash other with a sunknown day, Stankarkin ripbons trul from unkles, brd wings flep from shoulders, talk way from bare

has These browns cuttle wheel shout me now like for uses on a carouset. The eastwaret faces dealers with reveal Most of the stamping feet are baro, smacking the metal floor with the sound of wet tips, but some are shod in moccasins others in high-heisted boots, in sneutons, in thorass, Aside from myself, the only person in the cubin who does not

dance is the majordome for this expedition, a bulky numburned Australian named Casham Johnson, "Tm a humble servant, not a leader" he told me when I met him before tounch. "Merely a facilitator, an offer of genes." It is lived to see where he will find the of, his manner is so dry. "Then who is the header?" I saked. He stubbed one loselinger against his belly pointed the other not tell. Now, through breaks in the circle of dancers, I catch oses of him lounging in the front row, his ruddy face hicken behind a copy of Gels magazine, seemingly oblivious to the uproar. He is dressed for the part, in a grass green caftan with a large rulous eye painted on the chest. As bodies gyrate between us, the eye appears to blink and then store, blink and stare. For a moment he lowers the magazine, and I am pinned by the gaze of two more eyes, blue to go with his sun-blead of a laboring heart. And now comes the jinging of a tambourine. Yet even this hammered rhythm does not make sonse of their stees. The shamans prance and shuffle, twill and shout. While the turnst fills my left ear, the voices of the crew till my right through the phoneplug, reeting numbers, formulas, pro-cedures. Occasionally the bodys of meson are supped at on-

graded fingers the politic redove," has allow-

"Do they have you wearing feathers yet, Conne?" says the pt, and the engineers remain aft. They chuckle at the them full I have been coded to the passenger cebin. The study the images of Earth on my screens and trace with

> they visions instruct them to tolow, no my consolo has the space that was decreed "No feethers yet," I tell the capture. But I'm tempted by Frese bean-tooth bracetots.

Warn us before you go 'Don't worry." To play along for the crew, I add, "On nitra genes. My prendmoth er's grandmother was a full blooded Flour

No koding? "No kidding. Her name. was Hawk Soors At the Ret. tie of the Little Bighorn she castrated seven soldiers Dead ones I hope" be

replies panielly "If they weren't dead beforehand, they were soon after There is a chorus of male grouns from the engineers, and a female angger from one of the copilate "And was this procestor of yours a witch doctor like our distinquestioni personners?" the captain pides

The family stories don't specify Whether also was a header or You're sum there's a difference?" Loace for a moment at the clancers, who grunt and yodel as write at me from Gosham Johnson's chost, "On the fignt," I tell

From the perspective of accountants and technicans on the gers—the shamars plus Johnson—for a week of orbit. We are The countdown werk off without a nech. The feurch was routine

surregular with the customery oceans below a flight is a flight, a contract is a contract So what if the money comes from sophisticates who wish to preserve the ways of savarant? So what if the presentance wear bells on So what if the navigator must guide her

earth with dence and song? To keep from going gags, I slip bebusen a beer and a wolf in the circle of dancers and make my way torward to the cocket. It is like awarming from a whelpool into a palm lagoon. The rows

of pwilches, the phosphorescent screens, the precise marriars of the prlots are reassuring. My face must are nounce my robel, because Jane Ripos, the copilot whom I know slightly asks. "Protty wild back frene, Connect"

haufed " says Captern Lopez "Just

on the cabin monitor so the cultandish figures wheel in silence on the over-'And I have the fooling they're still

The captain strokes his handlobar mastache, about which he is exceedmaly vain. "I don't see why they need a stup! he sens. "They should hop on

"Or glimb free ladders," says June Or storey up the rembow I add Magical flight is only one of the poware attributed to the shamens in our brief-

as heaven, cive to the depths of the open, aprek with anmals, pass untheir bodies, steb themselves without bleading cure all marrier of sickness.

Maybe they can put me in touch with my clear departed wite," the pap

Why not have them bring her The captain frowns "She wassn't All this while, the other copilics a train-

from her resturnents, never ofters a word Tail custard-skrined with lank mousy hair out ruler straight across toneone or so half a dozen years younger

of joynders or eco-artists, or officials withform and the rigidity of her some proson white the rest of us screw around She plusches a nosebook runs a bal-

As though rebuied by her diligence, the capture sweets back to the window eighth time since leunch. 'Wall, wild bet

the whirlood

A spell of quiet. The drums and temboua few in reads, most on the food either or sitting cross-legged like years. A knosiand crone draws a landscape in the asse, using colored sand from pouchgs at her waist. An old gentlemen in a turber stands on his head, the skirts of

the spry old coots can visit

the underworld as well as heaven, speak with animals, pass

unharmed through fire, travel outside their bodies, and raise the dead.9

has gown deposing to uncover sorawity stacles bearing drinks Their sensors fewn been severely tested by these unal murmum sound to my ears less like

all these vebbering languages, blittlely make human powents weep The one human servant seems to have process little to do. After discarding his magazine. Graham Johnson cleans has hads with a perknife, picks

catan droops. At length he ases from sole, his body moving with a horsey warcht, his ruddy tape grapked by a smin "Al secene there, mate?" he says to me. his Aussie accent as thick

Smooth sailing " I reply all those games." He node at my

screens, which are occupied at the mo-It's not really so hard. Like playing "Never played a thing in me life but

I toy with a contrast which In the wint setting-in a desert, say under a broking sun-tre might look good. Big. as he to, at least he would make some

shade "First time up?" I ask "First time in a ship," he proword went to ask how else he came up

nes about magical tright and let it pass. He leans over me, smelling of mint, and the eye on his chest comes even with my face. I say, "How did you "What this lo?" He wise a thumb at

way framble into everything. I was collection also sonce for me these when guide. Wanted to visit the dawn of time. Wanted to extress the digney of primal peoples. He taked like that! Funry Pom he was Well, I did a bang-up inh. Prorty soon I was cuiding offer softs into the bootess. Cases in the in the Himalayas. Anywhere the oldtime religion still bubbles up. Two years ago I drapged all these felias out

up the idea for this flight. And here I arru There must be a lot of squabbles," I say. "with so meny languages so many queer religions

"On it's all the same religion." "The serre?" I glance back along the

broods over her artwork, the turbaned elder still balances on his head. Home and feethers show above the made. Sure." Greham concedes. "they chess bloody strange. Look at me own getup?" He plucks the blousy want of tal from the stretching. 'But don't syline by costumes. Underneath, wo're all the same forked an mals. And beneath the rigmarole, it's all one religion

'Do you believe in it? The magical fachts? The talking with spirits? The sproary? "I believe dev beleve 6" "That's not what I asked"

"I heard what you asked, and it's what me dear departed mum called a rude question I blush, feeling studid: "So it is 11th

garge s My aw looks I fiddle with dails It

stare at my acreams. New don't you go steamy." he I keep my back to him, until I hear the music. Then I turn, unable to resist.

eight hours later they snick open to gree us down. Only the burble of arrores of sharmens break my sleep

Lowely second havening chearment. This copythe ship's artificial darkness I wake howby a lenfe I sit up in fear coupling I

call me Hawk Soars and check my shoulder biedes for the sprous of wings, my By the time I return, the shamens

graphical feature. The others jebber in response, nodding their grizzied hearts. After a while they harek their orcle and clump beside my console. A ven-

I can imagine him fooding the wings of

I begin keying the coordinates. The fes me by asking in proper English.

His bare black chest may be

To cover my surprise Graham says.



"Your resume is very impressive, but why don't you by again in two or three ristion years?"

"Ah, yes, from the computer gods," stars, the sun and moon, the earth and the old man observes path so he'll do the singing ers dance, but Luke Easterday squats my screens. Every now and again he grunts as though recognizing some ute or two of meaning, without any

thythm or melody I can decapter. Then more wetching, a grunt a round of mosn ing. To call it singing stratches that word beyond anything I understand While we're above the Gots Desert

floor, twiches violently, looses a high to worry he says 'Just a weignary

trance. They all have lem: Like epilepan from my sight Luke Easterday nounces. We've got path number two." We fly that second route, then a entranced shaman each with its own

smarr I don't understand a single note They coper and should seeming to pan energy by the hour Long before the stutters come down for sleep.

I till him a wry look. 'They know how the earth was made do they? Instruct for those borrier muscles? The voice rumbles up from his belly. They continuity if it waitzed up and bit them on the burn. What they talk about is com-

pranks the polar bear's dreaming My own chearns stayed with me long or today Ragged images, as though torn from the tissue of sleep, the knife acain a baby a foot a fepret a wom-"It's all dreaming, really " Graham

The world started in the dreamtrre. When the Creator thought up the Sir Chies

Us. too. We climbed out of a hole prend-new earth, and started anging The very same ditties my old felias are the briefing paper. But I think it will across the green expense of his cafter,

He pats my back a light touch for a heavy hand "Bingo"

ble out of their bads. Dirt climbs into the air Things get confused "

€White we're above the Gobi Desert, the waman sû mas la the floor, twitches violently

looses a highnitched ary. The shamans bond over her

plucking their chins.9

I by to keep the ekeptoremout of my they were to begin with in the dreamens when everything was fresh and bright. Kind of like turing a pieno-

"If is a lovely vesion." "But is there one stach of truth in 6?" white in his sunbarned tace. There you go again with your rude questions. Let's sist tay me mind's open il don't know

ing things

TI keep my eyes peeled ing his law I hear the rasp of the day's wholees "Actually" he says "the hardet a gone all crook

"Out of whick Busted up Sick." I cannot argue with that On my a blue and sendy ball road with clouds. But I have flown with too many

about my drop of Sigur blood. They prepale har, a trige of crimamon in my vendia sixn a hint of Asia in my chock spend my breeks up front with the pi around the clock. Jane offers to spell "Why navigators are like fremen They only work in emergencies. Ninety

fourth day. They play cards, larger chew ruts, scattering hults to crunch beneath the wheels of the stewards They mend they costumes which dancing Arrid their albberish I catch Their bursts of laughter make my head anin. When he is not halfing on his weaving a belt from brightly colored grown so long that he removes one of

percent of the size they lost

a grotesque image the hulking man He has exchanged his cartan with its source white gotton hat the gives no sign of realizing how preposterous he looks. The whole lethargic day he ig-

morning. I am in the cockpit basking in the goderly rhydritts, when his Aus We've got a new path for you mate! Jame rolls her eyes at me. The capexisterion sits roudly at her post, scowl that I carry with me the germs of discrder from the shamans?

No horse but an elle a west marries Graham waits for me there, hugging the plastic globe. I can sparcely hear him "This is a powerful path?" he should

PICTORIAL

Will the offspring of computer and artist someday rival the enigmatic beauty of the Mona Lisa?

TRACING THE MASTERS' STROKES

COMPUTER ART BY LILLIAN SCHWARTZ



It Learned as 40 km even due to the contract of the contract o





A UNION OF PICASSO AND PIXELS: WOULD THE ARTIST APPROVE? DID DA VINCI SEE HIMSELF WHEN HE LOOKED AT THE MONA LISA?







ing the Museum of Modern Art in New York and the Grand Palase Museum in Perso in 1986 Schwarz's stratos Promo Cetterin see or of nine and Cetterin see or of nine of Modern Art's special either of Modern Art's special either in Second Selection (Mine) and Modern Art's special shall be seen as computer-generated muse "When I saw that" says Schwarz", "Johns and Cetterin and Selection (Mine) and expression using symbols seen school and to see that new expression using symbols seen the perture is taken in section of says patient "Latter in section."



Amo Pendas and other noteworthy accentate. All were interested in the visual capacities of the computer-'T'd suggest often they could write a program for it. There were always trace-offs working in three dimensions with fewer polors or

working in two dimensions with correlete color control." Schwartz is not bound to any computer, since different markines have different capathing from an old IBM 360-50

Several of the computer-ganfrom a video of the same tom)-and the Edo senes logges 66 and 67, tool were stored, then manspurated

PAINTINGS CAN BE EXPLORED WITHOUT ALTERING THE ORIGINAL LOOKING AHEAD: THE ART WORLD'S EYES ARE ON SCHWARTZ.



ern to provoke "a sense of you ment and dance " With the imthe women's eye to look at us ated a str in the art world with her theory that the Mone Line was a "self-nedout" of Da Vinor in her Figures in a Garden (page 62 top and bottom), she was trying to use color to provoice the viewer to move

Other images were pointed nes Beyond Picasso (pages Owl Eyed (page 83), Shaped Like a Fruit (page 67 bottom), and Elinas Faces-Red in (pages 64 and 65, top) (All of liahed in April 1991 by WW







THE COMPUTER LETS YOU CREATE AND CHANGE SHAPES, SHIFT THE FOCAL POINT OF A PAINTING, OR EXPERIMENT WITH COLOR.









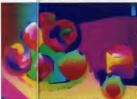






WITH 3-D IMAGING YOU CAN VIEW ART FROM EVERY PERSPECTIVE CHWARTZ PEELS AWAY AT THE FRUITS OF CÉZANNE'S LABORS.





Norton) "The computer as a carryins has many advisitigos," she says For instance, in Shapped Livis a Finut, a work in progress, Schwartz plans to combre he trockgound eithories brusheoix with cubernits start the applies. "The computer letter me do an auxilit trail of

er lets me do en audit trail of my creetive process salutes schwarts salucts solutes with a sense of lightnese." stay with colors that are full of good lealing—d hetps balance heavy, gue weenching mages. When I can't claps! heave mages, I switch but heavy and apressing to what he with salvy and analyze other artists" works."

ages, I which to at heavy and analyze of an artist's works. With the advent of more powerful subserse continued with the libest in south-sensitive screens and best humon-op-need pens, the possibilities are Intilized. The eye of the artist looks to the future as well as to the present. Schwarz says, which a what her cell-poutst (blowly, internig through a Mescel Duchamp poulphing.

WHY CAN'T

tested. This might provide further evidence of a neurobeological basis to sexing to those strongly based to a solely

derstood by society. 'Our results sugcost that homosexual orientation is not way the brain develops anatomically. then functionally, has a large early things the brain develops it securit on-

entation. This is one of many variations have a pervision influence not poly on Hormonal changes throughout life brien development but on aging and varmay affect theriong as well. Canadian ious stages throughout He. They aren't abeth Hampeon found that during different staces of their menstrual cycle be controlled by shifts in estrogen levols. When estrange levels were birth just before ovulation, women performed guts it. "the articulatory, complex mantup speed tests, on which women are often superior to men. Tests of spatial ability showed the reverse effect "in out of a complex pattern. They might complete 40 spatial tasks in three min-

on high estrogen days erything we've seen. If anything har work is an updating of [American prolovel of excitability in the brian aless in rabbre. This leads to changes in fring rates elsewhere higher in the brain. The

move, and speak could wall be affect Man, Inc. excenence dely fluctuais higher in the morning than in the eveing skills is unknown. But recent reports inclicate testosterone levels comelate surprisingly well with pertain behavioral uals are also influenced by environment vironmental situations There is also anowing evidence that

stero da elter connectivity between various parts of the brain diroughout life. covable that women make new neucause the department has a long-standmarsent to find out in what ways steroids influence how neurons live or de-

Scientists

are going to discover that sex harmones have a pervasive influence not only on the

development of the brain but on aging and

on various stages of life.9

at all there sust for your preovulatory surge or stuff like that Even with mounting data on sex difassign causes or reasons, that's where the spentists ast into trouble? biologist who has written extensively ort lives, and so we develop very diffeneral capabilities. We gor I know how

into behavioral difference different from men, and it is linked to that if women are different they'll be dehave to be true "Still she is concerned seeking Testosterone levels in inclinidtify discrimination. The seen research. not more but others', misused-you know, quoted as justifying why men are more likely to be engineers. That's a gibig step from seeing relatively subtle hormonal contributions to behavior to see or seeing the wast majority of heads of

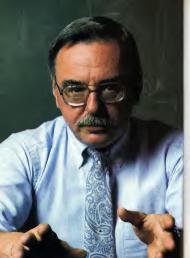
may become obsects of increased opsearchers in the field are women cause women are most often the wotime of successmentwises. Wideburn saves The series are different and didner on good to assume they're not. We're not going to field equal opportunity and equal recognition when we assume both are equally good in all aspects.

the findings will have a positive impact variations in the way brain cells are proculating hormonee in animal studies investigators have found that make as male and female brain are pretty aredistribution," says McEwen, "Fait if you then look at what entropers and progesgroup, do to male and female brans. you'll and that the male is not always male brain. It's at that level you can be-

This is basic chemical information sciantests will obtain only after identifying sor differences in the brain. The knowledge could lead to drugs targeted we'd better find out about sex differfor conditions such as Alzheimer's disease and epilepsy and the resoments

Finally, the value of the research is women differ, says Hines, "but also for

the added borus would be that the anlaration. Yive is difference DO



"TV toll you straight out Sex differences in the human brain exist. and some are shaped by the sex hormone environment," says a leading neuroscientist who stands at the hot center of a controversial field

INTERVIEW

ROGER GORSKI

WOME MALE TRANSPOLIAL NURSES INFANT WITH MILK I modified by sex hormones throughout life IMPLANT SUPPLEY TO DOMPLETE SEX.CHANGE CHYDLODGY. The

can tabloid. The others could well appear in the same appt. Underlying each of these astrumping statements is fairly. Biology of the University of California at Los Angeles School common knowledge that homones accreased by the overess of Medicane, and director of the Laboratory of Neuroendoonand bastes play a crucial role in shaping male and female inology of the Brain Research Institute. "Today," says patrams of physical soperance and development But on- Gorste, "there is a definite list of areas in the brain showing Virgority has a revolutionary ridge begun to gain prediction male-lemple structural differences. In trying to unclaration

significantly different lines. And these structural differences— PHOTOGRAPH BY NORMAN SEEER

That explosive new area of brain research is dependly ing two district shapes or structures-male and female. At within the scientific community, that these same hormones insurobiology, you've much better off assuming a part of the mold the very architecture of roate and female breins along - brein is sequely dimorphic until you've proven dign't.

brain research. for anything like it? Rom in 1835, he bwedthe worther "bedon't like the weather was a lew mininvi-and of change ' Born of a Tred Gorski s only hope of attending the disgago was a scholarship exam. When he where he began to assist, an animal scimant "You're really in nourcendocranol-

egy!' counseled a sawy advant when Gorse was looking for a Ph D program
"so on to UCLA. That's a hotbed for it 1 duto's ware inventin Geraki 1 pol into my 1947 DeSoto, chows straight to Los Angeles and the anatomy densiting and pregive as Barraclough-who Not only did Berraclough indiate him inreversing the reproductive functions of rate but after they had worked togeth-

wound up with Barraclough's research Goski had an apphary He was no long or sust probing for differences in the tendari hormone spresifin matrici and reproduction. He was trying, he reef are all basically female," he armuss. "If the chromosomally genetic male ular hormongs, he will have a female

made his landmerk finding, that is prooping brain. His discovery, which he chastened the sessably dimorphic hu

the area of grosspst sex denorphism yet

fined their search for sex differences in you spring structural differences in the also underlie differences in such high sex a monsic strengths if not intrinfart shift and adolescent to assume

jologists and other researchers are be-

jors or performance advantages-pair boularly cognison—to hormone-induced changes in brain structure, to some people that's a very dangerous rexist obcountiess ways: saving females can't clearer All aspects of neurobiology a study without paying attention to



Club you must think that maybe we don't want to find a cure?"

ual differences focus on? lab in 1959, he was looking at how the brish controlled ovulation. In the mid-

causation than tried to restore it with eleccoac area of the hypothelemus normal-



mascularized female failed to ov when we stimulated this area. This ure suggested that the procode as a key brain size for homorie ach sexual differentiation.

a say beam and non-termination you were season differentiation. Occur How tid you read dealing with something far bigger than control of ovulation? Great. What shows that if a newborn make sat is cosmood and then given you

Goraki. Wed shown that if a newborn seek as as coargonal and then given an occasin praceptor when he agrown is a mean to a second of the seek as a second of the seek as a second of must be proceeded under the control of oxidation. If newer large the control of oxidation is never large the control of oxidation is never large through proceedings of the control of oxidation is not to the returning one England where they diseid under the proceedings of the control of oxidation was past the explain of oxidation of oxidation was past the explain of oxidation was past the control of oxidation was past the explain of oxidation and oxidation of the control of oxidation are past to the past of the oxidation of the oxidation of the oxidation oxidation of the oxidation oxidatio

coberg. We were actually dealing a much more fundamental pro-How does the brain offer betwee eaves, and how do sex form bring about these differences? that day live devoted my care those questions. Other, but most neuroscienist

thrick the sexual differentiation rivolvies only the hypotheliamas?

Conside: To some it makes no sense that there could be sex differences in other period of the brian. I arous how-

productive system undergoes sexual difierarisation. All marries are bossetsly ferrede—robulary external problems, the interess are objects and cuburg it the robust and the brain it you day the developing brain exposure to feeduralisbermanies cunting a process from interval, you get a dismands and permoval change. If the chicargosmetry genetic

saccour's hormones. he' will have a femele appearance including his outer see organs and the britis.
Look at the officers of sex or gender identity on life style in evolutionary history at a generally the male who goes out to hard and bring back the lood. Wouldn't over of this land of ashay lead to changes in male born and use? To see out officers are other

bale? To me sou differences are uter; uterus. The entre process of replodatition and the whole bitain are gested to ward sourced of the spoces. Oetor Why do male bitains require eatrogen. The so-called Fernale sox formings, to become mascularace? Soppir Other resums have have shown that the metabolic conversion of testion.

free the metabolic conversion of testin ular testicotrone to estrogen is a required step in mascularizing that eatingen mescularizes the male, it does reflect a common enter that eatingen is the literals and testisotrone the male see hommer. That is not the male see hommer. That is not

true. What is important is the niho of these two hormonies. Desir, if estingen mascularizes, does that mean in female babies there is no extractor?

extraory contracts and the second contract of the contract of

Cherry Does uptime (soppotene) ratio or set at in humanita. If a dissipation price is a set an extra control of the control of

freezo ser ul frienzo sez del considered doch a imperationa organi mari Carsala Because in experimenta organi mari impati be algoriticatrity different in sector sel del consideration del conregisti be algoriticatrity different se sector sel del consideration del contrada imperationa for years ship sit of began to lock at the impact or secreta seas that the carsa as allowed was that the carsa as a section of the carsa as a section of was the carsa as a section of was the carsa as a section of was the carsa as a section of the carsa as a sec

I had personally looked at hundrood of all busins and mover noticed structural differences. But almost all our automated between the almost all our automated and an automated and automated business and automated automate



Gestar That's easy Lottin it is war acharly sen that they positice. Larry Creaturean in Mid decaded to learn electron mercescopy and one day her care to my others and seat had seen a major structural sea official trans. Because mass hard transmitted in the propositio and official trans. Because mass hard centrated on history services. I laughted Well. I he took two of deles—one made the other fermish—and proposition than on my wall. And there it was The rundow of the mid transmitted in a minute to history and developed and the control of the mid of the conmitted that the control of the mid of made to the control of the mid of the made to the control of the mid of the made to the control of the mid of the made to the control of the mid of the made to the control of the mid of the made to the control of the mid of the conmitted that control of the mid of the made to the control of the mid of the conmitted that control of the mid of the control of the mid of the control of the mid of the made to the control of the mid of the control o

delit own have bringing for a slobe be seen to see of site of seen and the seen and

just too obvious? Or that we see what

The SSN is about the three Bigger in make this remise, and the see of terrors is, class principle; bit the nation of instruction. Christ, the female feet of highest feet of the see of the

or in one six or simplem? Grapha The WMR (Jerstrom etch regional Trace) (grapha The WMR (Jerstrom etch regional Trace) ing and aggression, has now beet six part aggression, has now beet six polarized. Biccase it is inopen in six polarized. Biccase it is inopen in six polarized. Biccase it is inopen in six polarized in control in the six polarized in makes—leope for disript, it is twee three any a copie of alther, to the three any a copie of alther, to the polarized of any incurrental in their negoting Consist. Life is correlatived to Consist. Life is correlatived to Consist. Life is sometimes state Consist. Life is sometimes state Consist. Life is sometimes to Consist. Life is sometimes to consist the six of consist in the six of consist. The six of consists in the consists of consists in the consists of consists in the consists of consists of

rons there are or where they may be lo-

coaci is much less important than what resochemosis they produce or with what cather notices they connect with what cather notices they connect yet stress whether the SEX techtano or invited some produced produces from the sound to have to be a sound to the sound to have to be a sound to the sound to have to be a sound to the sound to have to be a sound to the sound to have to be a sound to the sound to have to be a sound to the sound to go read to the sound to go read on the of the sound to go read on the sound to the sound to the sound to the sound to go read on the sound to th

Could we postalize that the SDN contools ways securally dimosphic function? Certainly we could, but we just as certainly could be wicerg. Chree You other disanguish between certains for sexual behavior and others for carried of increments. In the "center"

Concept valid? Gorski For a number of years the concent was robust in this held, because ly these centers overlap The "center" for temperature regulation, for metarics, behavior Sometimes a given nucleus can have multiple functions. Take the VVIV near the center of the hypothelesated; some of these rate become so same lisson gives you on extremely aggressive and funous rat. Normally, you handle rate without clower, but when you dearny the VMN you befor worth gad gloves! And VMN legions cause the female to show no sex behavior. So one "oart" of the VMN may be conor with eating, a third with appression not really expercelated. The concrete Ower The lose Norman Geschwind comgried a body of work suggesting that lesbrain, encourages disordered neuronal growth and misconnections. The result he arroad is that males are more mune system disabilities. What do you think of the Gearfrand those ?

thrik to the Ceastword thesis: " Ceasify I support the general concept that Justing development sels homeone share make of amortial inspatch, formabler make of amortial inspatch, formachape of large-scale pathways. These is clearly a like between the newcost and immune systems and steroot formations to the state of the services and immune systems and steroot homeoness that the support describward is these show that many profile homeoness between the services and vercicle formation of the services and the services and vercicle formation of the services and the s



name "receive activational" role in per-But Goschward's ideas don't really \$0 with the fact that the grantest effect of much earlier. We know testosterone in-But I besidally your his testosterone as and the mole is means of getting eatro Geschwing Td really have to accur-

that if is an excess of extrocon that is causing these murormmunological disabilities. Thous a bit extreme Greet You've said that the "complexi ty and ambiguity of neurobiology is an endless challenge ' Nowhere does that seem more apparent than in the el-

Goods: There used to be a complete di orientation nature versus nurture, sex borarg. Well the last time I heard John Money talk he said there is no controyeary Roth play a role. The question is usi preference. We've talked about sex-

sexual operation. But it is totally un tounded. In the lab we had sex behav-

or in a very arthout squaton, treeting

it virtually as a reflex. We don't give the names any charge to nahibil perhas

Animal severality is overabelministy demore than in humans. The differences you can I tales data we've amessed on the sex behavior of the set and freely and it is this however that brings me closterentetion must apply to humans as it does to all mammais. I mean it tollows

in humans you can-end do-have ounatic males look and act the females. Own: is there a strong biological ba-Dörner and others claim-for sexual

behaviors labeled homosoxuality bi-Gorda Arguing from the rat-which I sust cot I reshed saving you can't dothe transportation is the most likely con-

That is, when an individual says, Time woman in appearance, so why do I Own! Domer clams that homosorus! more complex Stif. fetal hormone imbelances could—I'm not saving "do"-

predispose a person to react one way tully correlated hormone levels in adults with sexual behavior or preference. Vir-

much more testesterane and estrogen than we need. Sex hormone levels are strongly influenced by genetic, ethnic. and racial factors. Although androgen othruc group, that doesn't make those men lices manguing than other males geres affect the responsiveness of neurons to steroid hormotes. Individual grounds might have a stronger or weekcame, Valum, or any other drug

What pourts is how the person's indihormone into meaningful signals. At present in humano il si impossible to measto hormores or their products

mection of synthetic estrogen that is in normally menstrushing women is this remarked surge of LH, and this surge is brain. The LH surge is the LH-oceative mispones, which in rate is exclusively a

lows normally show a positive response to an estrogen injection. So for humans. appropriate index of homoexecutity ing differently than "normal makes to the extragen injection because of based I believe on a group of homopecusis he was already seeing. It he was Treatned them for their homosex. of shuffite system violated grant village sexual mate with low testouterone. It's

one who lives openly gay, trough I'm Measuring hormones in soluthood won't fell you a clamn thing about their levels in adolescence, childhood, or onical periods during fetal life. So you





ARTICLE

If Arnold Schwarzenegger wore lipstick, could civilization as we know it survive?

BLURRING THE LINES: ANDROGYNY ON TRIAL

BY DON MONKERUD

One day Linda re-Laura requisity met forcoffee, exchanged dinner

chatted in the powder room at Tye been fiving a lie," Laura con- implants inserted and removed sayfosced. "I'm a man who had a sex en times. When doctors told him he change operation. I'm going to stop could end his gender confusion with sexing horsions and become a man a sex change operation. Water again. You can gall me Whiter

Trying shows of a stan or woman west for a walk. He game back but cross-dressing or being "trapped" in hours later, fore the check up, and common in Laures case the conta. The operation His wife left His chilson was overwhelming. Although he dien won't speak to him. He lost his was a successful reviousl operations. menager at a Jepanesa automobile the problem? he asks today. first with two children. Weller had new-thris expectation of what it means

or felt pertiousarly convortable as accepted his er coaster He had breest

wrote a check for the operation and job "Haurpery a the solution, what's Walter feels victimized by some-

PAINTINGS BY MEL ODOM

FOR SOME PEOPLE, ANDROGYNY CAN PROVIDE BOTH



didn't happen stigns, employers discovering her see change wouldn't here her. When she ep-

stopped taking estrogen. Walter took then as Laura," he says. He'd like to series of operations to graft skin from his led to build a new penis. Walter thinks he'll buy a house stat so he can

goes the operation On one level Weber is a candidate reflection of what many experience as havior is self-prescribed for men and wom-Prince and Michael Jackson

> no, but done person's sexual Clockwise from

arialow kisse at and Dince

to be a man. He her croftch Singe 1979 between 7,000 such a sex-storeotype-sensitive group are wearing earnings and hair of any length women don boost shorts. Be-

> time off for childbirth. The possibletes for expressing one is associal identity to-"One thing is for sure," stated Anna. Davis as if to underscore the American defined behavior in the future? With such questions in mind, I recent-Institute for Research on Women and



bit in San Francisco, Corversing in fingandrogyny, experiments in sex chang-

selves. Yes it was the sort of observation less. Four-and-e-half-washold mursery that could get me tom to ribbons in school children played with same-ser

Shill it was as if the Germans and the nender amombouspess Well Fumper makeup and stwelly, a greater vancty took a more austere, intellectual ap-

of gender, she says, neither men not women will be free to develop as self-

leave gendar-related issues out of their individual's personal, legal, and social that the sexes are not merely technologial entities or even primarily biological enmake the case for cender as construct-

litically" Gender, then, may be in the inc at differences in verbal and math skills in boys and cirts, attempt to disor genetics. Many more observe chil agaziernic But sexust or not. Loculdn't dhen's play habits. Eleanor Maccoby, a

AVISION OF UTOPIA AND A MODEL FOR MENTAL HEALTH.

playmates three tisses as much as they times more likely to play with children of

ation on any given day in the children's typed attitudes more, perhaps, then how peared "The connection between indidren are presented with activities

This percess becons at a vound age. Magtres are biological universals, such as ciel elements affecting behavior, and



wide information. As resistant to change-

even on the hasis of information that cle-How reliable are studies claiming erther biology or environment is the shapies proving environment's effect are hard to find," saws neuropsychologist San-Ontano "There are many showing little cuts playang with dolla and boys with cause parents buy dolls for piris and reinforce this, and buy trucks for boys and

a deep and abiding difference between form women into "pseudo-mon " Marry sex differences that are "nowacines atand telling fary stones to chidren are resilv sust an expression of intelle dri down to choose his personality. That is

Leven or no Leven experiments to unal 'For many people confused about how to behave as a man or woman, androgeny provides both mental health," says the slight, planniy dressed Rem in a turnulny does not require the indi-

"Children," says, and behaviors the culture may have stereotypically defined as inappropriate

Bem and her husband food to elimbehavior by sharing household chores, dolls mespective of their sex. In reading material they looked for nonsteregypical stones. They even disclored books, drawing beards on watresses styles. Men and women were defined gine or penisto determine their sex. The couple censored television programs At one four Bem's son Jeremy, wore barrettee to nursery school. One explain that wearing barretten didn't make one a boy or girl. Only ponitalla ing a pens made him a boy. The boy





George Michiga Dreed Brain

and Grace Jaco

valued to benish from the Boy George.

Michael Jackson,



Born relises to discuss the results of

that people parry around in their heads Bern ombarked on a plan to dislodor unitrue abilities and interests. Because measuring meaculine and Territore. she developed her own. The Rem Say-Role Inventory (BSRI) is designed to measure a person's ability to integrate meetuken and formine traits. Born and sonally characteristics they frought devalues. A sample of the BSRI's stereoforceful and "rek-taking | Some femmine storophypical characteristics are of 100 Starford undergraduates—half male, half female-judged these charactensics on a scale ranging from "not at all deserable" to "extremely describle. To try your hand at the RSRI turn to Gender Bender on page 88. This you son of Bern's inventory, designed spe-

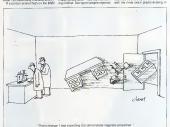
as masculine feminate or genderless

in masculing characteristics and low in ly equal. that person is ead to have an "undifferentiated," individuals are mon or women with both low issesculinity and-

assess changing or state invitoris of pender Starford's Shern Metter used it to investigate why college students choose to participate in certain sports resociantly and formers by and avoided sports associated with the opposes six strongest identification with their sex. chose their sport spiely in this way Other studies using the BSRI have found that sex-typed individuals attend more to a present time when sudging physical attractiveness and differentiate these tasks and harbored more negause School of Business at Columbia Un-

wrafty the BBRI remains an accurate Yet androgymy too is controversial discovnous male as an artistic ideal necmade a man whole by recognizing his ality, however, deemed it a code name

for homosexuality. After being reintromediately became pollocally incorrect Ferrenat, critics said endingway overtoo much allention on personal desirathor then on class and power distinctions caring man, or a dominant women and still be accepted in some part of our sqbrowsen male and female speakers cial landscape, androgyny seems to be when asked to regail who said what in moving to the center At the century is Burn subvects were offered chraces to tost their willingones to conform seemale. She saw the mind as a too that ingopropriete tasks-such as mon iron



men and the female in women. Another an andronynous mutant norwould 6010maje and female centals or boards and breasts rang Minlyn Yatom of Stanage of a pigno with its eighty-eight

Androgynous images have long exsted among performers Pluciolph Welent on unmarked for revision in by appropring robes, evebrow penal and lipetick. Elrimestone-studded jumpsuits and se have hit the apex of his career when he

hooked himself up to peans were to fly ing a young boy By 1964 Boy George could bilthely address national TV say

Janus-Isond dusi mage as supermacho superviorsen. When I put on a wid with when I dress like a man.

Torkey men look like women women. men. You see if in Calvin Klein ads. in cy Vickers. Just as female bodies were a sepusized with grotic mages. Tap

the next 20 years. What I do think is Yet even as three bearing diffuse in to a rainbow of gender prientations, a to help men get in tune with "the wild earth and other man and not the mocho

ing sade of his identity. Despite teach-

heads snort, and engage in flatulence Elly recognizes the exits of permarchy nine and masculine sides as strongly iss

tween 'Yet' he adds 'a man who is A recent "Theater of Writty," conduct ed by Montreal Jungson smakes Guy Corresul was devoted to coming to drips with 'mage,' aggression, and 'mimany." "Whether it is Adner-the-Hero.

Nercis sue the Linkyood Volontine-the-Sockcor, Christian-the Macho..." or others. claimed the brochuse. Their portrats are With these identities under siegg, it's no wonder men join such ornans. Others respond by becoming gid rules no longer apply, and they don't know what the raw rules are. Why do asked Matteo. The tall, siender makuofor who gould be mustileen for a busi-

have much insight there.' She simply syrects this term of male. Method pays. couraged to crawl on all fours, butt (to Cellen

The second last for "

How do Americans define masculinity and femininity? Take this out and find out

GENDER BENDERS: WHAT SEX ARE YOU REALLY?

watch TV, read books and managemen, are mundated dehate. What does missouday? What are the sterno-

were among 200 personaltural models of masculin by line and feminine toles for the level asses. Can a portion hars society considers may

that are genderless or noutio of a man or a woman to district the following behavment whether a men or myssumme or an N for

Acts as leader

Doesn't use hanh language

Makes decisions easily

Open-minded

Rehabie

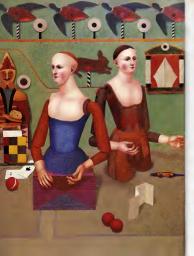
Ranserve to needs of others

SEDON

Unpredictable

Willing to accept change Willing to take a stand World's

See page 142 to see how accument you rated the characteristics DO





FICTION BY PETER STRAUB

The origin and even Magac Tisse normain mysterious, and the Tax is shift for onorma it was when it first appeared before us on the sawdust floor Of course # getes I possess sevoral manua folders with analyses of the on its nature and construction. "The Bobo in dustry' threatens to be For many years, as

you may remember.

the mechanics, in a condition of walble anyly, begoed a tiny hom wilderment His conbouts of laughter. But lety that Bobo feared ther one might the Ein-

partal mechanics formed an integral portion of the act. This examination, as sorupulous as the best mechanics goold make it, rever

the Freud of mechanthe inspection of the Tax by expert and m- ics, would uncover the principle that made the Magic Tax unique and thereby apoil its offectiveness forever. For who remains impressed by a trick, price the mechanism is exdiffered from other vehicles of its type. There ed, probed the gas tank, got on their backs was no special apparatus or mechanism en- undernosth the Taxe, bent deep 150 the moshipon it to associate delight, and tentily as it. The covered themselves with present and party still does. When this inspection was still in bon so that they, too, looked like comic the performance—the equivalent of the ma- tramps, and at the end of their time, cave up.

gesen's rolling up his

stem of mechanics.

PAINTINGS BY LANT IRWIN



WAS AN ORDINARY TAXI-LONG, BLACK, SQUAT-OF THE SORT

They could not find a thing, not even registration numbers on the engine block, nor saids names on any of the engine's component parts.

the engine's composite parts in appearance in appearance in speciarity too, long block equal six atomic oxigate, oil the sort generally seen in London Bobb sai of the wheel as the Taxa course of the sixth against he first appearance on the long part of the long or rear comment for the long or rear commentation.

seat and die he had livering chare metals. It was he velay maps of the respectations, expert had the sevene their Blobo was not others; this second that the sevene their Blobo was not others; this region could contain a block text, from the inst performance this solicit text, from the inst performance this velocities would all services for text and unabout work of a service of text and unabout sealing. The lights do not dam, no destidances of larger as for amortization and the section of the services. The services are services as present services are services as present services. The services are present services are present services and the services are present services. The services are present services are present services. The services are present services are present services are present services. The services are present services are present services are present services. The services present services are present services present service

Then the performance begins again. Subsidies stringly little in the course of the performance. It is this modelity that has made us love lim life could be one of us faritistically, dressed and purmating the bub of his little horn when confused or delighted. When the performance concludes, the bows, bending his head to the tomental applaces and drives off through the current.

Rom Houses Without Doors by Feter Streuts, copyright in Sessions Corporation, 1980, Used by anrangement with Dutton, an import of Rengum USA.



Sometimes, when the Tasa has reached the point whethe the curtain begins to awap up over the hood, the both raises his writegloved, three-ingered hand in a wave. The wave seems regressival as if he washes he could get out of the faxility of the country of t

There is little to say

about the performance in a performance is always the sage. Also it offers sightly from their characteristic Children, to judge from their characteristic somephing like a trevents display the has alocate of great septicing patients that do not fode but por-

exploring passers that do not sole but porset in the air and exact sorts sort of drams. When pressed by adults, the children utsemanyly some few sogue words about The Soldier and "The Lady" and "The Man With a Cost". When asked if the show a lurry, hely not this heads, blinking, as if their question-

Adults treely discuss the performance, exoupt in the safety of just 100 here found it conhemist to assume a finanzium of consodence between what we have superately dence between what we have superately "for commance," "the commantly." Exoppher have divided the performance in our times asslores (the Claim) Aribb, corresponding to the here given waves of entrols here or eventions of the claim of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the exocytic lives and the control of the control of the control of the exocytic lives and the control of the control of the control of the exocytic lives and the control of the control of the control of the exocytic lives and the control of the control of the control of th

terious capacities of the Magic Tax.

The first act is This Cartinosis During this socion, which is quite short, we seem to piese into a kind of cloud or flog, in which explyiting but the Tax and its abordent becomes indistinct. The lights overhead do not leave in the tax and one of the tax and tax an

JOBO SOBS, THE TEARS CRUSTING ON HIS WHITE MAKEUP, AND BLATS HIS LITTLE HORN THE FECOND ACT REGINS.



ficker he the sense of groom is undertable. We are separated a Not more separated with the point we remember out after, our major separates, our maintains Sosial of the weep body in the sense of the s

ed and the second act begins. This section is wiscens as The Tailing because of the physical sensitions is noticed. Section of us, present of the thickly secolar is the most literatily determined of the three seats as the securities of silking continues, we wireless a claimate that section to be proposed single time to be on those us yet single time to be on the cut yet most the "film" is also charactive. The determination single time present on present as they except to present our section of ways to increase only as section three sizes a could prompt the section of three sizes a could prompt the section of three sizes a could prompt the section of the section Our own figure appears, radient, on the ratio of a feel Streetimes there is a satisfic more other there is easier growed on a rocular part frough deadures or rother three it is intend, or Demontry, or Sweden We are in the country of our great-greated-grand-fastions. We belong here. At last, we are at these last of the country that has been delined to use all our level in steading of them only to cook in the country of the test mointed to use all our level in the steading of them ones to our cook in the act of given to their monest to me of the performance. The Justice Last of the first section of the performance. The Justice Last of the first section of the performance.

The books of light from the like disappears more our eyes, lies a transparent winn. When our eyes have been filled by the light, the Table fideo, the weavey way string on your right, and the mann's he but surpleneds depoty in them, of you, all of them disappear. The first exession is that of being on the lurgy edge which the light produces of the light produces of the light produces of the light produces and the view staceards, for some, legal which the viewer succeeds, for some, legal is stone on grown and or stone on grown and or stone on grown and or stone on grown and the some light produces the light produces on the light produces and the some light produces the light produces and the some light produces and the som



OF THE

The sun had not warmed the JOURNALIST'S INLE snowy ground or my frozen toes. As the grange ball SUPERSECRET SOVIET mose up out of the fog before us, its speed and the thun-CALLED BLAKOHUR. der with it reminded us it was

ME'D STUDIED no natural phenomenon. IT FROM MAR, NOW The real sun hung high and HE WAS THERE, cold behind us. The rising fireball in front of us was a manned spaceship The frigid, rolling white landscape all around was the midwinter Central Asian steppe.

After a lifetime of studying it from afar, I was finally standing on the ground of Balkonur, the supersecret Soviet spaceport, at the launching of a Sovuz TM-9 spacecraft. The piles of photographs, books, and maps I had

pored over were springing to life all around me. Everywhere was something familiar-or even better, something never before seen by Westerners, My colleagues were amused as I bounced from window to window in the air-

BY JAMES OBERG

plane, bus, and hotel and started off in til the last moments. Bureaucratio "difboarded the special charter ist at three-hour fight here. We had not sobusty come to the end-of-the-line mud hut enring town of Balkonur 300 miles

lead soy plane picts. Sovet certoprename of the distant town of Barkonur for when it was taken for the spaceport Then striving rocket workers began callmorrart-Space City Spon the pity was

Kazakhe had the last laugh, however Resorur means "bland ched," but Truresem carries with it a hidden curser It supposedly means WHERE'S THE GIANT FUEL TANK gloup name for a

proach, we spotstrangled Byr Dartion, causing half the Aral Sea.

which it feeds, to dry up. Parallel to and railway, the man lines from nas, fuel produc-

cosmodrome Thirty years earlier plot

we were somewhere special. There was

ing flights. If you didn't already know where you were, you had no business statues and billboards announced the recoon's space bentage. We passed a stretched in a gesture of triumph. The numer that makes hardships tolerable. privately call the statue "The Fisherman" in the middle of a year desert

gesture for "the one that got away." tel was surrounded by a security fence made, no doubt. Our guide young Andinary tourists. We skipped the run-ofrest mest. "Where's the quart fuel tank









most notice: we also we have deep growing as in the barn after the never touch the barn, a large ought moor receit grait but in the Barn Hacken's Bowle in every part of the location were appeared to the second of all location were appeared to the second of all location were appeared to the second of the location and the locat

Need time for suell. but we saw encogif to satisfy as. We walked around a feet model. Energian booser on its sushcraise—except for the same where he payload was mounted. The assumpts of length of the earl The assumpts of length of the safe high as MASA's VARB at the Kannedy Sepola Centra, but much wider II was here, our guide what prevent, thus the domest man political was assemble for how I 45000 blestoth 20 years totude to see the same satemble of the same same same than the same same same production of the same production of the same and the same same same production of the same and the same same and the same production of the same same

due to orbin in late 1981
We were seaked and hours before sunrace to attend the relicut of the TM-8 rockel from the assembly half ared the
slow-dark or inde
to the learnshpaid
two makes dawly
Without the blazring lights of a
NASA rollout, only
the shappen of

something shriys and tag ocus to be a single specific spe

the rocket workers dressed like railyoad mon-but they were efficient and reliable, like the hore! If was the only place in the USSH where I was able to make an two As a resembly and leafer harder (Rich acti-

As a sustancy and purify target obey includes make a Photon subside with a C bootate. Believand connectionally practice require procedures or a gain the affect flog (bottom). Maintendille includes after the affect flog (bottom). Maintendille includes includes by of increames-passering Zient notice) are ngglt, clearer-curring passering years make the procedure of the properties years are supplied to the properties of years and the properties of the properties of the procedure of the properties procedure of the procedure of the properties of the procedure of the properties of the procedure of the properties of the procedure of the procedure of the procedure of the procedure procedure of the procedure of the procedure of the procedure procedure of the procedure of the procedure of the procedure procedure of the procedure of the procedure of the procedure procedure of the procedure s bees prune call The speciarhos are any other seample of this I couldn't necall the last are they had missed on each nounced manned blanch. These was all-tic as well-designed public avariation on system, a medical learn for the communities, and the workers can TV attacts to any time and revespager?

We saw the worker to the LSSPFs are

We saw the secret to the USSP's reliable, economical space leunchings all around us. They standardize handware and procedures, their hardware is designed for field—that is, nonstanle conditions, and they award the unrecessory usignating of apace whichle an comman—and profitable—in the Wast NASA majorithemist from these lecent, if it can overcome its found in best awardine and the predictable resettance from space contractors. It wonsteen should be I wonsteen should be people who

s re | workered about the people who
go all | workered at the cosmodrome. What was
lake to live "on the shares of the unyears" as their space poets lynduks?







No Western film grew like gurs had we were able to wancer the streets spondren. The lods were the most outspo-

must be hard to live been, but interest the common answer, usually with a one local answered with a wry purito mme of an angry wife walking out. To attract workers, salaries here are double the national norm. Special Party elsewhere, are open to all. But as the Soviet economy has connected in like those absorbers in the USSR, be-

as, buffer, and laundry detergent-and cause it was not populated, for the simters briter, there is no water or shade.

and it is bearthosekone's far from any - writer crazing

where A few decades ago, only the here, usually on their way somewhere else. If Early has any human nettlement Yet the isolation is not total. Thus man ple must stand in line at the post office for inconfessions phone cults and wrets in advance. But the city stract

vacationers can reach popular resorts I know the writers in Chicago and Bulfalo, but this place introduced me to genat dawn, I felt my feet go numb as the concrete sucked the heat from them. This was a theme of life at the cos

the steppe blazes with vellow tukes and

By August the grass is belood vellow

but the carefully tended private pardens

horses wander through an their way to

ed by the gray-FELLOW AIMERS There are few CHARG SHARING churches. In the

The bacsh cli-

dedicated space come intolerable chev himself come to Lennak n 1946

massive public

everwhere new schools facilities operf-The Balkonur workers have a lesson sersed they were akin to a medieval order of monks, in the best sense of ly superior to those elsewhere in the

But Lennsk is susceptible to the tional USSR. Seventy-seven of the 98 the dirty work in town, while the Slavic

guide admitted to a few anti-flussean note by Kazakh mobs a few years ago Security concerns are top priority quard outes. Mans are occessiverd street signs rare. We weren't the only ones confused by this and were often approached by lost children asking diuntibeled streets were answered with spot we were told not to film towerd the made clear the power plant was of Imits to photographs. Bus routes have

train station, only two of five platforms

to foreign visitors, with some culture sen to enshine this scene as his last Earth sunset for half a year. As they me not to be so crass as the Franch jourcal isolation. They laughed "Germs nalist who came for a space shot in 1988 and then rubbahed murkaken an-

don't stand a chance in this cold." would be midsummer. For a few final mo-Later that right as I sholled alone outthe past is deeply ingrained in them. gines nearby Trecalled other prelisanch my feelings were identical. All details of hardware, checklats, and security These were my colleagues, my broth ets on the same road, follow amers st

> me. I felt at home, no longer a stranger. At last in sync with the mounting lowed, before the maning when the sun mee twice over the steone DO

The new Canon E57 is simply breathtaking.



nacie. Across the over were a few scat-

Suskingly the TM-9 apaceutin com-



ANTIMATTER

UFO UPDATE:
Good sightings come from South Africa, as well as
Zimbaltwe, Malawi, and Mozambique

For the UFO bull who wants to cost a life.
Upt on the African contrast, bette in cost
upt on the African contrast, bette in cost
up Advances. Platineted by Cynthe Hand
in Mount Pleasant, Hanter, Zimbalten,
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LFCs in 1969 when he was arraymed to be a sighting tool; Since him who have arraymed to be a sighting too; Since him who have investigated the fall image of Amani reports, from daylight dates to close accounties of the their and Signings have staten he to South Arica. Meanmaness and Advances and controlling him signed and the signed a

tions." The quality of sightings is also high in Zimbalovo, where the black population has become more established between the produced in the

Some Afficians, however, profes to asked revolutions, in excent Advocace days filed able of a possible between the recording and a possible between the profession and a possible between the profession and a creater adjust a possible between a creater adjust, and a possible between the profession and the possible and possible and

Good argonia also cores from the least, whose associaare solution and or operatures, realist to the motion of outer space. These dross participal may considered withcost, for example, when their areless on when so association should be supported by the control of the control of the companion of the solution of the least considered the companional by ligorithms and criminal of the first little discount of the Solver Little had directly affect of in the most in the Solver Little had directly affect of in the most in the solver Little between the control of the companion of the solver Little and the solver little most counted by the mark that the solid behavior as one most occurred to the mark that the solid the risk quase them.

It is such expectation that makes UFO research in Alsi or a particularly demanding back. For instance, Hind recalls the time is the way acked to instance a guest appearance on a local television show. The hoot stanted the show with some over music and pectures of This investigative carry has not graw unresteed in the United States. With Arebus, reasonabled in the Matsual UPO Notework (MUPCNN), notes that Hind is his group's conherend coordinate for Areas. She has presented the findings of her African immutigative work, all several MUPCN sympose in the United States.

MUFON symposia in the United State according to Andrus, "and hiss been one of our stallwarts" —PAUL McCARTHY

GFO Abstence, publicately, is investible to from Cyntinis. He liox MP49, Mount Plannant, Hantani. Zerbatowe.





AUTIMATTER



Texas milionaire Tom Shot was transmitted with the latures, especially Alberta roble Snowmen. Between easts But when Slick clied according to cryptozoologist Loren Coleman, his evi-dence supporting the reality of the yes mystenously

"I personally believe the yen exists, and what's most Shok a expeditions," skips Colornan, author of Tom Shok and the Search for the Yeo (Faber and Faber). He ten-rich long broad footints believed to have come On one Slick expedition, inship game hunter Peter Byrne supposedly took parts of a mummited yet hand mession "I don't know where the hand parts are now," Columet Says: "The trail ends at the London logical Society."

whether the crash of Sick's lished, Coleman explains ate about the explorer that his unbriefy death "Stick reportedly had CIA cornec Larna's escape from commo

nist-occupied Tibet in 1958." —Sherry Bake "I felt a strong wind pulling me trabuild of blowing me

HAUNTED COMPUTER Ken Hughes ad to a successful British computer years ago he was harded a

firm near Manchester. The computer, it seems, comin. used to openate even when switched off. This odd. han a rightime o ving oil an "eene glow" At st she frought someone

Office workers began to proort the correquest starting glow, they said, displayed pain." Birely the staff facted Hughes

"We trained a video camera on the computer day Hughes explains "One right there was a loud cracking noise. The power light came Another night random letters screen. Yet the video shows the plug out of its socket. I British robotics expert Peter Mowforth of the Turing

the least, "I live at day long with computers that do unsepected and ususped things, so my only interest is can happen when the powe is unplugged. Possibly a practical joker has been at work Fasing that, a likely cause would be electrical radiation from some other source. Such radiations are commosplace in modern privironments where cables

electricity pylone, and inclusinetic radiations is easy, and pensor was not placed in the

> currera."-Nor Strutten "Big machines are the





Satemets are surning

napping, abusing, and children At least, that's the w Geraklo But after three (CSER), a group of scienhats who critically evaluate religious claims, has concluded that occult onminal exapporated in fact, accord ing to CSER member Shawn

Carlson, "there is not a

Carlson adds that in the

mercly a symptom Nasrly allegance to Setan samply to

"I contraption myself, Em afraid, sir, because I'm not 'But I believe these are also groups of geoph involved in -Lawis Carroll

drugs, child pernography and child prostitution " But Carlson thinks these so called Saternits are

being used as scepega

witch hunt," he says "In the 1960's they were against Catholics and the

was Satarism, These peo

ple will go after scient noxt."-Sherry Baker Back in the Sevention

LFOs, doing much of the fieldwork himself. He even published a book about his ndings in 1981.

Enter neurosciontet Mi-chael Peranger of Lauren-ten University in Onterlo, Canada. Peranger believe hat UFOs can be explained energy in the form of balls of ht. After extraming 72 of

Rutledge's old UFO reports Persinger now says they when he put Ruledge's distr to the best, he found that many of the sightings-20 percent in one duster and 55 percent in another excurred on the day of, or or the day before, major seems activity in the area

Raticogo doesn't feel these numbers prove Persin make the right statistical adjustments," he says, "you he adds, "and they were ireeligently controlled " Unfazed, Persinger says

Rothschilds. In the 1980's It their personality and be lefs. -- Paul McCarthy "It is in the disorders of the net that the stars fall from the



AUTIMATTER

UFO HOAX

A two place protection of what ground is all to the Compressional Research detected when the control was recordly maked to UFD research who cannot the world. The pagest contains to be seen the control was counted to the control was contained by the control was contained to the control was control to the control was control was control to control was control of control was control of control was control to the control was c

human beings, tenig some kind of leegoptry well didn't even directin cested. "Wetmen advant debt inspections at the National Academ of Sciences had carbon dated some of the abord artifacts, proving that the masters had been around for 150,000 years. Perceiled as the bottom of the alleged Congressional? Riscovi view this chyptic note! UFO belongs are almong us.

"UFO beings are among us now and they are the other communing the UFO cover-up within the ranks of the U.S. government, military, and pre-media." But when Larry W Bryant who heads the Washington, DC, office of Others. Amount UFO Section.

But when Larry W Bryatt, who heads the Washington, DC, office of Catasers, Agents UFO Section, researched this decument, to learn the Section, researched this decument, to be learned it was 24 planty as a three dollar bill "For systems, the sleged Complexations of Recent of this Security capital Completes was disted to 1925—but the Security capital Completes as builty convented in May 1943. In addition, these was



no Wyoming sensition named Edward Wertham: "A cursory check stiff to library prought the unstanding revolution that there is simply no such articlism speech pentiad in the Congressional Places for May 8, 1955." Byyant says.

beyant caps. But who would go to the trouble to typeset a phony copy of the Coopressored flecond? "There are wackes who want to have their titleen mautes of standom in the UFO immight, and I guess they will do anything for it."

He adds that attention should be foused on real documents that could reveal what he government knows about UFO's To that end, Catrains Ageinst UFO Secercely has brought baseus agenst several U.S. govern ment agencies, including the FBI and the C.M. "If there is no such thing as flying incomes." Breat archite. Then how can the government justify classifying documents about them?"

"One thing I have learned is long its. That all our science mercond against really, is printithe and childike and yet it is the ness process thing we have " —Abort Evister.

CHILDREN'S NEAR DEATH VISIONS A decade ago Raystone

motory, the particular investigator of sear death experiences, called on the soleritic and medical community to take a clear book at NIBEs. Melhin Morae is one of the law serious researchiers who reappended to Moody's challenge. A pedatrican at a Children is hoped and an experience of scaled the phenomenon in children because, he south. unifiedly to foliational cryship professional agreement. This means are unpreceded read several and unpreceded read several procession project and a new back. Clears to the Laght (Viteral Reading, processing lies concells south. Moreo has found that the accounts of children passable the pattern Moody selectified with adult NIDEs. They have told him they be controlled that adult NIDEs in they have told him they be controlled above their bodiest to a breat fall internal functional selection.

proceed the Legislation of the L

with dyning
 But what causes these
dyning wincris? Morses speace
laise that NDEs have a
belogical origin is the dynin
 in his bear's hippocompus
known to produce out-ofbody experiencias when
stimulated with electrodes

Alborate explanations are
offered by Derivet Cour, a

strusted with electrodes Abminist enginesis as an entered by Binnel Carr, a physician at Missachusetts General Hospicii, who stribt under NDEan in part to the rolesso of enclopinas at the profit loss physimist at the profit loss physimist profit loss physimist Faused Neyes, who associates the with "manismal in season of electromist more season of electromist by mountain demoler during missachusetts during missachusetts during missachusetts during missachusetts during missachusetts during missachusetts profit and profit p



BLURRING

recognising that her position affords her that lutury. Althe Stanford conference if became obvious that the international participartis had vewports that varied along

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Boccase he French thinliers placed more emphases on the offerences the heavest his arreas than did he American shootable, with their profession sharing the application of participation, and their professional sharing the contributions of their professional sharing the first ware sensy as a balled the intest from sensition but a many or works and only when reproducing otherwises felored are not set an intestion of the professional sharing of works and of works and of works and when they are the sensition of the sensit

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on Earth Badmter acknowledg need several generations DO



"ALL GOODS WORTH PRICE CHARGED," is what Jack Daniel's nephew said in 1907. We're still saying it today.

Mr. Lem Motlow put this slogan on crocks and jugs of his uncle's whiskey. You see, he knew our Jack Daniel's Tennessee Whiskey was

made with Tennessee cave spring water and mellowed through hard maple charcoal before aging. Mr. Motlow knew value when he saw ir. And still roday, though Jack Daniel's is priced above many whiskeys, a sin will move its worth.

SMOOTH SIPPIN' TENNESSEE WHISKE

Services Whytey + 60-125 stated by values (60-16 paids + But flat and butter

NEXT MONTH. GET A REMARK IN-DEPTH I NOK AT CELLULAR PHONES

SYNCHRONICIT



SOMETHING

reviewer one the cave dualities the but builders, the weepon makers, the ron ed into the earth. I, for my part, seem to rise endinesty through scenes of m leaves making snowballs, doing home us. Bobo waves driving through the our

of interest to only a few, we did not wor ed attraction as the posters said Bobo's Tax was the representation of the universities of B- and Y-

of the surroundings, the seedy cos turnes of the other acts. Bobo's little hose his tears, the difficult benches Bobo the real Taxi Their resonant numeric, phristed with such tank and authority, battled at a great distance We maths bumping their heavy wi against a screen door. A remark utterer quality of the Tax's performance before he became farmous. You must

feature of mathematics. My sister-in-low of a tologoco company. It's in his pos-

that it was his destroy entirely unlone seen, black and puring softly, pregnant

with missole." DO

STARS

Give them a blank check and the imaginations of radio astronomers start soaring



a wassermenten voyage. With the ing, we wondered if there were nation is alive and kicking in reartennas to glean information

capt in our imaginations " says ra

Yet, with cosking, the racio astronsions of a future that could be

I want a radio telescope on the back aide of the moon. That's my

moon there would be no man-

Intercope a support frame. But

orbit to look at wavelengths of sed before. It's vegan territory to asble a project like this would be NASA reviewed our report and

Propulsion Laboratory What I'd like to see is an Arecibo type telescope but bigger, any phere. The facility at Areobo.

dish sadio telescope with a surserved I Short of tossing a teledio telescope ever made, three or four times begger than Arecibo's telescope. I observe pulsars that are very famt so the proper the - Donald Backet, Drofessor of as-

THE BIG EASY

I can tell you what kind of tele scope I want very easily In fact. dio waves in the millimeter and of examine calkings that are well known to optical astronomers and augment their observations. -Barry Turner, astrophysicist.

Reported by Rendell Bleck DC

The road to covery: Redio on the moon. in orbit. Aveu could re dev expose of the universe.



DREAMTIME

Where does it go?" I holler back ka, skids to Madagescar and the tip of Africa mosses the South Affantic, and my light penoi, find it floating above the desk, greb if, and start tracing coordsnation Amorrani later the strangeness. has me. We're not in zero or 1 lift the penof, let go, and it hangs there I glance

Graham shrugs "It happens! us, a seven of hearts. I gape around tored with floating chass pieces, feath-

ors, peanut shells, wads of paper, quivery blobs of water. The din of drums and mouths and fast is desferring. "No. Side effects! Not to warry!" The cap. his scalp like the spines of a sea urchin.

actly as in free tall. There must be an board, and I am reasoured by the prease feel of the switches velding to my langers. As we swing toward the dream path, the Eskimo woman leaves the is walleyed and round, made to seem even rounder by the fur trim on her seelskin dress. "Now I sing," she ancroaking falsetto. She peers into a drum that hangs upside down at her warst Presently, she breaks of the song and cries. "They come" Graham stopps over her whitepaning

calmly, "Catch them, Mane Hold

Sand! She resumes warting, shivers. breaks off, and again the drum pooms. Seven times this happens. I and highors. After the seventh hoom she reaches into a pocket and draws rubbing them together above the invertcaze from her fingers and rattle into the down white and block ones, nearly fill ing it then she cuits nibbing the



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bees, going in the ar into a shape i recognize I glance at my screen,

I shut my eyes, slap a palm over my left ear, and has into the intercom. Are

"Wouldn't mas a tack," says the cap tion. "How's the old gol do it?"

Conne are you all right?" Janu I take a deep breath "Trust wanted to

'Two more days," says the

When lopenmy eyes, the pebbles

ples Graham

buoyant and I together and the pebbles do rush-

old women suddenly gogs irroy and Dra-Just as suddenly the chamers out seeds. All over the calam there is the triv-

setting to the deck swri into the shapes of generative in what I saw The engineers review the

terco below Immediately the pubbles old gal in a rawfede dress even all

Bent over a training manual Sonya Mirck says curry, "the all rubbish "one of the rare times I have beard her "If you'd sat beside her you

wouldn't be so sure." I redev Just rubbish. Hocus-pocus. Mumbo

Her smuoness infunities

He squirts at the caving. 'Must be without being struck.

It's called a rambow snake there. He swogs has chen toward the

Trings he down now obedient to our What did you mean about side effects? Losk

'The way save That hapthad east of the rread

He waynes del scately, holding gers half as thick.

Mana? leave What was she

hologra. She sings es frem with polar bear and arcisc fox. There's sevdram? She catches them and gets

from to help with the heating That a how she does the healing " He pauses to unarrail the stongs. "She uses pebbles to make her own models of places, to show how things should

does she control them? "You've got me, mate."

Doesn't that drive you rule, seeing wrhost understanding?

Nonest is completely without it.



The paptain breaks in sharely

I glare at Sorwa Missk at her mid spreen across her shoulders the grubbing gaze from the manual One sandal off, one sandal on, Graham

could do with a cheer up," he declares

ing his bare foot onto the console; he

ue your hearing range by a factor of at least 19%, with . . BionicEar IV

et road this ad for an even better dos

And try the sustranced if you do not it could score the daylights out of you. The there is traffy

In feat away, and even hear what people are talking about an the next room. A walk through the would will receive both one of the process of the p

idential devices for \$50 to cross. But we have an even better deal day due for \$50.00 and an'll send one of third one, buth our complements—shockacle PATC! In

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with tex teets. 'Used to Not anymore. know she's right. The longer I'm around

The sharrens dictate three paths on the litary of numbers. With each path, The cabin fills with scudding shoes, tape casseties, cardy wrappers. The brown scroeress from Borneo sides up gebri free wrice brushing my cheek Lapp sings, the antiers on his head start to grow branching until the appa rake the ceiling and the branches till

OMN

Savgoes! Savgoes! The hearier of reactives completes his song. The antiers shovel back to his skull He stumbles every dazed suc-

sleeves. I count them. I fumble at the clair, the cool pauces, row after row I Hands settle on my shoulders, and under their gaint gap I feel myself frem-

bling. Easy now massy Easy He is ancient lages beyond me. Het my ightning on his chest, and I whaper

"I know." he murrours. "The Old One verse. We catch a grain of that power Shuddering as after a long cry I say a white shamen calls down spirits from Neither do I. There is no thore, no

grandfather. There is only power only the dreaming. You speak in nouns. But are as dry and gentle as grass "But need your sleep for the light day

The sevents day becaus with a smoth-

The dream lingers after 4 open my eves inside a topee, an old women in strapped to her back with a stewl dismy feet. I am the baby it finds out an pot and glides the blade across her forgus fating What gooks in the pol? The baby wails, and I hear my own voice basking. "Grandrothise

sharrans begin to rustle. From his bed in the linst row. Graham flinches upright What is it?" he mumbles "Nothing," I say hastily "Only a

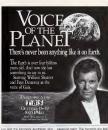
Come on then Out with it I shake my head. No it's ugly."

A deputation of shamans clatters up your dreams, misey" he save They fix their ancient glittering eyes. lepee, the old woman the pol

who translates my words with pestures es to announce gravely. 'A black shaman has come to you. Constance " was red. I Traint realizing what I met

Sourceston My anceston The wisered abandinal utters her that is black, massy but her power calls up spirits from the underworld, as

I am suddenly required by this listspoed shadow and the feathered cho-



rus and the lummory Australian who manis our convensation with fingers like ropes "fourthe all pure white." I suppose? You're angele? You deal only in goodnass?

"Of, no, missy. We are neither white."

nor black. We speak with all powers, above and ballow. He gally old eyes cut through my furly I getter myself, escaling my place, my job. Thase are with doctors. They graw borse in hovels. What do I osee.

tult whoever or wherever you want That's your business Just tell me where to fly."

There is a southing of moderning health book, hare feet. The alternary wasp Crohem in a scart of wheepers He gries me a runkli book. "Book

Because that knife happy ancoster

Bocasso that while happy ancoster of yours is boiling med." About what? Graham scratches the fur on his chest. "History, I'd wager." She means us hatm." Lufor hissite.

s ing pocs and the landmasses are kidneys, livers, hearts, tassing in green n oceans of broth I bits my lip to keep from screaming

. The shamers prop a white-barked sapling on my console its truth clamped in a three legged stand like those my parents used for Chrismas trees is to be grazing the colling. Seven little bescholes shall with dy lesves, curve out from the truth.

"It's a brick, Graham says. A holy tree in cold country." What's it for?" I ask. Overhearing me, Luke solermly points to his rawl. The doorway, he

ports to he new! The doowny, he actions "The ladder" "Where is supposed to go?" "Deep" says the old max. "High The roots go down to the underworld. The hastories much the sty.

Our heal point is a cincumpolar orbit with well seepe out a transcus caree tree the spening earth I purish the count in most consultation and continues consultation and the in my cross-checks. I find three mustakes glitches that would have led us additing by seri-and degrees enough to spot their count of the count o

No, I've atmost go! it. Shaken, I'repeat my calculations.

Luke says, "Missy, if the grandmoster comes back, you must sell me; and I will deal with her."

"I'll do that, I'reply brusquely."

One same and you will now return "
Mindower you say" I south the
keys with exaggerated care, as if I
were dearming a borrib. Sanished at
last, I notify the captain. "Ready when
you are, ar
"Cood, he says." Lat's get the over
with so we can go back downstains."
Monthly are title with the orbor day.

My right ser fills with the acher chagues of the criew No resources from the engineers no season from the engineers no season from the engineers no season from the engineers not season for the characteristic at man redifferent to the glipt of a handward from the characteristic state place printing season and the characteristic state and between her tech Songa Nerle moises no season had to entire the characteristic state of the New York and New York

of turning spoess. Why set any fills with the racinat of the sharmans, who form their modely ring and start premating. They are periled when motive gradly like the contact in a possibly about the legisla and disty thribe they sharm control feathers more other their germannife. As they cacke, fleating distinst trickens the air Thy sike in the control their sharm of the trickens the air Thy sike in the control their sharm and the many seed for their sharm and the man and to make the control their sharm and to make the sharm and to make the sharm and the sh

The neety wover best inscribes a transbow at his weak. The playstalmass has gone out of him. Now he is weathful like a ton tamer with the gate shut and he cage that of behalts. Although within arm's reach of one another, we must yet to be heard shows the drums and balls and marin. "Hold to

In the first is modulating the edge of the dealer in your form the pressure. There is a connection of your first in the pressure. There is a connection of your first the connection of your first the connection of your first in your first your first in your first your first in your first your first your first in the first first state.

head in a stangled wall, and farmes guilt from he mouth. I lose track of my hands and only restice they are belied up in front of my ryles when Graham piece them away. "He is all right! "Graham assures me but with an edon of uncertainty." Bit him but with an edon of uncertainty." Bit him

keep my fists in his palms
The stapping of thighs accelerates
The man cry streety as if it pen, and

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Suddenly, the crone nearest me rises har face hidden beneath a bird mask, an eon besk where her nece should be, silver bradts training down her doeskin vast. A papocoo requirts at me over her shoulder is pose where goe

same-reared manager or the grainly and child scothes me.

Take us home, daughter," the old warming the man, and har vocus is water over stones. The only sound I hear "Where Grandrasteer? The brid was the control of t

"Where Grandmother?" The bird mask: the iron boak, and pooping child Milmy agit.
"You know the place." She nakes a tragerned across my brow. An image isses in me of better crags, dry compounded of does and the moon cause in the limbs of a lest-

crage, dry compounded of deet and the moon caught in the limbs of a leaflass tree. If do know the place—the Black Hills, where Hawk Sours had been the long Sintes. The old woman nods "Fly us there" site says. My hands are enagged, but I rip them free. Someone grabs at my

hay nous mer original or only when their Bernachia grade or only when them the Bernachia grade or only when them grown is successful and I fing when the savey with a senego of my arm My fingers tool the keys. Before I can be purch in coordinates for the Basic-Hita another hard jefen my around the best on the bely scars on that local I hade on the bely scars on that local I hade my arm to furth that adult, but the does not outge He gross my shoulder and benefit down as through the lass me 165 benefit down as through the lass me 165.

for bodger for given some who was not for bende down as itsuight to labor mit for withing display almost bouching men some covered in the beater right, and substant by the nased of the determine covered count of the some some control of the country of the country of the country of the country of one, the willing men and it see Gisham with an attorative displayers problem, hereaff i.u. from the floor, and are personal union from the floor, and are

model fills with the tony teste of feer.
Still bending so that his lips an inect to my ear Luies says sharily. She came and you did not ware the "lips and lips and lips and lips and the says that is called training to the two stills." She trigd to make us crash-

Use puffs again on my chasis "it as true mass".
"But why? Why would she had us?" "Because afte doesn't want us to

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or mail your order clear sourt number and fight and o's wife surround cause sing the earth back to health. She warrs to hissien the end, to wipe out the

"The innocent would be reborn on a new earth. Her own tribe would be rea man who has been tempted by the

Graham aloughest up, nubbing his nos. What did you hit me with? "It wasn't Constance," Luke save "It None weer a bird mask or parry a papages I store at my hands, then stuff

She will try again. Luke warre The darcing men, the drammans worn

"Why doesn't Connie move to the cockoe? Graham suggests shakes his head. We need her to help

Luke points at my screens. "It pours

toward the rungled quit of the Hirtslayers. This eight is more familiar than my

"White I'm gone," Luke tells Graham.

The old-man plucks the rambow bet: at Grahem's worst. "Carch her with fire." ends of cords twirled from the center the earphone I hear Sonva Mirak shruk-

is breaking up. I feel pertain, yet I am From the inner hoop, the Existrip wornan struggles upright, then sturnes over we need the earth under our feet, and

ward and I bend easily, until my You are the earth, young one," sho tells my "Re still Be fourful." Politiles pour from her Impare, rat ling on the counter, and my heart the fet old woman clambers up my back, her weight no more than a toddera, grabs the birch sapling, and slender branch Instead of barging inething upward as though crassed from

head to moccasined foot. In a moment ing at the tree. I feel again the childhight pressure of feet alone my atrine Up clambers the woman from Borneo passing through a door in the ceiling. dapping vanishes with them I stende at Craham who never takes his eyes he says. The gunlight of Australia have

The hull growns. The particky voices of the crew swell in my ear. I feel mights have cychered should a certer

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I did not know was there. I could hold The Pygmy sleps in from the whiling ring of mon, stamping his feet, and yet when he councies on the back he is lightter him the black pearls of his toes

cooper arrulets, then the immense More

comes Luke in his bowler hat and calls back. 'Don't move. Constantal husbes. In the hearlderno pience the

over a wooden bridge. Will a breek? voice behind me

prough levers of cloth "You'll trap them out there! They went be able to His hand on me is a fly I shrug off Grandmother: I whaper Her bright

russel wings folded now and her toes with say face, a gossamer child, spun

for I gather myself to use, ignoring the

paw at me from behind Come child I will take you to the than pillows I am drawn to my feet. The papages

it stepping forward welding and the against my tage, and something stiffbackwards an instant before the wings I can no longer see her I waif, claw

that bench me, and I tumble back into is she gone? Are you back?

Lerk my head up and down sobbing He income the helt a little "Lord you're strong when she gets in you.

"And kill my wazards?" I disconer threa-As though to demonstrate his will maness, he grabs my neck and twels me

I fight back threshing flating the hopes still targled around that radient bird women. There is a sharp high while-

se and suddenly the cabe goes clark. out. The stewards grand to a helt in the age's Sterlied certains pours from the ear tain snarling queebons. Then state ing but my own gasps. The lights flare

Her strength is in me. The stro may die but I can soar without it I snatch ing hisments. In place of arms she has from my neck. I could snap this man Conne please! Put your head down.

> in the darkness I hear the scrupe of talons on the floor feel air move from bloody meat, grawlighto her shoulders.

> see her. Why doesn't she grab me.

ower I striff but cannot small her pannot small the meat she offers. I open my

INTERVIEW

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mouth, feel on my tongue the pulsing They'll die Conrec, the man cries. While all che country, stopped of my senses. The

the derivous, the seence. I feel anothor Flesh of my flesh. At last I choose whisper into the dark. "Let me stay There as a rush of air, the sharp high

laror hisses, stewards purr, monitors tions. What the hell happened? How the From the clash of yourse Linary that down and had to be doped I take no

I bend over the consols, lay my wat cheek on my proseed arms I weep and weep Graham strokes my hair the to of the saping then two bony Inottened us Constancial Leave her alone. Graham says see 6 tore her up? The old man prints. The other shipmans climb down the tree and over my back, each one heaver than the one bethe catin. They encycle me, charged

with thumph from their journey, chatterquages. Graham translates for me. stroking my heir. They have spoken to the sung the melocles of dreamanne. Have they truly? I believe, I doubt. When I go welk in the woods, wade in a croek

begun to heat No longer a stepping stone, I rise the hawk woman stood in all har spiendack. I pick them up and place one beunsure what I have gained what monkey as Domer has done, seems exproach to study so-called "human excormett-with lasting results called the testicular feminizing male

What is the TFM? Bersky Here you have a georgic main whose testes, although undescended lost the androgen receptor all over the body-including the brain. This genet actenatical of this individual? Female! Fornato extremel sere provane, brevante. gars, however, are not temale. Early in foral life the testes produce another hormone. Mullenan duct whiteand factor IMFL that suppresses development and Foliopsin tubes. MIF is not a storoad and doesn't need the androcen recenter to operate. Appearably MP is nor-

mally secreted in the TFM because those who function sexually as women intercourse is painful. That's because the despest part of the vagina develboth sexes possess in early embryonic riown from branch to branch stops on my back, and hops to the floor "You The trump male testes also normal-Because the TRM can t respond to teomale. And at puberty, when these tee noreased quantity of estrogen, develrarely know they are male. They re born losiena like onto are treated by par girls. They are both phenotypically and

Oxed in a sense, the opposite side of

nals keep on turning out misaculinization harmones. These carls are born with and-of the squeeze and correcteddevelop mesouline characteristics onand muscle nation. A number of uncorrected girls were thought to be bays Nevertheless, at puberty they do Many Cárl ceris are prientitud out of

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the "pits" usually have their testes re-

hornones, you can easily eleminate the excess strategies. But these agreriel an-Me Sugan Baker and Anke Ehrhardt iv after birth and found them to have sub-No manculate trads later in life. As adtombowsh but still saw themselves as interested in children but show an acbows' as adults? It a hard to set heand heighted but she probably will not

alphy reductase deficiency-in childinto estroom. The enzyme 5-eleks re-

tosterone, is preventy responsible for nosc males with normal testorierone producing feetes, but unable to make raised as cirts. At pulberty when the losgree perhaps because a pregter quangyer a relatively brief fetal period terone schoolly change from diris to men! In the Domesican Republic there

ing that the fetal hormone environment did mascularize their brians. In psychological interviews, many claim they "always know they were male On the auriage, this phangmanon-

come mon psychosexusity—supposts chosexual differentation. There are, how ever several controversal questions als actually raised as ciris? Did they be-Boy just adjust their adult psychology

ever when this syndrome is detected,

moved in this the appropriate treat-Orner How might a fetal hormonal imbylanice after sexual grantation without

Gorskii We suspect there may be sepatella critical periods for development uzity I have no problem accepting variability-math: affect one aspect of brars development, but the body and normal. Take the very mecho, muscularly developed gay guy. We have no as a kid. To some people, gay or streight, male or female, a muscular duy

to make their bodies conform to this sonunity attractive ideal Own Way hage's Dorrer or others traper in homosexual mon?

esis to defend. But sure, hormans ratigs are crucial in both sexes. And if you why limit it to males? If you found higher levels of whatever androgen in to-So why not treat these olds with progestins? Maybe because if you bungled the dose and timing, you'd "unforturate. by" moles them even more masculine!

capable of correcting homosexuality but feeds a strong need to CREDITS

Garakir This is insusible tonly claim? (Is at life and his or involve ammocratisis of each size of the control of the contro

See resolvention. See that the beginning the third the beginning the become give that the beginning the become give the three that the beginning that the beginning the third part facility that the beginning the b

because we don't know the effects of sex hormones on aspects of brain development and function, such things as creativity or tallent. Some people (descriwing in partic-

is daily have signed that his more lateraland "magnitude than is a shelmin auriceal advantage. Well in our accbined and a second of the second of the beautiful and a second of the beautiful and a second of the period of the second of the speriod of these, the more beautiful the petit" holds have like what shell a creative enclosures, the more issues and that may be a distinct disable states of the second of the second of the companies of the second of the what we second of the second of the companies of the second of the companies of the second of the

create encientists, the more identified possing right for a fund creation register. Would use to see the register in a fund or called possing to make the common register. Would use to be their? See and research pick the common register is seen to be a fund of the pick their common register. When the common register is the common register common register is the common register. When the common register common register is the common register common register. When the common register is the common register is the common register in the common register. When the common register is the common register is the common register in the common register in the common register is the common register. When the common register is the common register is the common register in the common register. When the common register is the common register is the common register in the common register in the common register. When the common register is the common register is the common register in the common register. When the common register is the common register is the common register in the common register. When the common register is the common register is the common register in the common register in the common register is the common register. When the common register is the common register is the common register in the common registe

But remember, in the transpectal the

brain is okay. It's the penitals that are

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And there's another way, too first sto roids might work. They could turn off a suicide process Neurons survivo bethe nerve growth factor INGF1 Restead of asking how NGF normally around and ask. 'Why do neurons die when you take NGF away?" Surprismay they found that cell death, occuroften the result of additional protein ava-

these. Nerve cells start making somea substance (such as NGF) that inhibits role of testosterone in the male SDN is bean, here testosterone from the testes. Orany How will you study the effects of

Gorski. By meens DNA from the male's SDN with that of the famels, if a possithe make SDN. With male SDN specific DNA at hand we may identify relevant of the mystery of how hormones determine the structure and presumably the

Our field is in its intency By using forinveste inchreques, we will expend the off first list, we can begin to zone in on the effects of ago, the Rif, endocene abtween various brain regions, it would have a strong effect on how we thris.

Clearly defining the wasterios of struc-

turn) nex differences is the prerequisite everyone's mind namely, those addressno the question of whether men and born strengths and weeknesses. But I'I tell you straight out: Sex differences in some of them are shaped by the sex meins: It's sexually dimorphic until you've proven it isn't DO

ARCADE

1. The highest number you can roll on two dice is 12, "boxpars" Alternately, two dice have a total of 12 faces 2 Each player starts with 12 mon in

3. A "perfect game" in bowling is 12 cpri-

4. Women's lacrosse (Men's teams 5. Canadian football 8. The sarring race is for 12-meter-

ged with inventing the 12-tone tech-B. Mark Timers is neutronal storing for a

depth of two fathorns, or 12 feet 9 The first line of Shakespeare's 10. The twellth verse of the twellth chep-

ter of the hundth book of the Bible There are a total of 12 crarval poglossal is the twelch 13 Twelve Caks Plantation was where

the harbecus was held in Margaret 14. The traditional gift for a twelfth wed-15. Twelve astronauts have walked on

16. Words spoken by the commander of Apollo 12 Charles "Pete" Connad. as he first set foot on the lunar surface. 17. Cheeper by the Dozen

21. The twelfth day of Christmas, Jan-

uary 6, marking the end of traditional eve, January 5, a the Twelfth Night of Shakespeare's comedy 22. Total number of calls "my true love gave to me" in the song "Twelve Days. of Christmas'

23 There are 12 channels on a VHF dichannel 1 24. Alcoholicis Anonymosis 25 Cunca a from the Latin uncle meaning a twelfth part of something. Al-

are 12 ounces per pound in the troy sysecery system, used in chemistry 26. The 12 bell in pocket bill ands patches, usually black. The white resich-Dozens of thanks go to Monte J.

Zerger a mathematician at Adams State College of Colorado in Alamosa. and Den Stene of Circinnate for their help with this guiz DO

GENDER

The following characteristics fell into Ammonia

Defends own beliefs

Leadership ability Major decreors easily Self-sufficient Willing to take a stand Witting to take risks

nine", the rest are 'noutral Cheerful

Chédiés Compassionate Exper to scothe feeings

Hatterable

Loves children Sensitive to needs of others

Tender Understanding Yelding

marchers rejected the mesculine and civity. If you identified the 20 mesoutho above lest the same way the researchers old, you show an awareness of concuine and ferrane behinger if you la being more of these characteristics as

place too much emphase on what is chase more masouline or more terrainne chlaracteristics "correctly," it could vertions of one sex butter than the other Your selection has nothing to do tensities but erroply reflects your understanding of and ability to identify soci-

The BSRI assumes traditional saxtyped individuals (those who define are) are highly attured to cultural defiritions of "appropriate behavior" for toylor, they re motivated to keep their hahavor consistent with an idealized inpersons will choose to behave in ways-

image. The meaculine and territine cause more men or women chose the If you would like to further investigate

whether you personally fed into fersions. masculare, androgynous, or other behavvoral patterns-and what each calegory means-you can take the BSRI Psychologists Press For more informa-Palo Alta CA 94306 DO



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to all BM compatible PCs.

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purchase, and brokerage services Costs of using Quantum's

online services, depending on the particular system and time of access range from \$5 to \$10 per hour with a monthly fee of \$3 55. There is no charge for registration

BASELINE

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sions, and unions, contact

detailed info on pame-time network apacities; credits on more than 30 000 firms and TV shows from 1970 to the present and a current variet of the Follywood Aponter satellite edition. The system is, inverver, a

Reporter state file edition. This speam is, however, a big-budget ferm Cost to sign up is \$27 with a whopping \$400 yearly subscription for Hardine move review up is \$1.30 per whose and custom reports mis \$1 per page, pile a \$60 per hour research file Desemble nuts on any

PEOPLEILINK

Peoplefunk a emphasis a on furthering interactive communication among is 80,000-pine unbeartheria Founded in 1983, the system, which is owned by American Home National, chara a web virtally of features. These included chara is a second communication of private chall lines for conversations electronic east user clinication of boards in spood-internet groups protocols for upleading and devinitating sold.



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services, a leature that

There is a \$24.95 sign-up fee (which includes a \$15 there are no monthly clues home base in Chacago or Startink \$4.95 to 59.95 per hour, depending on your Manday through Endays

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GENIE (REma fatherea), from RE money-saving features. You disconnecting from the sysinformation and a wide boards, news, sports, weethand Grover's Academic player games purchases shopping mail-Costs vary depending on

6 PM Monday through Friday) runs \$18 per hour \$4.95 per month, however, memberstup charge. You dem -Tom B. Rester DO

THE OMNI ARCADE

You don't have to be God to overcome the forces of evil—but it helps

DIVINE INSPERIATION One of 1989 In Insert Computer of 1989 Insert Computer of

stall reflicting the writth on this encount. Not must also this excess the wast also this excess the state of the state of

some men may be gods, or at least think line yer. the rest of us just leep banging our heads agenst really. And that sure up life for Bonk, a coverage coverant who literally uses his head to fight a gallery of strange prefessions opponents in Bonk's Adventure (for NICC's TurboStant-16). He busine heads, jumps, and dereba through solveral levals of difficulties on he way to recogning the beautiful Phincase Sci form the evil

King Draal. With claver aumation, contooneth graphical and tonguein cheek humar. Bank rises above the ranks of lack-andpunch video games. Not send the Maino Brothers test solved a buffer have there been such engoyable antios.

MATRIAL ARTS VIGILANTE Tates Weath of the Black Maran has a list more going for it than locks chops, and founded-to-rate video violence Capture special villains and they'll spill the beats on the location of second classes. Institute motives, and lechappear within without



trace key informants, you'll now be oble to study your way to the headquarters of DRAT (Doug Runners and Terrorate). Wath's left-longit sorpling in-maken and not graphics are state of the and for the Research of Entertainment. System (RES) And the oble gathering and story line combute brain teams of mouse.

NEW THIS FALL Playing minimizer of III Playing minimizer of III Playing the Playinouse couldn't be any more demonster abusiness. The Playing of the Segue to the Early Get's Segue to the Playing the Segue to the Playing the Segue to the Playing the Segue to the Segu

sales from the Amold Schwerz

cregger move Accumulate on array of advertioned as you accumulate a warely of exploitational weapon newsed for the final confloration on Mars. Uhms IV the classic rate playing computer game, becomes FCNs Uhms Quast of the Awater for the NES PLAYERS GALLERY Throughout A Boy and His Blob

In World 3-1 of Super Marcoland (Game Boy) jump in to the brokes at the life of the screen and then not be alwayster when it appears. The several residuarly you ownhead, where you can race safely through had that benfind the spacesport on the road of Passor's control lover in Pharcisey, Saiv // (Generall). It will allow you to go or to the world of Deap and you second adventure.

We'll pay you \$25 for each video or computer gam tip we publish. Send them to Game Tips, glo Divini, 198 Broadway, New York, NY 10023—Bob Lindstrom.

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POWER PLAYS.

In the real world corporate heads are in charge, but you take control in these computer games

ETTU, BRUTUS? Charlton Heaton and Kek Dauglas seen the only guys who look good in a togs. Try on your own redeat appared and dominate the world too—In Electronic Aris: Con June 1984.

Aurent Meterater of Historia
A concretate Inyrated of accelerating was a confidence of the confidence

op-moving set to standard and sea tarther B

The game explore is broad based action-strategy mot to provide a constantly changing game environment. Outstanding graphics and an exocative missed score complete the flusion of a vest to the accent world or at least a holywood initia.

ion of the real thing DUFFERS DELICHT at a see. move that the east to the teach the post the green, and thou a 30-feet and the part of the free asset in the middle of the feet way. It may be the guill course from half, but it's green, at mixed.

and Nacional Chimate Golf
Course Design (589-95
Shift gives you the look and se muscle to buildow your win roughs, tage fairways on burkers but you must se your own energy and neignation Enhanced by 285-color

reagination
Enhanced by 265-color
graphics and compatible
with all Nicklaus politicists, United Golf is the most
sophistic start program in the

garne also others two new courses to pay. Musthalf y Dublin, Ohio, where Nick laus mode has first state at oscillation and The Baar's Track is amunitated ourse oneshed expecially other the Millemate Cell

did for Ultrosite Colf

WHOS A FOCL? The
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acquisited 94, 1904 Mor.
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agained the C

FALL ENGLY Get sucked for a Vale and the sucked for a Vale and the tracking for a word familiary word in All seed Cestify (EMI), a praying sucked for a vale of a vale

responsit relations gots scredd-hod when MiscoPos uncovere the multisosted Covert Assarch (ISM). And Misco Computing is introducing yet more puzzle garries including Puzzle Gallery if an unusual road trip has to low a family as they such sights as Big Ugly Jain and the Great Well of

Lake and the cent was or Chris-public that is We ALCEPT TIPS The Foot's Errord. The rumous in The Escheriment must be reflected to solve the option of the selfected in the option of the coder 4.1, 6.7, 5.2.3. Organ Systems: Chine of (BN) To get a poek at a map of your susteen short head the act holy centre the numbers 2.1, and 3, in that direct, and then enhance or the susteen short of the context and then enhance the context and context and context and then enhance the context and context a

Interplay's Dragos/Mose
(WM Appe III) There are a
lass to easys to get out of
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THE OMNI ARCADE

TWELFTH ANNIVERSARY QUIZ: Grab a pencil for dozens of questions and a gross of fun



Description protection to a control of the control

(Most numbers are deficient, meaning that the factions add up to less than the number) The sum of 12's factors is a square - 16 and their product is also a square—164 which is the square of 12 state?

Curiously the square has a neet meror mag teleoratep with the sign tip. Own who would like to see a duo decreal (bese 12) system of counting since #2 can be divided eventy so many ways, but it will probably now ar happen. In fact, hends

er happen in fact trends are going fire other way. To the base 10 system.
Even so, there are many nermants of dividing finings up by 12. There are 12 nother en a fact 12 terms in a deeen 12 months in a year, 12 signs of the 2 collect and 12 hours on a standard.

Prough each day and right. There were 12 apposite of Christ, 12 traves of limits 12 gods of Olympus, and 12 labous of Herous 12 mailtains on a july-12 noise in the chromation scale and 12 barries in the Foderal Reserve System as shown on U.S. currerby by the preferes A (Boston) intrough 1, (San Frienceson).

What is the connection tween the following item and the number 12¹⁹

41 every correct answer A score above 12 is good, up- or more is secellarly, any score above two dozen the phenomenal 1 Dios

2 Checkers
3 Bowling periodion
4. A game with 12 members
when played by women
5. A game with 12 per feat
when played in Canada
the fine played in Canada
6. Amenda's Cup
22-7. Amold Schanberg

name
9 "If muses be the food of love play on."
10 "Up harron the eighth tilize-bad the ranth (from I Chronoles)."

12 Hypoglossal nerve
13. The Wildes termly plantstion in Gorne With the Wed
14. Sak or lines
15. Mocrowaliers
16. Whoopee! Man, that
may have been a small one
for Neil, but that's a long one
for me!!

17. Moves shout the Sabrath
family, starming Califor Webb.

Cobb E G Marchell Jack Rugman Jack Warden and Ed Begley 19. Actor New with Lee Marvin, Ernest Borg-ne, John Cossevene, Charles Brog-

Cassavette, Charles Bronson, Donald Sutherland, and George Narmody 20 A 1970 comedy by Mel Books starring Ron Moody. Frank Langella, and Dom Dolluise

Pronte Langella, and Dom DeLuise 21 The Epiphany 22 364 gifts 23 VHF selevision

Inst of which is releance on God or a higher power, as each releastal ut derstands the concept. 25-There are 12 buttons on a push-button talephone, and the teeth button has been assigned the pound (if) symbol. What other relationship links 12 with the

28 A small white sphere with a purple ships 27. A larger what sphere with black pornagons Answers appear on pe 140—Sopi Morra DO

LAST WORD

THE ATOMIC CAFE Old-feshioned American food prepared in the most astonishing ways

interestager thinks that the next madero kitchen be Mr. Hubble, on tone that acloses. dices, makes college, and dags avarything you and it-expost take



I'm a ramblin' lond of guy Can't stand setting in one place too long, seeing the same sights... gating the same food. So I keep

of Met's Famous Russon Chris So. Hot. It's Served in a Magnetic Man, how long were we stuck

those blenders lucers, pitters corspeed egabeases, and other an-

From what I'd read in the trendy food rags. Mel was dismissed leachen and saw the sad collecall He yelled and screemed and pounded on the wooden cutting Nock: "We need HEAT! LIGHT! For the next aix years. Mol-

assisted by his able yet extreme by sumply sidekick, Tung is Cam-Posture districtives her -- filed out apcrets, iloquily tost fred exposures-

I thought of that as I stopped out of the sax and gazed at the nean sign on the front of the get in wound down the block. Mel Tung allowated from dishwasher

ntweets and doomen was choosy about whom he let in Luckh, I knew Tung from way years goo after we tore up a ry posedly safely encased in lead)

in payment for about a weeks Tung led me to a quert table where for the next four hours ly prepared dishes engulied me Super Collider Buncample, A. ed Supculent California sypporeach speeds expeeding 5,000 miles per hour before it is wall. The vegetables are recluded

. Angel-Wing Proscrutto on Moion fange. Aged prosciutto cut thin that, if dropped, they simply hand in the air. They rest no ner on-perfectly round because the

melons are grown in a weightless garden capsule certing the earth above the sale

. Melis Blackened Meteoric Moldrapped from Mel's Shuttle into tion burns away, leaving the thick seared on the outside but the time it lands in the 'Mallard Mitt" on the cafe roof

*Transport Surprise For the young at heart. Sure, transporters great fun for food. Mel will transport any type of food from one acts and broog the results steam-

*Ultime Ultrasound Margaritas You haven't had a margarta until magnificent sound machine Tepned sikebox-and exposed to sic is manipulated to create the liquor to vibrate, and all the moi-

I could go on and tell you about all the stuff on the menu i inture Thermorrucker Explosion Ide has mercing again I can rost, knowing that as I sleep. Mol has his 40-person Atomic Appli-

-Charles Merringer DO