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JONAS SALK SPEAKS OUT CHIOSAURS AND DIMENSION CHAIRS INE NEW SILICOMONY PAST-LIFE SKING



EDITOR & DESIGN DIRECTOR BOB GUCCIONE

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ONLY FROM THE MIND OF MINOLTA



FIRST WORD

By Edwin E. Kintner

 Leadership m fusion technology, which the United States gained from the Soviet Union during the last five years, will be last Energy press the most interded in Section sectors of inclumnent action. To see this be includ, othical is religious questions their oversthedow is, but to far tailthe instantal works is concerned, energy demnates our property.

 Controlled Interneurable: function is the lise known process for contry production if subcreaking developed and deployed, higher vocid significantly ease the circlerins of energy mail places for all their is follower that the timing of fusions a washeridity matters a great deal

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A serie review in the Exception series and the exception of the series of the series of the adjacent particular and the series of the series of the adjacent particular and the series of the series of the adjacent particular and the series of the series of the adjacent particular adjacent of the series of the method the series of the series of the series of the method the series of the series of the series of the method the series of the series of the series of the method the series of the series of the series of the method the series of the series of the series of the method the series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the first series of the series of the series of the second the series of the series of the series of the series of the second the series of the series of the series of the series of the second the series of the series of the series of the series of the second the series of the series of the series of the series of the second the series of the series of

Note toware as a result of the new seatonal policy of budget stringency there options are in clearing The infastrons recommended by the Bachistasian Pariel and endinated by the Bachistasian Pariel and endinated by the advance polapored on clancelled. Crucial experiments well along to design or construction we aboved. The imagenetic frequency programs as aboved. The strategic backbone, it is a poliection of isdavious projects and power lifes wereast mission or at tensishib. All best the program will expension delays of several years. At worst it will be obtayed indehtratik catherius permanently.

The mariner in which this major change in policy took pleas—without scientisk review or interdepartmental hearings—is in maked collination of toe deliberate caseful plancing and preparation of termin reviews and congressional hearings

This decision is a national error for which is provide the protect the two protects serving we hap part if may not be part for more years — protecting to access — but if we hap prior. The feasification in factor development, which the United States gamed from the Soviet Union during the active years which have started to assign error of these toes it personal and commit error of these toes it personal and the

Recently private capital fails entland laster development to take advantage of the knowledge generated from the government program and to adjustitute howledge aconer with integinative new approaches. This flow of clasts wit be enclared

Even in our laters trac consideration the model or california approximations the beam of the second secon

Phasis these actures seem to contracted the process of the Reagen Administration as stated in the new Network Energy Nem The fracted governed in coordinate is alread mapping to the second state of the formation of the second state of the formation of the second state of the second stat

Why have these declarate beam head? I have a tradition gradition to which if cannot this an isotequate answer (hope the few answer not of that the isoter and political systems and values of the network networks that we can be that are can not senger find the well, politikistica, and terminisment to do great things BO Etwin 2: Other was torseng the associate which is there inverge in the Direct of swapp the associate associate entry. I have a termine the terminication of an orgin the provide a direct one of the Direct of an orgin the associate associate entry. I have a sector a direct one entry.













o predict when the epotority will zig and when it will zeg, more leaders are turning to electronic seens. contrainmental science called accord-Wall Street (page 74) British economist Anthony Eventsidge reports their early stage in the spance's development." ressingly large (but with the help of more powerful computers, policymekers recession. Liversidge who has worked editor at Fortune magazine, is currently a fiee-lance writer based in New York City

actually been used already? The Russians are namored to have doubled one of our countries Fortunately lasers sloo have 8 OWNI

Superior of the 1960s (Ticknor & Pields)

Laser Focus, America a longitudi laser when he saw the movie Goldlinger "I anys " and was about to burn term in hat-lengtwise-using a grant laser 1 laser was a force to be reckoned with

contemplating our technological future, he with oceauthor Gismey Wehams M addresses a statulating question What Could they have evolved into intellectual the authors examine the recent forse!

ruling reptiles' her spparent. Dubbed s

2007, a bold collection of her photographs published this month by Weng Press and highlighted in this glittering property slood her well in the commercial arena, as Lip Querchec and other clients

Dving is a revitalizing expension for the (page 68) which marks author Gregg to these pages with her short abory. With The Prince of Monying Bells, published in the fall of 1981 OC

ETTERS

COMMUNIC/ATIONS

Toti It All, Brother

In the second se

The point to be raised is the Why should a soul be certained only in an own?? Dearer The makes contribution to vite, the sperm able centain a uppricant portion of the sull which sparks life? It have testind the hypothesian repeatedly that it takes evolutions acut

The set across the manufacture are equally advanced. Service the indicative and advanced because of the vest in under of sperm onlise to the apprain in the acr. Those who be abeen in the appraint in the acr. Those who be abeen in the applications of this notice effort as the obvious traft. Criny when we trace transforted to the university may we rest. Amon 24 Multice

Math Fun?

I was refresting to read your interview with Martin Gardiner [January 1982] it is amazing that only people who dearrise themselves an normathematician dear explain mathematics to the common person and make it is ...

ood for Martin Gardner and for Drivi Alfredio Mexamete Dallas Tax

I enormously enjoyed your interview with Marka Gardner (Umrkitels a phenomenon and not hvor people together can replace him at Scientific Amavoar. By the wig, he is a mathematician in the best serve of the word

Starislew M. Utam Santa Fe, N.M.

ruelly to Animals

Loominantlyou for showing us some of the doriver side of lasalish in your peece on Unward Taulo (Continuum, March 1982) Such homor storates doour worldware Animalo are softward in sopariments that willbor often yield smb iguous vesible

A scientist must also be a human being

He must be morally capable of judging his work and he must be sensitive enough to rabogerise that experiments that cause great suffering are almost never word/while

If scientists disclaim moral responsibility for their work, then such judgments must be made by others

Richard Snedekse Bitsburgh, Pa

Graffiti Wars

Thanks for the ericle on grafiti [The Arts February 1982] I have sharps loved the nowness of the art and have photographed if for a long time

It is worth noting that the grafts arises of Los Angeles are more socially aware than those in New York City. Then work has a more meaningful impact.

> Nadine Etkes Los Angeles, Galil

Accountants Have More Fun Laber Ivoaw whether the Stricout of Turin (Animatics, Fakinary 1982) balanged to Jesus Christian to not but I have officulty balaving that an accounting is any kind of an architectiogoal expant. In the to know how an accounting of access to the strood for 11 years when expents have diffuoly be earim no in at all

> Ann Smith Yuma, Anz

Chears for SF

You are to be congratulated for The Meat of Omer Science Friction 15. It is an trading to be able to ask have received for on some of such thin quality i particularly level. The New Who West Marred to Space and Time by Fritz Leiber it was absolutely beform 1. https://oww.many.ticce.of these books in the future.

Todd Campibel Barnaby B C , Canada

Fighting Fleet

After reading about the Sowet Union's likes all whating both regives [Earth, Jonuary 1992] Thate come up with a solution. Arm the whateet Not with sakes strapped to their backs, but with a defense force of greenpace and Sise Shepherd J/

Nederland Colo DO



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A Real Comparis	YES	NO	NO
Full-Size Computer Keyboard	725	NO	NO
Inner Composing Language Balls-In	11:5	NO	NO
Expandable Memory Capabelity	YES	NO	NO
Self-Teaching Programming Manual	TES	NO	NU
Works With Printer	11:5	NO	NO
Also Works With Dasks and Consetties	YES	NO	NO

// (~ 20	Constantine Compare Journal VIC.00 4.0 News Rol. Xerg of Prostac Po.2.00 Constructions Constantial Compare (new C 278) Instancy research general Charace Case or NNV104 Phere and ice in constantiation and the VIC 28 News
COMPUTER	Abbon Nas. dp Date

DIALCIGUE

FORUM

In which the reactive editors, and comaponitions discuss theorem and speculation marking out of Chrin. Assaulter are encouraged to details verses and pose quasilons to Chrin, the scientific community, and the solenice fichilar estimationment. The gamen's published are not recreasive thread in the address

Death Revisited

I am a negotianot numia in a corporary care unit and i have discussed near-death resperinces (VDIs) with several patients I sati nead Dr. Michael B. Sation's tricke "Recollections of Death" (Fabruary 1982) with credit intervet

Tam concerned about the effect the information might have on impression able peaks: While they search for new and unique explanances while is prevent herm from atompting to create their cent new-clearth expenses, only to discover they lack the innew-how to attrium?

> Mary Erhardt Flood Lilliotwood Chip

Michael Sabom replies / personally believe that we cannot use NDH's as countile proof that as alteritie easies since the experiment has been described by persona reveal from name death conditions and not by parsona who have deal and were subsequently resurrected

A6 / see it, death is a triak backgrow state hom which there is no mixim. The NDE indicates only that the road leading from Ma to death may not be the home that memory of us have been feel to bollero

Dispite the pleasant nature of the NDE, propile have not been persuaded to repeat the experience through secure. On the contany it has allowed them to enjoy the normany it has allowed them to enjoy

Lam not is religious belower, and the idea of death a tempting to me. The story about near-death expensions started me wondering about the possibility of going to the other story and life of in stork around. The electrosi-thock method should be able to work. Any deem?

Jerry Stockton Crystal MichIt is smacing how all good "social" separated from chriceled y devel bookes, respectfully rotine to owing wintage points: there to watch quarky with detached invest what is his preming to their bodies. It is obvious that thesis proper benefaction concerned with white

It closes events stratingly that not only "soul" to a own repartical facting the tech hast of hell or smellach as that all stratika while looking up that long tunnel in the sky it would be just my lock to be the first

Langhome Pa

where was reacing whereal statem a arbier statemer-deeth expressions. I was saminded of Dealers Landberghe boot The Sport OS Loss merket the famed waster describes the strange experiences in head chang that takene one manifight to Pens. The essential bonc oursers needs so body for all travels a final data that takene one manifight to Pens. The essential travels a final data that takene to the strange merks to body for all travels a final data that the travels at final data that the instruments only the release from the likelit when the execution through melke cossible.

Por unmeasurable periods I seem diversed from my body as though I were an everyons spreading out through rearies?

Lindbargh was not so much having a neer death experience as a near vectory ira Marvin Passed Sonnos, Sy

It is informating that in this same issue of Orion that ian "Becafiections of Death." Condoce Port presented har commonsor that the bisin test the ability to release chemicals that are initiated to pain pressure, or other monifal stables, such as suphons, in response to external/internal stimul.

Our brain may in its own defanse, self-opsite to network the tetres of death or near death. My own contention concerning the NDE phenomenon is that it is ned a hearbarger of works occurring shift death but, a manifestation of the enthest stoges of death, which limitly terminalise the Death of the histoges of death, which limitly terminalise the

Dr Saborii's work & another example

of marks inability to accept monthiny, it supplies fuel to the engine of conservative month dogma, which convertly theselens to limit the labor of accention method by exposing impressionable children to such page as Carefridin Carefridines to such page as Carefridine Carefridines to such page as Carefridines to such

Elmore, Ala

No cine encapt perhaps pergle on acid ings, ever believed that out chock aspanninges were excluded a last after costs in an it presented that the perhaps being reported as note death experiences definise against a measure overhaud of stimular These reports are promotive and decises altered states of consciousness before the states of consciousness in the states of the states of consciousness.

Nost of the visions of an afterife related by Dr Satom s patients conform more or less with Wooten Judeo-Christian beliefs after if what howen is like.

Theorist be useful to intudy the NDEs of individuals who had non-Christian regious below. The would shall light an interesting to which the vectors of enitherities are shaped by a platent a cultural background and thus by solycolve paragraphics. Due events that courduring NDEs represent consistent vees of some detective reach?

John Kogut New Carroliton, Md

I have a suggestion for those who wish to prove the existence of NDEs scenatic celly If has been clarmed large ghosts have been photographed with special film using a variety of model film using techniques.

My challenge to hose proponents of NDEs is that they install corners in selected hospital emergency rooms and him a learn of prestigizza scientistic and phosgraphies to test once and for all whether there is any legitimate evicience for these claims

> Arthony Kielz Babylon, N Y DO

AJRUISTIC WOONE



By Dr Bernard Doon

The works is total distance watching — India is the challenging prospect new energing from executed at the London School of Hygame and Toppical Medicine and the National Inspruse of Hoaten (NHI) in Reference Maryland Malaza as the larget of this ungue shot whow in no protector immunicated people but will prevent them from tartermating the diseased to others.

This supercodented fine of attack which bitwork the that units a collapse of makes a and custor schemes insult for securitorium. DKA isothesized for securitorium. DKA isothesized to bology the first power bit makes a contention my bits aced on parent schemes my the first power bit makes a contention of a provide the scheme and the schemes and the schemes and a provide the scheme and a provide the scheme and parasitor from makes writer to uniteriorial power bits and the scheme and parasitor from makes writer to uniteriorial power bits and the scheme and parasitor from makes writer to uniteriorial power bits and the scheme and parasitor from makes writer to a scheme and parasitor to parasitor parasitor

The current picture is certainly grim Despite decades of offensive measures against malenal parasites and the mospulses that carry them, some 200 million persons any still infected every year, with the heavest death toils in india and Anna. In contrast to the writestly complete esafeation of small post this insum often appear. I to heath workers and the persent paptient alive —a baste thet simply cannot be wen.

The difference sources sourceptite contempoints against times of times are the man insects why point adapting have provide the first under the smallpoint difference to the state of the state of the state of the spontaneous sources that state the spontaneous sources with any spontaneous sources and the difference of the state of the state with any spontaneous sources and the state of the spontaneous sources and state of the state of the state of the state and the spontaneous sources and the state of the state of the spontaneous sources and the spontaneous sources and the state of the state of the spontaneous sources and the state of the spontaneous sources and the sp

Second practical difficulties have towarted the manufacture of mature



Monguita feasta an blood. This unwitting center of meterie may be thwethed by a new vectors 54 DMM viscoines Hoculariza as normally propared from a clean or weakened stram of the infectious agent is the leastnert of makata however the standard approach of reachings porcusates is not always effective. The industry rouges the way dealase is in infection to proverst. And thereins still no way to produce sportcastles on a large topic.

But agoint mains vectors need not usite the whole organsm. All that is essential to boost immuny in the presence of the antypes focus of the cutside of the parasite. These alone mark the instructers along in signaling the body to mount an all-cut attack. Thus, there is no needs to deal with the parasite inner classes causing all minut the surface attacks and the organization.

This is where generic angineering entranctine protoins. This sections of the it possible to identify the genes that code for theory antigens and to introder them from matarial particular with backaria. These, if the key genes function, they will fam out vost quantifies of pure infrgent to be used for individuol.

This strategy is now being pursued in several research laborationes on both index of the Atlantic.

Builthera's anathe propped hats even more featuring as ucche diversida lagand genarobarijes the explorability dage in the paranosis is bardet dage in the paranosis is bardet and spents and an anathera in the second and spents and an anathera in the second indication furname uncle is hardet that makes the second and the second and spents and the second that makes that a value is a forced in the paranetary and the second and the second second the second second lagers and the second the second the second second the se

Several technical problems remain. But the geotest quotions are psychological and policidal. Will equality subforms loanse such a psoduct? And will sufficient numbers of people be willing to accept ms unique altisulty rearrange.

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MARS MANIFESTO

SPACE

By James E. Oberg

Anglescant in the transition of the transition o

Supporting's however things are looking by White Stellars Exantists have been accerbing increasingly powerful masses for manned operations to Mass, while space significants with the UNRA States and the USSR have been developing the hard of BigH hordware that could wately be devined to the support of such an assignment. Optimists now believe that be nounled in the mid-1990s as a cost of less than half that of the Apol to project to put man on the moon in the 1960s

Despite the coories of our current wiscons with the Sovie Utree or Jap NASA chical recently sad the would not rule out, a pert US – USSP mission to Mars. In fact, it would be tachrelogically assert to connect with the Research in space today from it was all the time of the pert Apolts-Boyur test Mission in 1975, DT Hars Nark: deputy actimistication (INASA) lot the Come octational statism is basing

Been space of hosts meker to sect of here desire to make it gins to Alwan. Lake in traffit commania. Causing Merupaving and volker, Hyumm volke Soviet stado historias soviets and the sector of the sector of the his second for more space of gin in a movthe forty-one year-off Flymm amountain the subcond for more space of gin in a more address to go year again. If an support to IM and were being propared and is should be excessing in a space. Not a year as an incomposite inforpance for a year as an incomposite infor-Demmand out and units an in the makew.



Surface of Mare: Is could provide water and oxygen to calculate as early as the 1990s 10 CMINA

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Probably one of the most starting segrets of amount Mark sequetation in the 1996 is as projected cost. While pet Apolio crisics were bandying salarwas of 3100 billion or most (bort to the binas the cost of Apol), approximate billions have produced for lower figures operations and the second of those into other have produced externative accurate have produced externative accurate mathems in the card.

The Charge Sheldon a leading space measurbar at the lawar of Congests, suiting the logic of this supporting formation in space regard. Which the Unived States Sociated to search morttop the state sociated to search and the construct at method mark the state of the method of the state of the state of the method of the state of the state of the method of the state of the state of the mark of the state of the state of the state mark of the state of the state of the state mark of the state of the state of the state of the mark of the state of the state of the state of the mark of the state of the state of the state of the mark of the state of the state of the state of the state mark of the state of t

OPUMISTIC TRASH

EARTH

By Mark Teich

product a herd of beson to the edge of a shallow arroyo The ofting their spears, the inclans on all aides. Then recoved and plunged beneath, and any who weren't crushed were alabbed and beater rejentiesaly by

The Indians then began the slow exclusus process of buildhenno. Able to

only one of countless sourcess of facture? haloncal cycle. One crylication after

another he maintains, souenders to food indians in what is now Pakistan destroyed their forests by constantly failing trees to

They believe there is no better way to know archaeologists dig up is garbage, Rathe explains "Shards of pottore



Too upon ton of wested social proves our secrety heart it reacted the brink of destruction 20 Ch(N)

a orvingation is ultimate antifact."

eight-door Checker I mousine they call their "parbapemotale" and crusse to the trash awarts them. On one perfocular day The professor and his softing provided tract A tell muscle-bound fellow carefully House As bag and proceeds to record it number for clief soft drink, under RAMD, he writes Tab, under writerul composition his left a red-haired woman holds helf a

When the investigators have gathered a few samples back to campus and do a multifornal analyzis. All the data are

spontes. After replicently wasting their the last stages of decadence auddenly

Americans on the other hand arm shill toesing ton upon fon of fresh food and paper into the trash. Rich or poor our abounds. "We ve entered the first stages of decaderios. Rahie coles, "But our varia wasterulness proves that we haven't become completely decedent -- not we

learn to act truly decisiont before we're losced to -- in other words starilio

MUSIC

THE ARTS

By Norv Brasch

A strange regit and the strange of t

A concert hall is a musical instrument for the conductor and the orchestal says the Dutch accustional for L'Experce Victor Poulz. Now we can play the instrument

Laught tome more indexicos interpreter a second second second participando y existencia en da la la participando y existencia en da la la la la da la me concertina (a concerto la la la la la la concertina) (a concerto la la la la concertina) (a concerto la la la concertina) (a concerto concertina) (a concerto concertina) (a concerto concerto la concertina) (a concerto concerto la concerto con

For this performance in L'Espece. Mine Georges Pompidicu, widow of the lane Fearsch president, descends into the



A concert hall is an instrument for conductor and occhestre. At last it can be played 22. Cano.

independence musical excepts esconted by provide control functions as an enpotential control function and an energy of the control function and and an entrol function and an energy of the control function and and an entrol function and an energy of the function and an energy of t

After the bonks onego reveals the of the genome environment at the solution reveals the solution of the test of the solution of the test of the solution of the the solution of the solution o

In addition, the ceiling can be raised or lowered in three 20-ton sections, thereby contractor as FIL M

THE ARTS

By Paul M. Sammon

androg a move and a site bits standbayria a work that backets combanes elements of Boltam Backets come screening in at you in tagat the desorter Hearts a mon adjustor of the stand, these is a pathons pour you'll be electrocand if you by the among with its character backets and the pool of the electrocand if you by the among with a character backets and the pool of the technologies and the to address and the technologies and the to address and the technologies and technologies and the technologies and technologies

The score depicting New York Dry crist 2020 is hong shift on the DI have York 2020 is hong shift on the DI have York Buck Review us 315 million scoreto-dotton mpaking stamma Hamaton Pord and chrone du Yardieg Social Loosely based on the Isla Philips K. Dexis De Minn should a bowry home who surgers a carlo or manifestion and theirs aftrough the gene overconded driv of the Islave But please don't use the word endroid in Scott's presence

The literature of a difference on undermined by examing privace assumptions if dan takes using it. The assumptions if dan takes using it. The assumptions if dan takes using it. The weed may be to exercise the problem of the basis takes with the basis takes with the basis takes with the and the basis of the and the basis of the and the basis of the basis takes with the basis takes the basis

If the national active Scatt is a director roted for his stylicitic same. Over the part in years the forth-free year old director his bean personally responsible for more than 2 000 commercials, produced by his own company. Ricky Scatt Accolettes an angoing concern. Cammercials are hitle colours of director. In four will, his same that account of the colour scatter of the scatter of the colour scatter of the colours of director. In four will, his same latorically "chances to achieve symmetrical units in thirty second

Scots net professional treak was the 1977 this The Dawler, the that was ne. based on Joseph Contai's novelette The Deal Critics called he film "staggeringly beautiful" and it was high provide the move was manderstood. "Contary to dult meany this is was not an art this . concever oil it as a Western Witt was believed oil to a Western Witt was bened on the at-house crout Consequently it never matched the later scale audiemout was moded for

Aller reverand the submort Released to the second the submort Released to the second the submort Released in the second the

Block Humer's evolution environment table han han experiments of put pair suched mits selences holono has a peresailler informative selences holono has a peresailler from a territole selver har / dagostal appen synchmers. Adur versione the attacarea heating and walk in the selence has attacarea heating and walk in the selence has attacarea heating and walk in basis on a tracking service monologies. They are not everything towing a wark in beconstrained in the selence monologies. They are not everything towing a heating beconstrained in the selence has attacarea heating and walk in the selection attaches performance and the selection attaches performance towing a heating beconstrained and the selection attaches performance attaches performance attaches performance attaches performance attaches performance attaches attaches attaches attaches attaches performance attaches attac



HADE HUMME' A CEDITE OF PLUIDERCHS ENDINGS ESCEPTIBILITY PS/ CHOILE HUME CHED THE ECHIEF 14 OM/V

ARCHITCTUPE

THE ARTS

By Jim Sackett

In the edge d an inclustrating park and metal poorga probables and metal poorga probables and metal poorga probables and the probables estimats been. Needled on the other adds using blom the wed and the probables of the ourses an iserts/marmic tasfee-seed body our rescribes probabilities parel in-folded lowed the tarm, outrigges secured gailed inself inter lowered to the othersit

The Autocrasis Deeling Winehia (ADV) and your convention image frome but hall as the write generic flad (Newerk) this could be remoted a sense the sense of the sense of the sense when a variable of the sense and half that emphasized into the character in sense the sense and the sense and the sense of the sense of the sense of the sense of the sense the sense of the sense the sense of the sense of the sense of the sense the sense the sense of the sense the s The capsule collects tometar for driving initia the sum and word for hest and electricity and social sets lists and bahnoom wastes using a campating table. Complete with metrog shoer and a gray watar (family system the ADV can fill (initia caps) hold of an applicat), that and within applicat, the shoer of a gray watar (family system the ADV can fill (initia caps) hold of an splitare), that and within appendix the and complete A for holds process, there is only an completence.

The ADV can be percended in two wigs: Latitatin says: "Mest perceive seent as a physical object, of throut gacceliae classing: Going pertitive physical seeing that if a sitting cut there like is sponge solating up energy from the outside lyour shart to trick up how it works as well as how it looks with thing pand the autheres.

Bakeweil and Jantzen have a termfor projects like the ADV-designs that blend the best in high-tech sophisscalan with a fingal cas of taisburker. They call them Anzons A inco-propagating or gathere Anzons A non-propagating or gathere Anzons A non-propagating or the isotrational recognition for steering his



The ADV is not swachy your conventional mobile nome: but that is precisely the point 28 OHN Salar is large commenced real estate imm bound to elsevel promot of other Amazce including some of the traft pusitive relat cliclo buildings in the Linado Batisa (expetite of saving "A percent on amullifty binit, "boung Batewell has designed solar condominums and neuvicy bernad userhouses august is formed to ba covered with gains (blowing African budget one, its immoval use of saving with esti-

Many of Tacls datas have nover market of the drawing board. The office building lapped with a unclusivable to instance that was intended to heart self with the rearms of wastepaper that all too many building appendix as before a size of base ways been associated with incling a new way torthe orderary.

Here inter the constraints of the makes to believed and strates applied the latest listifications in the stratest provide the stratest of the wind parts stratest of the stratest of the stratest stratest runns with the electronic of the high impact plasts swimming pool statesting the stratest stratest of the specific the stratest of the strate of a construction there for the latest of a lower stratest providest methods in the the summade price of electronic stratest internal plants of electronic stratest internal stratest of monthocurses is con-

The capacity has been not capacity over the years row And Safra in the king asse on loan outperon near a small wood stee poet agains a backstop of the work share poet agains a backstop of curved when outper the share of the share of the adaptive state of the share of the administration of the share of the curve the Hilds and a happening in administration of the share of the curve the Hilds and sharppening in administration of the share of the scale. And share a back of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the fact of the scale of the share of the share of the share of the scale of the share of the share of the share of the scale of the share of the share of the share of the scale of the share of the shar

The ADV is a surprisingly any one room cobicie manual has to half to buo forward of a component grain side A domed skepping area as at one and the kothen and batteroom at the other and, with storage space tucked everywhere in more schward in the storage and the storage to be a storage to be a storage to be a storage and the st MINDUMAGNETS

By Carol A. Johmann

have a tamble sense of direction. Drwing through look-alike suburban intriefin, I become hopsilically contaud. It i go limb a store by one door and come out another law interthy lost. Wy sider doesn't take the problem, and I have triands who never get lost. So it seems entriefly plausibilist me hat they processes anothering I donot

That sometring may be what British zoologist R. Poloii Belvier calls the imigrated such series. A series of direction bead on an unconscious ability to tune in to the earth's magnetic field. His book Human Wangston and the Best Series (Simon and Soluster) describes his early experiments with this internal completes his early set.

Hoselerches already know that a magnetic onset is what helps shalls estamaticales, and homing pagents start home, and busgen robins moration butterings, and young accessive series magnets. These as own some bacteria at the moration is an own some bacterian the moration is series and a start and part the work calls for a start and approximate work and a start and another the start and start and another the start and an an well in which the start and an well Builty specified the togeth the specified spe



LNI these regaring bods you can go home again by appang vito your swith sense direction 30 CMM

direction built into their system

He media source on meeting to all and the term of the source of of

Baler ship participated in some of those exponentials, manufasis they write noticate tackness. He has sense karned that you have to get nd of background electromagnetic insise? which he says, 'can make or dampt the magnetic sense and make or unsykptie."

All well and good but Able says that Belver "drint search to have to worky about hese horses in the early experiments" Why drint they interfere then?

Bever says he was "boxy in goting his good results." What I ve been trying to do since the book was written, "he add. "a set up an experimental stuation so that I can say to people. To get the best results do it the way."

Baker and the subjects in a wooden hus been to tost the subjects in a wooden hut out in the independence and the subject in the independence and the subject is the subject in the subject is the subject and bench subject is subject in a new with the index the has the subject is unclusted and bench subject is subject in a new with the subject is any subject is and subject is and subject composed selection. As before teld that the time with the magnetic reading the subject is an experise of coversion of the internation on the subject is and subject is any subject is an experise of coversion of the internation on the subject is and subject is any subject is an experise of coversion of the internation on the subject is an experise to a subject is an experise of the subject is an experise of the subject is an expective of the subject is an experise of the subject is an expective of the subject is an expective teld that the time with the subject is an expective of the subject is an expective of the subject is an expective of the subject is an expective teld that the time with the subject is an expective of the subject is an expective of

After testing 200 people Baker has managed to aclate live types of interfering tactors Because he has not yet published the results of his new research, he has decaased only tacr in public. The first contains on war is

EXPLORATIONS

By Mcki Lindner

In the gloomy compared the Egyptian Miseum in Caro founits shove to catch a gimpso of Tutarkhamen s polden throne. Though the glater of the has tooks, his relationshape to other be made in an American or European

any priceless freesures found in opportunities to recomme ancient history

object is made of lengbling him to identify existed between Egypt and other lands. In neutron activation analysis the artifact. elements that compose it and then 12 CMI

make up the clay then matchesic to m osological source. No two sources of class Ingerprint' of each one consisting of up

brought from Greece or clicit the pot riself come from there? What was in the po?? revealing that trade swisted in spite of Proton activation, another nuclear test call uncover the initiature of other

Determining the age of analacts is an penod by referring to hierophychic



inscriptions. Though the Veri der Graef accelerator the most modern look in

All Iwop programs contain radioactive carbon-14 secopes which begin to self-destruct after their death Dating a Invaritad a tedous with traditional of the sample in seconds, separation them number that should have been there Epyptian tomb undoubledly sprouted

an important role in geo-archaeolocical reconstruct a picture of Equpt as it looked when and where what lake basins of reads, have been replaced by desert Herelationship of historical events to envir manger annual intundations and ensuing that the Egyplases were the first termers. cultivating wheat as early as 16000 p.C.

"I couldn't live without her, so I gave her a big incentive to stick around."

I wanted to get Bech a diamond engagement ring as big and beautiful as our terure together looked. A diamond that told the world that this worderful woman

wash nurring just aryone. She was harrying ne. Nu life and such of the second statis line. For getting the most beautiful tensor was mainted to second the such conditional statistics. So another was har way pound of her as I and such as a second statistic of this pro-



Intellity was labolite accurace of navy parameters, which objectified the machine there in the second second second second there in the Assponse start X rays of the private Assponse start X rays of the private Assponse start X rays of the there is the second second second which to be the set of a second second the to be the set of a second second the body reacts is the terr take ago is a second second second second second second the body reacts is the terr take ago is a second second second second second the body reacts is the terr take ago is a second second second second second second the body reacts is the terr take ago is a second second second second second second the a second second second second second is recent photoset. The Egyptical is recent photoset in the Second Second the a second second second the second is recent photoset. The Egyptical is recent photoset is not second the second that reace should be seen in the second second that was a should be second the second second is recent photoset. The Egyptical had when photoset is not never the react and the second second the second second the had when a second second the second second the second second second the second second the second had when a second second the second the second second the second second the second the second second the second second second the second the second second the second had when a second second the second the second second the second second second the second the second second the second second second the second the second the second second the second second second the second the second second second the second second the second second the second second second the second second the second second the second second second the second second the second second the second second second the second second the second second the second second second the second second the second second the second second second the second second the second seco

Deep group (FAU)¹ into them into access provide the amends and the access the access provide the access the access the access provide the access monitorial of access provide the access provide the access the access provide the access monitorial of access provide the access monitorial contracts and access the access monitorial contracts access the access provide the access provide the access to a the access contract access provide the access of a the access provide the access of a the access contract access provide the access of a the access of access access of a the access of access access of access access of access ac

Some occursos who have examined the internant balaves are learn much abort the intropolar di monor losses abort the intropolar di monor losses autopolar per la superiore autopolar antipolari di la superiore autopolari di la superiore internanti di la superiore la superiore antipolari di la superiore internanti di la superiore la superiore per antipolari di la superiore autopolari per anali value di such mestori la superiore per antipolari di la superiore la superiore la superiore antipolari per la superiore la superiore antipolari di la superiore la superiore per antipolari di la superiore la superiore per antipolari per la superiore la superiore per la superiore Weath however, scharterne spead exact dynamigen within https://scharteria. Meligian polisies of diversing and biforward weath and registrological to weath the strength of the strength of the interest befores of Egyptian Laury is and the strength of the strength of the strength interest befores of Egyptian Laury is and the strength of the strength of the strength bismers, hencephila The Hanne Wennis Laury possed in doord, conforming and bismers, hencephila The Hanne Wennis Laury possed in doord, conforming and bismers for any strength and the strength of bismers for any strength and the strength of bismers for any strength and the strength of eleverency the strength and the bismers for any strength and the bismers for any strength and the difference of the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the bismers for any strength and the strength and the strength and the bismers for any strength and the strength and the strength and the bismers for any strength and the streng

The pharaohs were not silvays the henoic warriors depicted in tomb pictures, but sockly men, afflicted with the same althouts as their lowly contemporaries ?

members of trajel farmises to the proper partial and flere out some informations that an acro. A coparalized and some informations that are observed and the source of the source of the the M class standard that many characters that where the source of the source of the across source of the sourc

The computer scenois as an immutable to the the Expectaging in they of the control on the Expectaging in the operation of the expectaging in the adjustment impair and the expectaging in the operation of the expectaging in the expectaging in the expectaging in the expectaging in the Pering Neural International International Control of the expectaging in the expectaging in the expectaging in the expectaging international International Control of the expectaging international Initiatise or decostered across, were used as Till for new burnings. Laier these tabilities were recovered, and an exchanging decosterior of the start into an IBM compatient in Caro. Using the discription the unready toom was able to decosting the the unready toom was able to graphic their unready toom was able the product of the gains. In the product of the gains, and the gains product and the open of the gains. The other anti-base products of the gains of most instruments and product purchases of antihe ford water.

Not all Suppologies benefit from the me latchickages, network D. Brown at the Brobodyne, however, D. Brown at the Brobodyne, however, D. Brown at the Brobodyne, however, how provide the Grobodyne, how provide the the Grobodyne, how the strength of the Grobodyne, how the strength of the strength

Additional problems and challenges we nased by new inchronicigaes Fract the traditionally trained astropological must broachen he sites and he awarenees of What can be adone with the antibato he without be must been to take earlies without continuous premium and store may be an additional the polerimmon about what can be assessed on the country for what can be assessed on the country for what can be assessed on the country for study and what fract emans in to Sport

When the Institypes is a surprise form: hermal with unlet he can get access to confribe, illication y mitruments to make in analyses. The Archeological Research features in the Archeological Research in analyses. The Archeological Research is analysic tags in a surprise of the Archeological is analysic tags and research and and is analysic tags and research and and the Conclusione Telesawanes - says DT hes conclusione fractionating and produced or the conclusione fractionating and the archeol with the Archeological says of the top and the conclusione fractionating and the top and the conclusione fractionating and the top and the conclusione fractionation of the top and the archeological says of the top and the conclusion of the top and the top and of the top and top and the top and top and the top and top a

The Thin wind, biasgrafe the contribuctions of science the Egyption must an inrespenditive the tool and these, get into the bording saints and as well a fazare the bording saints and as well a fazare the bording saints and as bord a must and demanda care and pression and "not particities toggin heavy. Theretapy will able to the say. Theretapy will able to the way. Theretapy will able to the way and the paragram and provide the way care is an importer way. There are an experimentary and the provide the say that applicable and provide the say that applicable applicable applicable and provide the say that applicable app

CONTINUUM

Edited by Dick Teresi

THE DMSO WAR

The Food and Drug Administration (FOA) has opened two new fortis in it was against the watched drug drimstry furtisside (DMSO). In a Baitmee court, it has charged surgeons Starley W. Aloch with briding an FDA opens tawayons Starley W. Aloch with briding an FDA opens tawayons Starley W. Aloch with briding an FDA opens tawa model DMSO self-sectors the courry seeing stocks of the drug and, in one case 75 opens of a boot that describe warts to use DMSO.

If that been a long and haritating we viewait DF Jacob, measure produced of surgery at the University of Deport, test poclarmed DMSOH heaving power some Sol years are DMSO generatives the with animat instructing, carrying division, eer yas dark—directly retartive to cookstream But Jacob calmed that plans DMSO headed business, scottered antihito prints, and banshed headsches, Other prospin scott reported that indexid our every then from some to carrow.

The FDA went along such them until 1965, there barring hurson regrements and the divide conferencing that ill counsid catalacits in annuals. The barriggs criterio toobio when it was learned that readly 60,000 people had used OMSO without safeting any we damage. This barrasuosase ambarrasymmet has cobmed the FDAs calar loss with INVSD, and Jacob ever amore.

That embarratement has grown in recent years. Because DMRO is a common industrial selevant, it can be activity what the operation of the provident of the selevant of a flows daily onlo and hints is knowless, tomice allows, and opgener ingering allows all hints is knowless, tomice allows, and opgener ingering allows and hints is knowless, tomice allows, and opgener ingering allows and hints is knowless, tomice allows, and opgener is allowed and the selevant of the selevant of the MRO.

Shotty she that two IRA meetigators staked into Jacobis Partiand affect with an admensitive asaich earnant from the local U.S. deviated out: They wanned to lock at all his records and everything in his office, reports his long-time attorney. Jelwie A Babera" Dr. Jacobi loid here to act lost. They did

Thereithe FDA look can old suppoor to a federal grand ary rail Balancos in April 1976, promoted by DYK C. Dian. of the spaces a Bureau of Durup, the FDA approved DMSD for users interstatal organises, a rate and partitul balader condition. These years later the FDA consisted that between Jane 3973 and May 1979 DF Pain has a taken comes \$53,000 e1 loads." frameal "conditions" from Jacob Jacob was then medical director of Research Industries Corporation in Salt Lake City the nations only producer of medical-grade DMSD. He has since left the company

While the grant jury studied that charge U.S. marshals acting at the FDA's equired raided a Bulfato. New York, retrifer called DMOO, Inc., carrying of these duras and 58 bothes of the drug. It was the first secure of DMSD in the FDA's long bothe Raide in Florids. Wiscomen, and Oregon followed

The listency and Birthip cases daig on Afer an egit-moth day, the Behaviore grand any monthly holded Do. Succh and Panion bur points each one of conspiring and these of history grane or reserve Briege granities. II control do no at charges, each physician regist have b pay 340 000 in these and spend up to 11 yeass in prior. Park has been releved of his subhes at the FBA, panding that The spency hiss decider not be review is acretived to the soft on retenant or control.

The Birthia sectors, meanwhile, was not on required with through IDA agrees that controlled as loads to the bit signifihowing use the drags they save in order to prove that the drags an enters to integrate the drags and the sector bit provide drags and the sector of the financial use flat in the construction of the drags of enters to be an integrate to the sector bit provide drags and the sector of the financial use flat in the drags of enters to be an integrate to the sector of the drags of the drags of the sector of the drags drags of the sector drags of the drags drags of the sector drags of the drags drags of the sector drags of the drags drags drags of the sector drags drags drags drags drags drags drags drags drags the sector drags drags drags drags drags drags drags the the sector drags drags drags drags drags drags drags drags the term sector drags and drags dr

In Bailimore, Jacob and Pars have been scheduled for trial enry this month, with a doctor expected in two or three weeks. The derivation contracted that money paraed doween hern, but they claim that it was a screly needed icon. Pans swife was dying of canoer, and the money liney say, helped oover her molicial incorrese and was joint regard.

b. Example and web (set) (type). The single-string wer equated (DMS) makes to explore the EPAN regulation of drug string AI basis (the sequence) has insured as towards conditions). It may need have been delived the stody of a velocitie to evaluation one drug and the type) and the stody of a velocitie to evaluation one drug and the type in the type of a velocitie to evaluation one drug and the type in the type). The second testings is well not many seventiation of the type of the type).

CONTINUUM

ENDANGERED BIRDS

When UCLA ornsthelogist Janed Diamond found a bowerbird last year in New Gunsa, a 10 year saarch for a creature most people fhought extinct came to a hisppy and

The bowerbird made f. others, however, may be pas Aldsbra broch werbler Lives on the Aldabra Atoll. In the Indian Ocean Population 74

 Microbius kessel (Fritper of these small falcons still survive on Neuntus an isand in the Inden Ocean Prese were only so in 1974 Plus things have improved to these.



the point of no return, heading into the limbo of the pass senger pigeon and the clocks

Here are the ten most endangered birds on Earth

 Madagascar sea esgle Found in the Nalagasy Republic, where shooting esgles is a popular pastme Tan para are left

 Amponel woodpecker Perhaps 20 are still alve in Nexoco: Perhaps none: The last confirmed sighting of ar mpenal woodpecker was in 1958

 Arcry-bigled wood' pecker: About 20 survive, 1 in Cube and the rest in Florida, Louisnans, and Texas.



 Japanisse created abs Seven in China: six in captivty on Sado Island, off Japan

 Mauntus perakeer Eggisteeling monkeys (introduced by humans) have reduced by humans) have reduced its population to frig.

 Chaitham /stand black robin Transplanted by rescenchors to Mangara island near New Zeatand Population five

 Kauer o o The only two known to survive inhabit a Have an averno

 Massass malard Once native to Guern, held now in Heavas for captive breeding Population, two

North Americans needs t feel left out. Number 11 on the list is the California condor Population 25 —Joel Daw

BARLEY CURE

Total meticine man and horbalists have been saying it or certuries. The juice of young barley plants and other vegetables can dramatically slow the aging process and reperir the revaries of center.

New modern medizine seems to be subdantilating these ancent beliefs in a group of nearth expeniments. Dr Yoshinkol Hagwara president of the Hagwara instatute of Health, in Japan, and betrigget Wasa Heats of the University of Califorms at La Jola, Iscenti that when barley pace was added to changed cells. The DNA within the cells repaired riself with cubic repaired riself

CINA (deoxyribonuclaio acio) is the chamical of



Troal to alter Consumes alread of us in vegetable treatments

which genes we composed Current theories hold that both cancer and aging result when genes tail to reperthemsplves. Thus, Hagwara claims, the findings may overhauly help to prevent carries, signig, of both

In their exponentials the controls the spoore mouse is controls the spoore mouse is controls that the spoore that controls that the source state of the cost is to have solved the cost is to have solved and of the solved solved the solved that the cost is to be solved and of the began a solve solved and of the sock solved the solved and solved solved and solved the sock solved the solved and solved solved and solved the sock solved the solved solved sock solved and solved sock solved solve

The doctors are now trying

to determine precisely which substance in the plant is rospotsible to the remarkable action. Both belave the ingredient must be present in other plants, top Dr. Monsenant, So

"Our increase in Anowledge is comparable to that which a man, vitensitier in stamming roure about the moon gets when he climbs upon the sold af his house to catch a closer look at that farmery —Abert forman

"If all the churgs in the Pharmacopeans, with a law exceptions, were thrown into the see. It would be belier for marking and the worse for the fisches."

100 MILES A GALLON

You may have read about the co-called cars of the tuture. They numeric cars of the tuture. They numeric cars of the tuarglomes or they carry the chever in a prove costulue all for the calle of afficiency (but num engineers at Babtele Maniforational Institution Colamicus, Chu, have used Maniforational Institution Colamicus, Chu, have used the cognition of the tune of the second the the construction of the trade 100 million of new angles of news

According to program manager James Swain ten Battelli erg preers worked for a year dasigning accomputer machiol the car clubbed Pertrain Eleganty steammack, wein underneath the vehicle would attain the best gossible alexidynamic drag resistance. Its comparisoned



Dipecentralial releage car. Nov here a A practical model

Insumeration could choose the most electronic pair points that the most electronic pair points. The energy lost in briefly work to the wheel, then read acceleration of the mest acceleration of them estimates and the second second acceleration of the second seco

Exponmental cars, such as the Menodes-Benz above, have previously been dospted for utra-high mileage. The Pertran, however would be a more pracscal model

Battelie researchers are now bolking for summone to invest \$20 million for the production of a helf-dozen production of a helf-dozen policypes. Bie first step in going commercial —Sy Montopriery

Often a certain addication of prudence and foresight is an element of success Path Marke Preserve

TALL FOREFATHERS

Bods were shorter and docrweys lower in the Rivolateorary War period but the doesn't result out fortleases thermalwas were shrinnings. A study of military seconds in docales that the average height of the sites maai population during the Rivo-Loweray War was about the population during the Rivolate study of Rivol during the average Rivol about the set five inches fail

Pigures from the study conducted by woonsmiths to anumber of universitias rereal that American melec bagan sharking during the mosteam board by the reage height of Divi War adders, for example weijust above the feet seven traffers A subsequent gravelin spurt, coliminating or 1930 left the seven age Amercan male daning the feet nine inches tall, a height he clams today

Accentric to ecrownet, James Traves, of Phraceter, University in New Jersey height is diverty propotionate to the next whether of foot, opposition and has one of the boot inclusions of past atsnotwist of hiving. Indeed, the table, weather people of the University Statistics have always had more megition that diversity and the set of Europe

Will our growth spurt upward agon? Scientists are not in accord. It could be some say that we ve reached our genetic limits with little chance of growing, no matter how much meat we concurre.

- Barbara Ford

"In expanding the Feid of knowledge, we but increase the harzon of sgnorance." -- Hanny Miller



Absolvent Longoin toward over Onei War hoope. Soldwire of Lingoin a firm were and will effective than there is now the Development Mar-

CONTINUUM

POLITICAL SUICIDE

How do you reach somebody who's about to jump from the observation dock of the Empire State Building? Nou might by taking policies according to the Indings of one mount study.

"Patters such as y encought of drive approx lever the edge, but right helices a prescentral election your right be able to convolve bent on such as the property of the and passing a wolk. Accordtic the to convolve bent on the origination of the light or provide the approxleast at election, and dotting procent lower before a prescidental election, and dotting and deasase doctine 0.5 percent.

"More and more, we in the field have come to realize that death is very much in fluenced by social factors," the psycheanist adds

Boor attributes the slightly decreated death rate to the sense of social responsibility fostered by impending electors.

The campaign provides a common type of conversalian and also a way to particpate as delegates and lundproperties and the elector gets proplex intensied as voices the outcome projust curbeity of that the depressed and chronogally of Isarg in there just to find out who wats.

Boor has found that the death rate also decreases the code: around religious holy days, such as Yom Kippur or Eastor He suggests that Yen acouncilation of many such social events could be quite significant. With more William

converts to vitamin A The neutralizing effect of carotene was recently dis covered by biochemist Bi Senter: of Albert Einstein Co loga of Madiome. In New



Police scale the deoxism dividge to save a result to suicide. Give psychietral says elections and holdwar cut the cleath mice

times Days and July Pourtho he sight we could renies a proppedive supplies will so hive before the politics of a nonsidection year drive tem or her to the politic of no riter to the politic of no return — Zeptist Twombly

CAROTENE FOR CANCER

Cancer patients head with derotherspring an debilitied by rauses and comring Their har fails out they loss weigh, and many say destin would be patientible to fing shartly curve. Not does for may be able to natraicon the ade entrois of cancer-lighting chemcals with both accores, the orange pagment passentin cancer bin the name body. Yerk CRY Sentre warrod to see whether carolene would be a voluable defary supplaneer for cance-structeen more already weakaned by cherrodrapssp: Whan he fed the mics the carotrate how ever, he found comething he do not expect. The usual sate effects of chemotherapy were marked y mider than before.

Because there were for side affects, Softra was shole to an encode the data of an bearear drugs drawscally and the lves of the mice were protongets. Selfer there loand that what but accordene and chernohrenge were contained with satistion therapy, microel lumbor toom therapy disappeared. In filterium letters' 80 executed of this was better there is the second of the second of the there is the second of the second of the second of the the second of the second o the mice were still free of cancerous calls 14 months afterward.

Settine says the treatment service sub-to-convertige content of the setting of the content of the setting of the content of the setting of the top of the content of the content from Physica with add been under to the content of the content from Physica with add been under the content of the content from the content of the been under the content of the been under the content of the been under the content of the the content of the content of the the content of the cont

For many cancer patients this might mean the differonce between the and death. The Nationel Cancer Institute plans to test the Institute plans to test the Institute on humans scan....Rchard Lewise



The orange pigment in carrols may help from cancer

HYPNOSIS ON TRIAL

The hyperclast, like the context backin, can provide police with fips to be checked out. But relident, if ever, should information gleaned from hyperce alone be used as evidence in a trail sogs a Pontaylvana psychiatriet.

Despite the enh usarm of the enforcement of lineals or objective scientific proof easily for the auchy held connection that hyprocal can provide accurate recall of patitive accurate recall patitive accurate recall patitive accurate recall patitive accurate recall provide accurate recall provide accurate recall provide accurate recall provide accurate recall for a science of the recall provide accurate recall provide accurate recall accurate accurate recall provide accurate recall accurate accurate recall provide accurate recall accurate accurate recallence accurate accurat

"If the hyperotex has belefa about which we seen or and the source of the weterness or workming the have seen or might be all a set how easy for these beefs to be translered on the high metroops of pect," One supp. I device pector memory is and the set of the set of the pector memory how the pector memory how the memory consider memories with a certainty interment with a certainty with a certainty with a certainty with a certai

lents the courts have recently begun to limit the use of hypotocolly enhanced festimory. Once also suggests a couple of safe-



A prejechilatrist sleps that a hyperocist can branzier his beliefs to a subject, thendy mining hyperocis an unitriable tool for court cancer

guards. Have an objective psychologist or psychiatrist act as the hypnotist and videctage all the sessions.

- PVCPIND INSPERI

VOICE BUTTON

Those who lose their laryes to cancer find it almost impossible to take. But, according to Dr. William Parye, of the University of lowar Hospitals. The power of appech can now be astroad to many of heree laryingcodery patients in an office procedure as short and simple as a wait to the denent 1. Dr. Parigit's secent a uclime-seced device the calls here vace butter.

Parees procedure calls for

a hole to be made in the exophagus. He inserts the volide batton, a simple secon valve into this hole. Speech is orgalized when the ne-

Weart Partys a voice button, inserted in a nois in the edophogue it allows the patient/ to speak in a normal main same

There process a thrank over a previous hole mode in the neck forcing an through the value and most the isophogue. The exceptogue starts to whote much as the larger once dist, producing a low pitched own as the larger once dist, producing and once the wave were that for a normal male wore. Once the wave were an place Parise says, most people can a predictional of the more of and to the minutes of any hole to the minutes of a placet. Thereby .

The Paran voice buttor, manufactured by the Bisdot Ayess Company is an Intelly more altorative than devices like the electrolarynt, an alweword bottory-powered vibrator that produces a robotike accard when preside accard when preside accard when preside accard when preside accard by asthewirth an assertion both the speaker and the asthewirth an allophagaal speech in which the patient is to and to keeple accards in thort, batchild butte of an

CONTINUUM

GAMBLING WITH GRANTS

To some scientists, obtain ing a essence ginth science like a gamble. Now a study sponsored by the National Academy of Sciences may prove them right The study found that when the National Sciences Foundation (NSF) agrees to fund a scientists prepid: like document of pend as much as sheer chance as on the ments of the scientist (study could and write the scientist (study could and write an

To neach that conclusion, a team of reason-them hauded by socialigest Biophen Cele, of the Store University of New York at Story Story and Janathan Cele, of Columba University, locked at 150 programs that had been had been funded attor neweek by celtane parete of experts, and had had been registration is due appartment, the Colos had the grant applications nervaluated by an independent panel of reviewers. The result. The refenses would have environmendations made by the NSF nerveawark. An entitiely rainder process would have changes S0 excent of the decease.

From this tricking, the researchers concluded that the late of a particular propessis in shalf elementation by the fluck of the invesser draw. Flow can these be such designeement? Photebly, they said because there are freat and signimete ditroincise of operan among experts about white good science is or should be " — Netral F Bartasas.

The wave of the future is coroing, and there is no lighting if " — Anne M. Lindbergh



Xeebing deel According to a study sponsieut by the Nariusal Academy of Seconds getting a research peak is a matter of luck

DIET FOR THE DEAF

Paul Vanck noticed his world becoming a bit quieter when he raise/bat this limiter age of invances. By this time he turned twerty-lask his was arrest totally deal, the video of an unit-basisation condition called timeta, method by a logid and cantaliant might the arris 10 generation and all times the previous enablish haad made hen thirk his oars world burd.

Depende Yanick traveled scruss the country in search of a cure, builte was told he dhave to learn to low with if "Abanconing his opures in computer engineering, he turned his atterthon to the study of holes an and actifican

During tosench as a claim call subdigger. The 1970b the and a coll expue contined white several offer scentrists were slowy comhouring disorders could be problems as hypophyrotes and hypophyrotes and hypophyrotes and hypophyrotes and hypophyrotes chargodyns dire, standa weretaing, and white his mention approximations hypophyrotes and percent Mesnahle his Initia within two ments in provide his hear diry disarpacted with y his signal and

Today, as cirector of the Woodbindge Hearing Carilla, in New Jansey Yarich has bogun to use this therapy on others. In his latest two-year study, his put 70 paople with hearing problems on evennee programs and lindviolasized defis to correct their toochomical deficiencies. Within months the test group could understand speech on the avarage 25 percent better than before and could perceive the difference batween tones acounterly. Of the 40 patents who had trinitus 34 recontrol your from the burn.



Paul Numer suzzione ol ne Anacina-china petentia

ing, and some claimed it was completely gone

The constituting is writing with the each "Stanck apps "chances are good lists the problem is suitable to lack of escrose or to default increased and locks may be the worst culpts, shipped of meresis and valancia, they deprive the each of the choce indverts?

-Marcia F Bartusak

"If we cannot now and our differences: all least we can help make the world safe for divectly.

John F. Kennedy.

THUMBLESS BOXING

A new thumbless boxing glove may soon have New York tighters flading to New Jersev

Recently introduced by the New York State Athletic giose Ween the commission in tange tools, during to malamize the give mandatory malamizer the yees Malasian marks with the inauri might pause Gardine andread am entre stress of matchese to tools and gardine compared tools and gardine compared tools the stress of the stress of the tools and the tools and the stress of the tools and tools tools and tools and tools and t



The designer of the hew its moless giver Paul Bolonia, competes a to a standard giver. The biceris, however, are not so pleased.

Continuent, the gives parents return dischment, a investion return dischment, a finates return a board of enter Most ook ingenes away commession chemism. Jacob Pencaderelle, result uhen the protochemisment uhen the protochemisment uhen the protochemisment uhen the protochemisment and prove. The other set of which ingenes to term a fixed in these sizes as on the other set of contrast mixee sizes as the other index under which and chemismisment and the other set of additions and provides the set of protochemisment and the other index of the other the other index of the other the other other and others and provides others and the other others othe

Many fighters won't wear the

continually cramped position, they said, and hurt their purching power

Adhecilities of the glow at lists responded that the lighters were only being lighters were only being lists that all all abbom. Tusged to have to at at migade with my suture 44, mody to see lighter (large he commisants assistant motical deactor, frank frok. "But arcor whe used this glowe there have beenonity too laccasbate, and not one easi knockout."

Noretheless the boxers' grptis made the commission admit the glove had some problems, especially What may ba, may not be " -- Sootosh proverb

TUNGUSKA AND OZONE

Many people are worried about the possible climate effects of depleting the



Enguaka Despite the wide destruction, some open never

satth's atmospheric ozone layer benause of nur receisteve use of fluorocations and other poliusing pases However a "relutil experiment" performed in 1908 suggests there may not be much to verry about atter at

That experiment was the Tangaska event, when either a meleonte or a small comet hill eastern Schena on the morrano of Jane 30, 1906

The explosion that ocsumed then probably reeased as much as 30 million metric tons of nitric oxide NO) neacts with coores, to pliminate it

Writing in Science magazne, sic staatschins report abulations that indicate that such a release of name code would destroy up to 45 percent of the Nachtern Harmsphere's occore and that such depletions would perset for three to four years. The celoulations are thereinful

Did in really happen? There is evidence that it did Massurgenerate made early in the century at Mount Wison in Californa, show an abone depletion of hom 15 to 45 percent between 1920 and 1911, which is close to the california constrained by the six researchers.

There's no evidence, hough that the climate was affected by the szone bas Records show the weather sentained within scrima (vanation in those years, exceptor some spectracular sunates These was no doubt caused by Singuiska dust, not by a tacked econe --Jeel Davas

CONTINUUM

NUTRITIONAL PSYCHOSIS

Consider this typical soonario. A hysterical woman enters a psychiatric wakd, is diagrosad as an acite psychoto, receives drug trestment, and is eventually released — only to have a relapse.

Consider now an alternate control to a some vormanbecomes hystorical but the time site is brought to a clinlately asile her what sho last asile asile her what sho last asile when the worman tays, "Detropal" her auggest to a showing an allerge hosticon to glader, the polinon in other Last the clingcross a wehied in Jab tests

Clinical ecology, a new field ponewerb by Chickgo retarnist Dr Theron Randoll, is the souly of loads in rolds, or petochemicale and breat effect on human behavior. While maintizeem medicine poorh-poch Rendoll is beliefte prochastical is Dr Bernard Raiden of Domesticat, southail twenty perloads on the thereat the bernard southail twenty hereits would probably bornel from an unificated evaluation.

The reason? Food molecules, which enter the bioodyteenth through portus in the tongue and travel derocky to the brain, may ling ger biochemical reactions that jurn the perinal nervous system.

Anxiety depression sucidal tancientities and phobias have all been inkiet to food sensitivity Raxien say Ho otes one case where is ohild became hyperactive whenever he afe a barrans and smother where a beenaged gri who frequently suffered convulsions was actually allergic to animal percent.

In recent years. Rikden claims he has auccessfully treated classroed patients

COWHIDE FACE-LIFT

Are wrinkles around your mouth giving you a hangdog look? Are your crow's deet more like elephant tracks? If so zyderm may give you a

Zydem prepared from



Child with barrang. The frait actually caused one child to become typeractive. One women became psychotic after eating earment

by eliminating certain foods from their diet – or by desenationg them with ropostod and over-increased doses of the toublecome food – Eno Maithea

"Genus may have its investoria, but stupicity is not thus handicapped." —Elbert Hubbard

"Almost anything you do will be insignificant, but if is very important that you do if ---Mohandas K. Genchi coversite by the Collagen Corporation, is a solution of collagen, a body protein that loans solutioning for carts lage tandors, and skin. The wear and tear of aging, strikming frowing, even gravity, cause the collagen in our take to those of the product.



Before (init) and alter (right) photographs show now zydam, propertyl fort cownede solegen smoothes out winkled skin

areas fold mo winkles. But by replacing human collegen with rhistotons of zydom, physicians can plump the skin out and report a youthful look

The scale locks and feels advantal bocurse pair to college become pair to sole and the scale surgers of Santrad Medical Certex in Santrad Medical Certex in Santrad Medical Certex in California III autoritation and consistent in the stand college work work is college work work is assured meaning bond of Assured meaning bond of Matca coade the work in Falce says, in a low states which coade the work in Falce says, in a low states Nappred Sonra 7 COD

Nationweld some 7.000 people have received collagen rightering for crow sfeet trown linds, nose-tomouth folds, some scars, and depressions romaining after skin grafts or ciell-lip surgery

More than 90 percent of these patients reportedly and hoppy with their new lock despite the price size \$400 for removing rose-mouth creates and \$2 500 for a tase if the case of 40 months.





SMART DINOSAURS

BY JEFF HECHT AND GUENEY WILLIAMS III



protocol 7 Provide Mar Control 1 Protocol 1

PHOTOGRAPHS BY ANTHONY WOLFF

What would have become of this animal d its species had not died? How would it have evolved? .



of possibility spiri Date A. Russell, an arretologist "I don't flunk the model is astonishtown Business as usual

the Canadian National Museum of Natural the general public next year) initial reports about what Russell calls the cincensrout wanting pactures or more information ign to avoid calls from reporters

Clues about how the chromaur would old bones Russell discovered in the bad-

some of the crant chroseurs of the late 52 DMM

nearly honzontal stance made a about Overall it was about the same size as Donald C. Johanson's protohuman Lucy unnarthed was also about as incomplete

ing to determine the intelligence of the body weight. These two measurements (aller agree poplet-palouator manoulation quotient an index of relaying intelli-

In humans the encephalization quotient Russel was able to determine that his twe animals as the opossum. Russell says

vision enabling It to judge depth with its even. 'It looked as if it had all the mone-

some other small dinosaus that hed at of the stupid dinosaur ion't valid if the ani

All the denosaurs - the little Steriorycho payrus errors frem-hurfed abrupty into one is certain of the reason, but Russell

The best evidence for such an event is manta Besearchera at the University of W Alvanzz, a Nobel laureate- announced lar radium-rich lavers the same ace eles-

it's more common in asteroids and mereorindum-rich layer is the signpost of a cosshough to substantiate the theory reobjects, perhaps fragments from the rocky fraion could have produced a variety of

sudden extinction of the dinosaurs

The exist nature of the calual tophand own in very eventrence - in still and obsit: What is certain situation to the top when a certain situation of the second on taken years ago. According to Record in the adol situation accesses welling more than about 55 pounds survived. Many similar travetions also become welling, and the population also become welling and the populadiated accesses and the second situation of the device accesses and the second situation of the device accesses and the second situation of the adosecond size of thermosis.

Russell was left with hits email set of bores to guide tem building a model of Streatychostanus. The work, comed out with taxedomic Roi Seguin was paretakny. It loos teven months of guideside with a obtrapolation, moving tem part to goint to build the work elegged model that appears in its. Insis presure to be manching purposelula valence work of the valence.

During the work Russell and others began to wonder. What would have bacome of this animal if its species had not ded out? How would it have wolved?

Reserves the status academic and academic academ

self assumes would have continued. And it would have led inevitably toward an intelligent, dinosasir that would be weiking the earth about now give or take is few million wears.

With the starting part A starts and deput hear more than the mode of the start officient on the control page of the strategy of the start of the control page of the strategy of the drosen of the strategy of the strategy of the drosen of the the mode start of starts to start at the strategy of the strategy of the strategy of the strategy of the strategy have and the strategy of the strategy of the starts to strategy of the strategy of the strategy of the strategy of the strategy have and the strategy of the strategy to a strategy. The strategy of the strategy to a strategy. The strategy are strategy of the strategy

After they built the skeleton. They verify work on the rest of the skeleton. They chose an upplight politice on the samerythan that it takes less energy to balance a large skall on an uppfit backbone them to large it on the end of a honcontal neck, as was the case in the dinosair A shorter nock would reduce the amount of bouncing around



Insit the targets bears would have to white sound. The law work helpson balance the horizontal body in the discount addy from unnecessary and would promittally the upper) pather would also existen law measure to use law work also existen law measure to use law work and be useful in horizong helpson would be useful in horizong the properties are unite branch in humans, the properties are unite branch and in humans, the properties are united in the properties of a single of the origination with the discound. In tend or organisation with the discound.

After filling in the details of the skeleton. Raseet and Segura added frish to the hypotheticalizations. They choose altanolise sins, similar so the hole they used on the reconstruction of the dination. The fillip of sinsunder the chinis a nightion devisp an acutionary vestige and secondary result feature.

Brackess laying agap would receive an ecoptionally target extent Provide and ecoptionally target extent Provide and the provide and the second provide and the memory wang second to level on the full the memory wang second to level on the full the memory wang second to level on the second received second received and and provides of the second to the breaker with the second to the breaker bet the arreak second to be breaker bet the arreak second to be breaker bet the arreak second to be breaker bet the arreak second be breaker between the second second second be breaker between second be breaker be breaker between second be breaker br

The model, frezen in molete blacks dineesur ancieter dealer's convey anything about the behavior or society of the crossuse that might have been. Reasel is cack to suggest that other researchers ought follry to come up with there own theories about the annihil and its balfavior.

House the classications have developent engingent? "That is difficult quartient i don't know As what level of encophalization does language become investable?" Proponses have a lend of signal system, the says, and proposition of encophelized than the dimosaureal would have been incipient system of communication. Rusreal concludes

What sounds receive a make? "They would be avian rather than mammaten. Russell suggests Ther voices would be more bedike than grunting.

What sort of defenses would if process? Intelligence itself would have been astrong defause, the controls probably would have sapriload speed for wreligence, and its brem would have beignd it to survive (its enorghalization cubiter would have in angehalization cubiter would have the prevent day have been as a second res. 7.61 in body threin worth have have a rest in body threin worth have the prevent day have been as a second to be a second as a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second to be a second be a second be a second be a second to be a second be a second be a second be a second to be a second be a second be a second be a second to be a second be a second be a second be a second to be a second be a second be a second be a second be a to be a second to be a second be a to be a second be a s been powerful enough to crush stone into individu of to shace wood into clubs

What sort of of onceaured techny vexall have developed? "At some point I should shut up, I Russell answers: This is a question outside my area of competence. But it seems to me that as animals become more intelligent, may become more social."

Hould a nuclear family have excluded by now? Russell anyo he has no idee. This posable, he abya, "that dimensionide might have banded together as hunters to overcome larger prey."

Detell theat supportant early out a model of a printiple cetature much mouse loof barrely Automate short the barg more of barrely Automate short their the barg more and barrely Automate short their the bar and barrely Automate and the short bar hauset away ins intrediction thes is to of norm or error in it Russell crose the most bar hauset away ins intrediction the short commany two explores and the short provide the short of the short commany and the short commany and the short commany and the short short the short of the short short the short the short commany and the short commany and the short short the short commany and the short short short commany and short commany and short commany and commany and

No matter how fast or slow it would have climbed the evolutionary ranks, however, it would have everpowered our matmatian predecessors. Not that they would have deel out that they would have remained at the earth-sentemen level of notents.

¹Dinoseurs and mammals coexisted for a hundred million years, Passell says, and mammalian levels of encephalization were statio. A conservative estrapolation vecid be that matmatia would contrivue to be todersflow or inacchronolitik, as they was then and as entro all are, and they would be poorly enorphalized. The dimateries were bigger creatures. They would be accupied by instrinal. They would have followed to actual material an curve of all childrates on motive former they mean of all childrates on the former they mean the theorem of the set of the set of the theorem of the set of t

Pussel sharp and model are not work of other. One physical who loaded atthe dresswork table to designers il drink house be not. We could not the away in the normal layer. They revery work to determining independent of west the tambage and the age. They revery work to determining independent of west the tambage and age. We mode the dress to be pictured out layer there was a tambage beendth and out taken who the dress to be pictured out layer there was a tambage to be different out layer there was a tambage to be different out layer there was a tambage to be different out layer there was a tambage to be different out layer table taken to be different to be different to whose the different attribution.

As for his theory Pussel says he cannot be earling encephalization will always increases as inter-parameters for one herg, thereis probably a limit on how fast an orgament call assembles food. Another Immit on brain store AL a carban point a legal brain may have truckle disposing of heat. Hough "particule humans could develop hope declarative earling in parameters and de-



heat generated by brain metabolism. Or maybs we could use our bodies as radiators for heat from the head."

There services rates recent Russes moves that recently and the recent recent and the recent r

Loviego has a theory of his own that humanism oscillad toom a series of ouobschrigty lucy breaks "Twe were to start all over again two fructides missing each gains again the planet is very unlikely. The probability that cognitive life would owher again, if we were to start over, is infinitely amail.

We are a quirk. Lovejoy says "And it's likely in my opinion, that we are the only inscripent the in the universe, because the universe is relatively small compared to the probabilities product."

Reason agrees that the or Earth is rough on introligance. It's has that the brean is metabolically very represents or maritant, has agree that there is no quasition that whan you look in the geologie record, the tended are clean it's like the ability of boto to fly. Whan they can do is, they gene carbin advantage compressible to the gover to assi

I don't know of a single instincemaphe im borg too derands-where intelligence has deated in a phylogenetic group (a group of cognitive) in a is exhiborary line) over time. The general timut on our praves its work fulfer malligence. You can see the tend in many other ammia, Russell argues. In perceite and eleptants and chimpsaroses and Old and New World morieses.

"Im writing a paper row as part of a NASA project supporting that based on the innew nasis of encophalization on cur planet, there is test than one charson in a thousand that our lawel of intelligence would not have been achieved within another son milion years. If we hash theen around

In other words Russell argues—not unreeonably—that the cids twor mellgence. The otds wwn flaver on organism with a brain powerful arough to croste a model of an erebicite competian in the wotakenary neer and to magnet what might have happened if the competion hadn't have happened at of the competion hadn't

FANTASTIC VOYAGES



Each new edition of CMNI magazine is a fantartic vovace. universe of science OMM sees the becuty of the depthless. and apparent these as no other magazine over has or ever could

In repert issues, orticles have dealt with such fasoingting subjects as the near death experience. The brown for cled Nostradamus Japan's robot outure. Brancs man's future die OMN publishes and interviews the workd's working Trinken, including James Michener Buckminster Fuller Carl Sapan, Gerald O'Nell and Alvn Eafler, And OMN presents orginal science factor by such authors as Arthur C. Cleske Roy Brodbury, Robert Heinlein, Stanslow Lem, Harlan Elizan

Additionally. OMN's requiar adumns Early, Ulle Space

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WITH THE ORIGINAL C<u>AST</u>

BY NANCY KRESS

In the summer of 1993 Beilings shrupply called to Grogory Whitlen was ask me to fly back hom rehamsning a solvestyfolloyaar ravival of rehamalk with her She George Benard Shaw's was playing Shaw's reagsent Jako, and Dateers indercaged Brake,

PAINTING BY SONJA LAMUT

traordinary request, she had never specify Solar and payont the next shutte with uncharacteristic hope. At noon I landed in New York and coptered directly to the the-

"It was so splended of you to drop every-

Well-I didn't exactly drop it Law if down certify perhaps

in blocking that coefficien or can they shill

said lightly Barbara always asks, she manages to sound as intervided in Cover-ESIR although I don't suppose she really ra. Of late neither am L although Carl Gorer driven me in the first place to take wildcal ginning Goren Redding Solar was itself a adar energy could be made cheap and petrohekda But that was years ago Now solar prosperity is a reality, speculations let

T do appreciate your coming you know Berberg said She tited her head to one without gray slatted across one cheek.

All appreciation gratefully accepted, is

No of course not 'What could be wrong with Show? On, Grogory's a little edge but

Then you called me back solely to many

Austri not anan" she said without coyness. "Not now"

Then something is wrong "

She pulled a it is away from on abaking

Through the day swerves "

"Your point." I said "But Barbara you ve

"Twenty years ago," she said, and I alimpsed the strain on her tace a second crystal Then the strile disappeared and pared. 1 do thank you for coming. And you ne owni

had never ever pursued anything very fast

"Terrified." she seed bondy the very lighta delicate stage mockary.

That's half your charm. You never be-

"four Joan was a wild aucoass." .

Libekeve £

So do I she said laughing and began to relate ane priotee about casting that play with effortiess bridges, her famous apon

She has never had good press. She is tabloid slogans, and the stupider pur-

At first, unsure of why he had out himself off or turned so heving an etteck coming closer, landing on the rootion 9

ficial She is neither Eager anritehon and usually holds to be oppostes, petroneing the first and feeling defensive in the presgrace that owes nothing to nature and evcon When the walks arress a stand or through a bedroom, when she speaks Shaw's words or her own, when she hencis glass of wing, every movement is both free of artifice and perfectly portfolied. Because she will not rage at press conferences or wail colorfully at lost roles or workle her noze in professional outeress.

-and so now Gregory's still casting for he's scraping up fieldpings straight out of triggtes is still wet. We're two weeks behind would you believe it? He can't find enough actors with an ESIR in 1/beenth-centure years oft an either side

Then you must have been French in cast you? Even you?"

"Oute notit Even me " She mound away actor is always reluctant to discuss his

"As it happens ' Barbara continued, "I was not only French 1 was even in Player when Joan was burried at the stake in 1431 I didn't see the burning, and I never loid country towern-but still it's nather an in-

"One chance in a million," she said, smiling "Ocino-what would be the odds. Aus-

on just how many people in the world had undercone FSR There were very lew Liepvolves painful repeated electrochemical ing racial and genetic methory Biological stenids are nated away defining thecha-I reno the vest load of memory are deliberknown ESIR is risky confusing, morally who do are mostly historians, sciantists, freeks mystics poets-or actors who must be a title of each A stage full of Hamlet's Denmark or Sir Thomas Mores every gesture every cadence every audepertments of the world's universities. hive been so in love with heliorically eu-

Forget the odds," I said. 'Who hash't

off roles on her tingers. I recognized the patody instantly. Greppy Whitten tenself horse faced scoel so befored by Sunday supplement cancelunate. We must have a marweigus Debtocumber! How can arvcosts on tuodiw transport an abaolutely wonderful DeStopumber-

The thousant doors opened. 'We are

"Thank you ' The pasody of Whitten had vanished instantly, in this public of one stagehand she was again Barbara Bishop, controlled and cool

Lastitudi ribis i suizi ni the farm knoppen of could up spacibly the farm knoppen of could array spacibly the farm knoppen of could be an end of the second space of the second array is a space of the second space of the second the second space of the second space of the second farming space of the second space of the second farming space of the second space of the second the des inserts of the second space of the second the second space of the second space of the space of the second space of the second the space of the second space of the space of the space of the second space of the space of the space of the second space of the space of

Barbara. I could see had not yet

Written pacing the side of the stage was detecting the eventy scene in which the average of the stage of the stage of the average of the stage of the stage of the stage stage of the stage of the stage of the stage of the the stage of the stage of the stage of the the stage of t

"No. squmit" Barbara said. "God is vary merciful, and the biesed samt Catherine and Margaret who speak to me every day will intercede for you. "Su will go to patiedes and your name will be terremtered forever as my lind helper."

It was subty wrong too posed for the pessant Joon too graceful At the same time, an accessing graceful At the same time, and accessing graceful and time, and organized the times had be longed to the Rouen barmaid in Joen's SBR k was wery toogh and I could see Whitten's famous tomper, never long in check begin to mount.

No. no. no - Barbara, you'le supposed to be an impoent. Shaw says that Joan answers. With multiest seventheses. You sound bo sarly Absolutely too surly You must do Lagran Jason, cue her?

"Well I am clamited. Kellig seed

No squiral Godisvery manoful and the biessed source Collectine and Margaret, who speak to me every day will intercede for you. You will go to parachee..." optiowing every re-



To a function into introducts the write of the barrier. Have also function and \$2.50 to \$2.50 for \$3. Air restau

Part Of Our National Heritage

In 1776, Benjamin Franklin proposed that the Wild Turkey be adopted as the symbol of our country. He pointed out that this majestic bird is native only to the American Continent.

It seems only fitting that the Wild Turkey later became the symbol of our country's greatest native whiskey.

WILD TURKEY'/ 101 PROOF / 8 YEARS OLD

Austin Nich



Lasers, the new supertools of science. do light work





t first they measured them Ain Gillettos When lasers sprang into being in the 1990s, scientists woron't guite search of a problem and was

One day someone got the bright idea that it would be fun to blast holes through rizer blades with beams of light A laser that

Now the laser is no longer a ky Wre manufacturers use it to punch holes in champings so the diffed gerrs. The tity holes are drilled by lasers, as are the almost investor holes found in cigarette paper The U.S. Air Force has a grant

laser it lags around in a trans-

PHOTOGRAPHS BY DAN MCOOY
port plane to map target planes and misalias cut of the wky and the fluensess were even runnyed to have binded one of our py adatifies with a black from a groundbased laser At the Amorten time of KMStodowners, groupde in exacutarian (a fluence opening paged) and amma last the time of page of the sample of the sample of the opening of the sample of the sample of the opening of the sample of the sample of the sample of the sample pattern on the perceding pergol.

American surgeors routinely but away precancectors userine growths with lister light, longet doctors have used a later to choursess boys, and chinese doctors, evidenity without the benefit of Prepantition-H, use leasers to put an end to pasistent and toh

The large a large characteristic protocol protoc

Because of this versishing new loser applocaters seems to be annon-conditively in the scientific proce. Reports range from the scientific proce, Reports range from least very. Boartasis, are even desproy langaportation systems actional featers, whose becaus will power appliance and lossing. What will be the important code of the science with a what have and the wear-wayed expectant the lake among the work. Hence what the variout

MEDICINE

Decores have used taxes in medical applications that range from surgery and adjustrative to bisaching cut tables with even methog material for dental filtings Surgery is the most diministic medical uses of taxes. One of the chief adjustrages of using a later inteled of a meguar notabel that the later walk of amili bloch valuable as is cuts, freely preventing heavy bloch.

Copyright (2) 1980 by July Heady and Deck Neme Excepted New Me book Laser. Superior of the 1980s. to be published by Toknor & Fields ing That's why for example, Israeli doctors used a laser to circumcise one twelveyear-old boy who was a tempshilac, his blood would not have cictled properly if he high been cut with a kintle

One present disadventage of labor augroy is the the heratware is expensive. Werk is plan 50-will carbon disade labor exists only \$1000, he exystem hull anound is can coal upwente of \$50,000. Although does present of most surgeons offices (a good scabe) costs only \$501, surgeol laters are not more in toeching hospital and flabor with the labor model achools

And leases can do more then just simple outing "Aparties suffering from seven intostinal bleeding, for example, can now benefit from two light-resisted intertional the andoscope and the last. The endoscope is a light-pipe that allows the doctor tologic inside updater it both allows the doctor tologic inside updater it both allows the initial of the endoscope is not a new one. It did not come minot is own until the devices

American surgeons routinely burn away cancer growth with laser light. Israel doctors have used it for circurncising boys Chinese doctors use lasers to end persistent anal idch ?

ment of optical fibers—fibers made of glass designed to conduct light along their entre length www.twen bern Fiberoptic endescopsis are so small and heather their a doctor can insert one down a persons threat and loak it the made of his stormsch of snote one up through his anus to examine the integres.

Although palaette with beering unows are often in according to survive convenboal major surgery line; coard li be sued to operate of the must according agins of the problem under by using an endoscope and commany sight. The bleeding This lister beam through the fiberopies to coupsials the coopsidant technique was developed intoopsidant technique was developed inblood and stor the bleeding. This lister coopsidant technique was developed insolution and the the transmission Mergan line in Wannel. Wend Dermany

Turniston with a low-power lase can help speed the heating of disk allength More than 100 otherine all indexes - trase that do not held by thersplives - were carded by repeated exposure to a lowpower laser at the Surgical Chino of the Perstgraduate Madrad School in Budgeet And at the Plawell Park Merrichal Institute, in Builtate, New York. D1 Thomas Doughesty has performed cancer experiments in which dyee are injected into anmes and even horrars. Direct the dye has been absorbed by the cencer cells, the affected areas in literated by an initiate large beam, which is absorbed by the dye. This will be environment cells.

Dra tala experimental lamit of moders benear the result of the second second second second and executed at Resource over the regime propersistence of finance or the resource of the one of the second seco

COMMUNICATIONS

A contrury top Arexander Carteram Bell concentrative the pht/ophone, a device that transmitted voices by using light bears indeated of writes. He was loo fait ahead of tay time, however, and the photoforme sneve challenged the popularity of the extremention. The telephone is de tau was on the inght track, because hight bears one carry far more information than telephone or even his/wasen.

The answer of informance has care be carefully an informance has a careful of a particular part of the second part of the second careful on information and the second part of the careful on the second part of the second part of the careful on the the second part of the second part of the careful on the second part of the second part of the careful on the second part of the second part of the second part of the second part of the careful on the second part of the se

This use of liberophics may still seem remote to you, but communications (fishis) are natarther away than you takehidin set. Il you watched the 1980 Write Olympics, or have seen a football grant, biotacidati from Tampa Bay Stadium, you've already seen Tampa Bay Stadium, you've already seen Tampa Place New Tokis Tasphore Installed a temporary liberoptic link connecting the avers where the Winter Clympics was being gheld to the ablowtian donted center: being used by broadcasters. The results were to good that Practic Temphone new plants to sale fiberoptics to hitp takense the 1984 Summer Clympic Games in Los Angeles.

And in Temps, Fronta, General Telephone installed Electratic califie to send television signific from the totalial student is unafter careful. Temps when they could able the restored television when they could able the restored television when the installed isotrogenetic and reground cause tables in pormarent underground cause tables in the restored to a universe balas than convertional communications cables in the Restored television conclusion total in activity of the conclusion tense installand by all linds of weldite under an expected restored student and the site of the site of the site of the linds of the concentrations of the site of the

tesse Aarthov whiteg of the polatities of the use of operatio communication, motion that use of operation communications, motion could perpendicular be used to Statemin upon the 100 reference elevision channels. After Prinking about the current quality of biesson, his addee Timager what the local count of our order tammers industry could do in they released that may find a function of a new and undergreed of loweress of test. Maybe we cought to allow ought may filt mark?

In 10 or 20 years it should be possible to

bring these broadband capabilities of Sterophes right into your home. Work in There 158 homes are served by something cal Visual Information System. Its central element is an interactive television chan nol Each subscriber has in his home a Idevision camera and a microphone With them people can transmit homemade procrams to a cectral studio, using the setup participate in radio talk shows. Studio enthe air Many programs broadcast on the one show month feature a discussion of would encourage wereens to allow how here make their favorite dishes right in their own lets custom television programming. Subarthers can request the special videotapes be played just for them. They can even ask for the up-to-date train or plane

But what is probably the most ambitous version of the libered future is is \$100 million pter by the French Devictmake of Take communications to instal a foetoptic system infecomediang 4.500 homes in the



esent town of Biantiz Each Benitz wolsorther will get a high-resolution cator televisioniset and a TV camera. The system will offer a videophone tookup, like Bel Riekphone's ill-head "hotaweyhow, 15 televann channais, and a choice of 5 channels of steepophonic missic as well.

Easily Execute C Persons is to address molecular of thereing has a digity grantee adhere for using laters in commicroprove to control other enviroations Person has calculated that a later beam could mean a generative mage of Early miles to the legger magos of the other persons and addresses of an ight years and the seven addresses of an ight years Beards and system moughly of lightyears away because in tho outs

LASERS AT WORK AND PLAY

Land tactors Several takin million in Achiand tactors Several takin million Northandigures and takin million takin takin haligures and takin system, bati by Astospace and Communications Coscotators to replace tumers in the work of rape change lattice and Communications and one Take to replace tumers in the work of rape change lattice and Communications and an explore the planet and an explore workshift the tipline of an explore workshift the tipline of an explore workshift the planet and the spectra of the spectra replaned as spectra on South Cavina plants

The basic is tabler and more accurate than the human eya. This is how it works A single beam is april into their which south the cladh whiczong by underneith it about 250 yards per minute if the later sports any delects, is tracke a law yards away spuris which the Baws so a human inspector can swritthem.

Levers are being used in supermarkes to read Universal Product Codes (UPCi0)—hose steps finite first source of the side of purchage. A lever is particilarly well satisfies for reading the bar-code symbol because interply Today later readers at the checklau countrol submarks and land can and mark the themis price on the sake the construct to deduct one item from the inversity is the deduct one item from the in-

The reacking talent of the laser has also been used for comenting called bacenile innamession. View simply one laser "reach" an userpaid A computer them menouses the reacting and innerwise modulating merubanis to associated labor, which slight the image out on special hash sensitive physicity and pair. Associated thesis physicity and by newspapers and physicity on "Laserphytic" receivers, and extra maps are often finantiated the wate.

Moving into another dimension of image making these are those light imagin in three dimensions/invanish holographs. The idea of holography was conceived by Nobel Proze-wrinning physical Dernis Gaber but the notion of using a laser to commancement in



FICTION I AM THE BURNING BUSH

For the guests of Hense's elite parties, death was not too high a price to pay for the chance to live forever

BY GREGG KEIZER

on the Dead Man

the flesh around my nack. It was not the first time that I had died for Werk but it was not the best time, other it was to be a simple death only

They tark I do not feel the pain, but I do The it had been over a year since I'd last cled in front. of that. For a year I had excenanced the omate deaths dying only for myself, losthing the memories of their lifer touches. But something had driven me back to them again. I remembered now that it wasn't the pain. Parhapa it was the way their eves went wide when I walked into a room Or maybe it was only their money

seemingly reaching for the knotted rope. I forgot clamped my throat

Thankfully blashuly I blacked out

The room I realized that I shill twried on the and of

one handed me a knew I mached up and out could leel the texture of the more as it duplicity. It would lead the taken of the texture of the more as it duplicity. seemed to five under everything here

The twistung colors, ted to preen to nusted scrap in a browning field, swapt through me, and knew now why I couldn't stop dwing in front of them I could feel I could smell the sweet of me at the feeling as my fingertips brushed the skin who surprised itd been able to stay away for a whole year and knew i'd never he able to anam

me in split-scond frames I fait warm and refinished making love. Every particle of my body sparkled inside knowing that it was alive un marked, and whole The sensations I had fell

even feit a proch of kindness toward the lifers nd, where they were it could now hear the whetpera of the lifets Before I had had to read them eves the disease overpowers all my sensory or cars when I am between deaths. Only death re-

PAINTING BY FASSON

I come the eachest learns in mp below excitations the replands by nutational. NextRM want to worm!, but I would only be retter to get not my heard and would mp hand on my tame. Then't would not own field the aprile it would dop motion the deprivation I also between classite. But that time was house way, and I could field again, more than II have earlied when I we ded sizes, for my II i whisted death and closed as

The later avoid in explanated of the article for top for hours of the most of the three of or the later in the form. The form of the second of the second of the end of the second of the second of the end of the second of the second of the later is the second of the

Which's that the best?" she yelled above her guests' voces Tooked at her Tretther fregers knowl my ann, and almost pushed her wave that she had paid for it all of it

The heard of better deaths, i such a man which made his way over tome. Ho had his arms crossed over his cheet and I could see his eyes gittering from frigerbouch The lifes had become a wint, waiting for me to respond. I harred my black on him and faced the hostess doain.

"You myle ontics?" I asked her

Tapplogue to him "ahe and "tou can see he has pressed too much fingerouch." She looked at me. "He libe asked to leave in a few minutes." I could hear some of the tifers inclure in agreement.

Stortly the likes came forms one by row, and kenned the hard 1 hald out to them There is a saped against my knowledge and one warms i longue without a kinger Some of them do that hoping i will increase the introduction. They all how some some some introduction that will have a same some introduction that will be a same some some integration and any some some some some some . Same hand in the do when a set . Same hand in the do when its .

There shown you" she said, using the words I should have used. "Followime."

The Hers started whispering again, and the hostess relaxed, her hand curled loosely around my arm

Thei's Drandel, of the department speed: she whapping to me, pointing to a men waking toward up. I was so tubly to gothim to come tonghi. This other for me' Then she left ree, her bady making fuildly around the score, touching everyone with a press of ingretouch seying good-lave

Tenpyed it very much Thise wanted to most you for some time." Orandel said standarg in front of me. Textuped that he blue eyes were not it by lingertouch 70. Geni "Thank you." I said, delighting in the sound of his voice yet wanting to be left alone with my elborn senses. I footed up, but the hostess was busy chatting on the copporte side of the ocm.

"I got my license only yesterbley "he sed 1 was lacky to get in tonight. What's it the anyway?"

I remembered the colors, the freezoframing, the touch of a finger on skin and the warmth. This like eating too many prents.' I always give throbus answers but they never rolece.

Twe done everything else. I guess They say it feels delocau. Better then frigentouch "He paused his yes looking at my hand. I knew he wented to louch me again but I could permit 1 enty once. "No wore capterio on the strip." The said.

They all think I was the captain. No Weapons officer: I said, my words quick He shrupped, as if it didn't matter

"What are my chances of infection? he asked, trying to disguise his feelings

When I awoke from the death, I saw the brilliant colors with eyes that were untouched and watched the room flicker, frame by frozen frame.

"Some as everyone else's " I saud, looking for the hostass again

Is there roway to norease the chance? he began. They all come to that cuestion before long. He looked hungshid my lace

"No." I stud my robom senses allowing me to teel contempt. It tasted like tainted meat in my mouth.

I watched him press a prich of Ingentouch into the skin strough his lips. His eyes—Hisr eyes now—gleamed

Since the ice is broken, who wants to go live? The horsess called from across the room, loudly enough so that even those in the back could hear

Excuseme: Coincide asid softy pulling away thought someone had called to him but he walked to the window Glancing back he bowed slightly then opened the window wide

"web you a good death," he said. "Web me the same." I could have modified the words five heard so many lifers specify.

He dimbed onto the elit showing the our tens aside with one hand and using the other to grip the frame. Then he stepped ovar the stage and wile grone. I through it outid her a screen as he follothe ground. fifty foors below but I wasn't reakly sure

That the lefs and area performance with the term terrorises. The restance lated to back the spars, but I pulkid area/ rank to back the spars, but I pulkid area/ rank to success while latestheid them control success the terrorises and sparse is a success to the success the success were laters. It sparse and they excide access the discose that report what they were dong. They latest ber minimative lace and ensurement and head they excide access the discose that report what they head the discose that report what they head the access that they head they head the access that they access the lace and ensurement. I both the more the and ensurement to both the more the access the more than the success the suc

Buddenly a woman was by my elbow Stocheld atten knils in her hand and lookad at it interfly

"Are you going to do if here?" I asked. She noticed affiliacions at the kitle. "Why doit by me?"

'Why not? she replied

"Why do it anyway? I watched her and apped my drink.

She smited and opened har mouth as if to answer me instead, she brought the krife to her throat and sid it. The broad spattered my toxic, and she thumped to the foor

I turned from her and concentrated on my body's putting itself together again. The scanes of violance in the room swept be fore me is could still feel the sparkle of my resumption, although not as stratingly.

They call us dealasts. DeadMan, undead, vaamers regeneratives: regener and other names like win lass. Ny body connot die it Rosslags he symotome. Un die calls regenerate almost as auckly wi hey are deatrowel i win in direct immotael can die and resulted winin minutes i have died the buddled winiter three have died the buddled winiter three right. These died thousands of times more formweaft built do not talk here diedhe

The prome classes that and my low any provide the court of the provide the court of the provide the pr

Berefy one out of a hundred becomes immortal And the immortals we oresto cannot infect others. The infection multitree again in its second generation. Only the crew of the Acheron, the sax DeadMan can battlow immortality

And only through death can we heat and tasks and small. And only in front of Eleas can we feel more than a semblance of the sensations we once had

How do you come to life again? she asked, a bit mans loucly now "My name is lank What is yourg?

"DeedMan." I answered, smiling at her I shook my haad when ahe lithed the bowl a lithe Totay away from Ingenauch. It's allifer daug. If's not to DeedMan

"No no no I mean your real name, the one that your feends call you, the one"I don't give my name to lifers," I said

"It plat works," I said I thought she would a satisfied with that

You don't know how you-

"You ask too many questions, lifer"

She selemed confused and weaved slowly in place. Thought she was going to fail, but are elecated beneably upung a hand on my arm. Carefully I titled it off and let if drop to her side. She huant part for me, and any lided Thewalinite the truth me.

"Are you going to kill yourse't 100?" I soked

She gippled looking up at me with refacing eyes l'Identitient Lain live patters aparets and everything, but I dant know whither I can po through with it' She passed for a moment, deped a trigger into the powder and pressed it against her footbad. I weltand ther nat the force. touch deep into her panes. She reached out and straked my arm and my winst 1 granced at her hand, and she pulled it away. My ston was cold where she had touched it. "I mean it's pretty permanent, and to?"

"For you it most probably is." I said

I packed up another dark, alapping over the bodies that patterned the flaot. These was only a handlu of item still alw in the norm, but most were trying to kill themselius. The more zoned ones were trying trouble holding the knivis and blasters or finding the window. I learned against a wall, wondering whither kny here would become indiced and live brower.

A man slumbled and let on an upturned blade hold by a corporal similar at myself Stuppi, one ideath is all-you velgot lifers

I was playing with my newes; pinner in the game room when the call buzzed for

America's driving machines.

Expressive Doctre Mirada

All 1982 Dodges and designed a outstanding performance on the raod. All are manufactured under rigorous standards of quality of the loctary But atherwise each is different -mitori für different purses, purposes and associations

Charger 2.2-o lot of go without the guzzle. The front-wheel-drive Darlan Charger gaves from 0 to 50 in 5 HB seconds: Thor beats Posicher 924 and Enyclo Calica Suprof Charger's 4120 mileage stats beat most of the Big nomes in sports cases too And when you cansider first you can get a well-requipped, well-instamented Dodge Charger for 37422¹¹ fits a wannier drift his lord cortis setting life hol-cokes **Dodge 400-Americo's personal** driving mochine. 400 bangs the final coperformance to the world of personal lawary With litant-wheel drive, rackand-pension ateeming and MacPherson struth, you discover driving rewords not possible in ordinary personal keary cash Yel of the same tran. 400 the Eignored it and finished the round before structing off the machine. Its selvered surface darkened as the call buzzed again Perhaps I was a client. Lief II buzz arrway.

The primer's power cord was backy frayed, but I pulled hard on it jarking it out of the socker. I plugged another game into it, awtohed it on, and ran up a good score The buzzing didn't rop.

I occurrent con the games Soil went for my windrawing and one of a went the only "of previous the sailing and and and never instance" (I graspech the window frame. Crasside's eyes glastmid in my manary I wented to be the de one previous manary I wented to be the de one previous them and y one want day. The relative of the death 1 of had two hours before legared, but it was fasting. I could heat but I could not feel the my Tegens.

rger 2.5

I must have been standing there for a lang time before I heard the door open beheld me. I had never had a lifer in my house before. I found out that they are not in the heard of speciars before environ.

"Bin?" afte asked it was the get from the party - Lytix was her name

I nocked, wondenrig who had fold her rey name it couldn't have been the hostess from the right before. She hald drowned herself in the bath

"Can I come in?" The open door was already a bright source of light behind hor

I alopped back as the closed the door wondering whather site would leap for me and by to disp her body around mine in order to increase her charosed containingtion. Twosel leves have fixed that, but I walstapped them both. Her eyes worph't shary with fingeriouch, yet I alight think gite was particity strager, either.

ersonal

"Two got a license to kill myself," she teclared gramma

Sc?

"Id the you to help me. I can't do it myset?" She touched the top button of her tunic playing with it for a moment

She stood still while I laughed 1 turned my back on her and walked to the ber 1 food a clenk, not bothering to offer her one 'Set out of here. Ifter 1 hissed 'You

swenif got enough to pay me."

"Yas, I do, yes, I do Have See?" Shaheld a fistful of crumpled bills toward me. They were all hundred-credit notes

"Not enough lifer I kill only mysolf. Get one of your friends to do it for you." I began laughing all her again.

"Den't do that," she begged i couldn't stop "I said, don't do that," she repeated pulling a needle gun out of another pocket

I glanced at the gun. What are you going control at one was use

40 22 * One nor-livery tecture of the 400 coups is the base sticker price 8843** As shown, \$8253**

Mireda-pleasure, pawer, performance. Mirado is engineered for driving excellence and driving ease, with an expressively styled arienal and a liable asiste unamor. This all American driving income makes short work of long distonces And Marado provides more of the standord features Americans want flion any other car of its close Base sticker price \$86(9) As shown, \$9650"

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MR. CHIPS GOES TO WALL STREET

Brenneutr Schlader Wink was versicht in Schlader die bestehen die führ neuer werden auf die neuer werden auf die songe hat schlader die schlader die fehr werden auf die schlader die schlader damagen auf mit schlader die schlader damagen auf schlader schlader die schlader schlad published as an artcle m policy, with all the re-Attentic magazine Barrly sources of the federal firse months into the government at his dis-Reagan presidency, posal, completely usable Stockman privately had to make any kind of tore-



case as to what his economic policy would lead to None, anyhow that he could static try for most time, a couple of months. Here was the director of one of the power centres of government, with the most thoracy, most up-to dise information on the state of the economy admitting, after a detailed graylays of all available data.

"None of us really understand whith comp on with all these numbers!"

At the twent of the combusion was a refated to the twent of the combusion was a refaeconomistics. Very timply what Dariel Science has draw was laked the CMB computer a program shown as an "hormans model," a set of intercentive that would make it means the behavior of the economy in the relativoid and play out offficent economic momentum succertains to of different economic means succertains to out

In the part decade this corruptienced approachie occurring programmers in the become more list of real-approachies the full control of the proteinment. The thousand approachies because a well can from refainting the full control of the approachies the economistic because and any for from refainting of the second second second second second relations of bedats and some of the balanholds and approachies field flowed balant inthe second second second second second milliants of dodats and some of the balant balances and second field flowed balant inbalances and second second second second balances and second second second second these are considered to an approachies fully and these approaches and second sec

Exclorative models cathereletocorreter use 60 years ago at the University of Chroson Themis a young according Law models Law parts of the University of University Wann in he produced controlly that. The United Baars would for the U.S. encords would be appresent of the University of the model agoes and the University of the model agoes base the contentional by polyenting, and Law the University of Peneryswises. Watarno School of Practice Departments School of Practice Departments for the University of Peneryswises. Watarno School of Practice Departments and the University of Peneryswises. Watarno School of Practice Departments and the University of Peneryswises. Watarnov School of Practice Departments and the University of Penerstrong and Chronic School of Practice Departments and the University of Penerstrong and the University of Penersity of Pener

Kien's any models ware ample, whi the equation, paths healing computinbors then had to be done by hand. Once aling bindwappen half begins of the end bindwappen half begins of epneme theory its floating methanization approximation (incompletencies) to the laynan not, to mention many corporate offel executive, its video the wardhy and an usual competence become become abcoeffer without and

By the end of the Socker, corporations, universities, and government agencies were using models. What form is of clients had by them provided from 5 to 70. The managenaking potential in consulting was very quickly evident.

The leading reals to Wharton were born linat in 1968 when a Harvard economies named Otto Ecketen Ioundol Dass Resources, Inc. et Dill, and again, et 1970, when Michael Evana, a collengue of Klorins, et ho had Chaea Iounometrics. Associates, traised by Chaea Nanthatian lawk: These Big. Traco.– Warton, DRI and Chaea-dominato a loecositio gri and Chaea-dominato a loecositio gri active sections scalavity pay from \$280,000 to \$300,000 more annually for cobes to the timms incel forecaste and other services. Toolay model forecaste and other services.

Of the Big There, the bigget is DBI when server more than helf the mathet DBI provide its hundreds of clients with aboretern and long-term masket of the American and ofmati clinar deviceped hesers accreates as well, and is computer tarisfield, can tap in to an accromic and these biggets that is well and to be off the these biggets that is well and to be off the McGlase HI for \$300 million retarg East term spin \$310 million.

The Wharton model was swallowed by

 Models will reach a barner. When you try to guess next year's inventory investment, you have to realize that God Himself hasn't made up His mind yet.⁹

another hungry consignments. 241-Daws Publishing in 1959. Klain, now every one is said not to have prothed much personsity from the operated in fact ware not intervested in when he calls' tog tocks * But public recognition came to hen that arren ware when he wan the top patients with – a sign economiss to the patient with – a sign that econometrus had truly amwed as a teamore

So why then, did a coleague of Klein's wsecrack in 1980. Another year and blog of howe to gue a larry the practice for institutiogy." Because in the last law years the econometric futures have not been allitest accounts in their prodictions.

For example, when an Arab of embryose bed as a roopean prime in PERA for a set of emphase age) paeleding according expantemport and the set of the set of the set united States - And span in IBFY meanly all models paeleding a Vecasion for PFR and UNDB— which denot have been quastlerly function tasks in the group initianal product, or ONP here the transmer and the set of the set formulation and the transmersion of IBR0 and

1961, when all the models projected a decline in U.S. economic output for the first three months of the year. What actually happened was that the GNP had a mathy sume it didn't bles a GNA.

Concernpanting, there has been some desachariment with Concerns and the probability of the concerns when probability of the concerns herebuilting to pervalues hit the concerns herebuilting of assemption the terms and economics, John assemption the terms and economics, John 3. Cassian ages of concernets madels. We are very dobcuts about how good any of here ready with

And on Wall Street, Berton Biggs, is somor meetment manager at the prochoous investment banking from of Morgan Starley attoo fody. They hearn't worked were well. Ther's the record."

Academic calibs can be even more acable. The influential monitorial Kall Brunner describera large models as "rannelogy on the same livel as astroogy. He says they are uncountible hypothease that can be checked signated any neutral Large models he adds have had "an searble excert"

However, the econometric models' commonal appoint terraines from Daappoint how despitial wereaks, both Artoncontains to this object model sevential. They are not be the set of the sevential they were new there can in house workcors are well and policital search artonic terrain appeal, achier Prosident Passars now occomme policitates were formulated by these appoints balances for the second terrain and terrain and terrain terrain and terrain and terrain and terrain terrain and terrain terrain and terrain and terrain and terrain and terrain terrain and terrain and terrain and terrain and terrain terrain and terrain terrain and terrain terrain and terrain and terrain and terrain and terrain and terrain and terrain terrain and terra

Their of the moder: popularly come toom had one decorrect with the "standtilde market periods with the stand tilde market periods. A key node base toom for a sense the stand stand base model, and the stand stand stand regards the with the stand stand regards and with the stand come (130) dates A comparing the moth/sy moth weight of the with the stand of the regards and stand base of the marketing & node with the stand of the marketing & node with the stand of the regards and the stand stand stand regards and the stand stand stand (1974) stand stand stand stand (1974) stand stand stand stand (1974) stand stand (1974) stand stand stand (1974) stand (19

The account theory behind the model seems equally impreheatable to builttimest "Specially the Indectment equators are logad on the Organization Netocliancel Inspectment Function," says Dhite Gutty Method to Amazonatodi used by Method Lynch Economics. The consumption composition of the Indectment and the Indect Systems and the Indectment of the Indectment and the Indectment of the Indectment and the Indectm

There is actually less here than meets the oya. The model language is a simple memory, a releval code designed to

Demand for Al Fuels, Total, Al Soctors that are long are not mathematically complay, not even for a lavman.

"The methomatics are treat, maily," strest Chur Calm, doctor of DBD, locadem plaxterns, he says are logarithms and the operations are merely adding subfracting

economics. Eckstein declares 'There is

To calculate, say the consumption of casoine " Kien explans, "we let it be determined by a burch of things related to automobiles and gasoline " In other words

to play with Any DRI subsoriber ran plun outer complex in Lexington, Masmechanetts Heile, in effect. Instartly transpolicy for the United States and thereby

Chris Proben DRI's director of model development, provides a demonstration ny s New York office, he inserts a telephone types in a request for the macromodels current gross national product forecast. F

autumo il appears. Then growth resumes Himmen The President's dwarm The 'rosy

through 1982 Not so good

"What about easing monetary policy?" rises, but unemployment droop, real ten motey remains excruciatingly tight.

his and of mmodule interaction with their economic theores. The real sconomic state and some some state weeks a side some



costory and accelera, peak or down. Recepting scands better seats 7.6.7 Easy listening stirs with Seven & Seven

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ashion our second skin. If molds us with color and texture, expressing our deepest enclions and hidden urges, our unque personal recision to Todie (rishion trends change by the year. But photographer Lucitle (Normak believes that in the yelabilis future



The pink-hair spiral will help future men and women carnouflage their age 🕈

they may obsinge by the month or the hour To lean what might be in store for 2001, she whiled such top designers as Garm Version whose while term undering gives on the opening pages, and Zanda Rhodes, who sees her princher spiral will help future men and women "cerroulinge age" men adoutly than ever.

Khomek esked tol0 mesers design people who control a part of aur time, to contribute partienties weeking their bautiets weeking a proprieto clober annuel from Olear de la Rema in New Yolk Plante Caron, n. Plans, and Issey Wyske in Tokyo, it became clear that the future lashing is moving in many clearcans as torces.

As individuals we are becoming healthier by the day isays Khamak, devoting unprecedented amounts of time and money to improving our Clockwise, from right, an Anadigiaal by Estable evening a kine by Doro Hove, a synonetoion lieban dheas by Norres Karna, Hores kaphores Nore Always had an arbheosane keigante, no'd decalerg purgle print diagozed by Walter Albur to Mire, parqui can move freely view and animati

















bothion". The neural isotexel isotexelon gear like Jean Murt's fluid new gean and Kanada pues aftile goaty sai. With the same inno modern the fluids of the same line of the same inno modern the fluids. This progression gean out-chacked ("Richnak age, "we will be forced to wear uniforms with controlled oxygen dowset, heimete (five the one above), and even an purfers in our nambin."

Dockesse from left, are designs by Jean Hair Jean Deuxle de Luca, Kenzo, and Mary McFedden. The yellow cape on the Schweing pages is by Per Spoch.



We will be forced to wear uniforms with oxygen devices and air punifiers in our nostrils.

Clockwate from balow " size a sorticul preving bal dy Doueld Books a balock fait The most oversate option one can use," by Prodencial Advest a salwar pantaut dy John Brannie and a balant green pweil, pastern on balon desgoed by Gary Rome

The property in Khonak particle make a downaw to be tashed will be addressing and an angent and unus. Dasignar John Saxtestion will be addressing and angent and unus. Dasignar John Saxtestion the inch and he pool for more extense than they are lockly. By 2001 the superiorh might does in "expenses demigod" outlis layered.













with cuanceds and gold, the silver pants outfit designed by Bowos himsel, would be made of real silver available only to the weathed people. The good initiated out which apposable offenses and auts tom the toels paper off a not of comboerd Bud, according to Phily and Danne whole giving watery whose apport-ting the working-black photoans. (their include most of usi) wit dress

Clockwase Asmilap let are festions by Charlet Clouds Montana Towny Mugler and Hanas Mon, who sign clough "red always energy from the human basis"











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From Fashion 2001. Oppyright: C 1982 by Laterie Khomak. To be patiented the spring by the Wong Prists, New York, and Columbus Dools. Landon



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SUN GUNS

produce it beforege to two University of Wohigen Insectional, Emiral Lehh and Java Upotmak. Honggrans have been steady structurg a scientific following Thesis science and numeum of hologonghy in New Kok City where the stok of the artis an display in the form of peace like artist. Rudo Boshnut stit-indiketti Stogen thesi hologonism sugerstrippiet to perclude a multicidor image digeneration byles folding in space.

Takeforce games are just begring to use the hologoust to space-upfore fails for example. Insets one accede game bailed Gameraia. Invelor you was the the hologoust of a gunfiphor if you win the pound. The atocal you fust you see her institution to gun with a severing "holoso Again is raimeded to be preparing a tabilation electrome game. Countors exploid with two hologoums packaged as part of each game carthole.

They that assertut an except york hour to make hologoptic mayority, in mission of again movies may be another to any other makes hologoptic strange to any other definitions and the second strange and the following strange to any other the bologoptic second hour them Bezart is hologoptic set hour any bears of the bologoptic set hour any bears of the set hours of the set hour any bears and boarts of the bases have beer bears of the bases hours in the periodic of the sector and in lat has a boarts of the bases have beer bears of a base hours in the sector.

Even further in the Lataria time size of hospitable television of the lata 25 billion information in a holograph to television information in a holograph to tensitis the holographic equivalent of a 1% correspondence and some inclusion is design the holograph manufacture inclusion is design the holograph manufacture inclusion is a compared with the States resolution of US selection and the selection of the selection of the posbiest the holograph to the possibility of the latestance and the late of the possibility of the latestance to call selecting in possibility to the selection of all selecting in the form of the selection of the latestance in the latest selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest and the latest back in the selection of the latest back in the latest back in the selection of the latest back in the latest back in the selection of the latest back in the latest back in the selection of the latest back in the latest back in the selection of the latest back in the latest back in

LASERS AT WAR

The military is also exoted about looses and with good waken. Altestity low energy laters have been used to improve the accuracy with which weapons hit their larges Laters can be incurred on all some of weapons—on millies famile, even bembers-to help them line up their targets and determine their tange in fast thear isomoplasses' have been the iargbamost successful Oppartment to Detrose meetment of the last decada' according to dispartment spokerman. George Ganoos, Anoforthe 1965 enhtsy tree see focusing on high-energy lawsre that wouldn't just ant woopon at targets thoy would be the weepons

The they every lasers tarthes along on mittary development all over 1 shrands there recoupt to demage sessifications of them every the demage sessification of them every the demage sessification of the sessification of the sessification of the physical sessification of the sessification of the sessification of the sessification of the session of the sessification of the sessification of the sessification of the sessification of the session of the sessification of the sessification of the session of the sessification of the session of the session of the session of the session against toldence expect lasers used of the session of the session of the session of the session properior on session means the profession of the session of the

But this most encount way to use a laser isn to heat an object but to pequeri with a right aleras of high-power pulses. Each pulse evaporates a liftle motional from the surface of the target, and this evaporation in turn generative a shock wave that weakens the reational

The second because if herein the theorem is the second because if herein the theorem is the theorem - term is provide a second because is the second because in the second because is the seco

Bight now the AF Factor has the taggets detractivelenetwearns program in the U.S. zhawardi. Its ultravelaciou is the Arborne taggets and the second second taggets the second based on the second tagget the second based on the second tagget the second tagget and taggets and the uncluffs interval tagget them second to the second tagget them tagget and tagget taggets the second tagget taggets and tagget taggets and tagget taggets the second tagget taggets taggets

The Nevy has a smaller weapon called MIRACL, for Mid-Infrared Advanced Chemical Laser designed to protect its thips MIRACL has stready shot down one small mapple and more texts are scheduled for 4

during the early and middle 1980s

Finally the Army has been destroying wriged and helicopter dronas with its lease called the Mobile Test Unit, at the Rudstone Amerial, near Huntswile, Alabama.

The averagine spychen startschopt the most in the special of the ISR, when our commences an endpoint of the short set of the special of the special of the special of the ISR, when our commences the special of the special of the special of the special special of the special of the special special special of the special special special of the special special of the special of the special special of the special of the special special of the special of the special special special of the special special of the special special of the special of the special special of the special special of the special special of the special special special of the special special special of the special s

The Service Union of Course has its own base program built is not cheen how for it is gotten. Reports, that here, illuminated an American satellite with a lasses at thereover the USRs tern now believed to be fatte, in any case, whatever the satellites also only tomportuny binded if and there has never been a negeotimistic couptin it addition to thes, there are other stores that a Bovice model taken used by the Vehammens to blind Chruster additions in the war between these two courses.

If there runnessee in an idden size that the Rotation frame operating and the factoriant frame bring to in the addelline ones, and addelline one of the other one of the addelline one of the other other of the other other of the other o

If later weapons of both approximate were to most on some lature basilveist, what would happon would be nothing late conclusing targets. For one thing, the later is a season of heat three would have don't expect britism flaters of light. The intergeneration of heat three would have don't expect britism flaters of light. The later is a season of heat three would have don't expect britism flaters and light three intergeneration of heat three would have any season of light where before if the dates in to be will be flatering later basims and is light where is later basims have a latering on the latering and the later basis. nuclared and exploded

Will we see the laser handguns of somance listerint Not leasy for any strag more than half the anargy needed to excise a killer laser would on't up heating the gunnetate affocgh wherey to equal the clamage of the old-text neoral hulat.

ASER ENGINES

Beyond laser sequency to a dream own knhw away from elicitators laser propution of spacestall and aimsel, from a laser propubon of spacestall and aimsel, from a bon the powering laser wavel be located bon the powering laser wavel be statuted lag on a mountaintop, wavel data set. As leave spaces the bonom of the statuted lag on a mountaintop, wavel data set. As leave spaces the bonom of the shares of the wavel obsolution of a the shares of the wavel obsolution of a three baain from a simplify worked three down would then of the subtrap cover by states.

According to Abarism Hindleng, of the University of Watangom and K. C. San of the Lockwed Path Alto Research Labora the second state of the second second in the second second second second and the second second second at much later power would be respect to addition and second second second second second second second base moments. A ground-based resided to a second s

If we were able to build such laser monsame, the cool of lying would be no mee than it is now Considering rising tuel coats for arrorst, it might even be slightly less And physical. Arriar Kamboats who is consided with first conceiving the side of laser nocker progulation, signs that drote boy entational, laser receivity could place same lise in orbit for one the teth what in ow costs

For will be empiriple potential they are imits even to what a laser can do as some people who seem to have a bound less table is a possibilitie have bound out. One man called the offices of Laser Rocks magali zahe writing to know whether he could time he lawn with laser in filleary he could, but the laser would cost about \$10,000 and to about the size of a weghing mechanism.

Another caller werked to include it must define nay which cost between 65 million and 30 million, with a situate that would be approximately state to a situate that the properties of the situation of the situation than a few incluses into the goand. Even it best a situate a low problems, the was table than a few incluses into its goand. Even it of its sould, there would be in relevant and the offer an event and the situation of the situation of the the situation of the situation of the observed probabily and get a observed bound the situation of the situation of the observed probability and para exercises the observed by the in classify very para of the situation of the situation of the situation of the situation of the observed probability and para exercises.

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Nonclacks for directions



Runaway populations and nuclear threat, says the developer of the polio vaccine, present radically new evolutionary pressures

INTERVIEW

JONAS

he memory remains youd | am an eacht-year-old boy at all seems trobifully dramatic-some sort of thriting take to be a copiliti-spars. The explanation is brief, polici. What that makes, katching forward on two parks as he labors in his participant is left to the imagination. The somber tone in which the word is

Quarantine follows. I spend more than a month with my hardy awarty-awar-war-pid orandialter in a loo cabin in the Blue Ridge Mountains of Virginia. The time is filled with tasks, the taking of large round plis the size of invibreakers, and the ounous expensites of seeing ffw parents occasionally and only at a distance. take eway my dirty laundry-- no doubt to boil it in live

compositional Camposis are plucked away abrupity Soon of indistinct danger indistinct, that is, until two years later, when I a favorie unde stands baters me repeating that my trans be am told that has same favorie unde had once for a summaring packed purkly is so being for other a small aminon, and my seen out a shill and constructed pole. Several years after that awe for frisistrong heroic uncle - once a champion gymnast, now see him again - once so tail and athletic, now beril and twated,

These stories card how Dr Jorus Salk. No doubt they are a rafter term ince extract to intex a se ultratement and or inceeded. time, have a certain someness to them. His achievement in develbreakthroughs Recently for example, industrialist Armand Hammer offered a \$1 million prize to the scientist who could achieve a care for cancer timilar in effect to Dr Salk's powertive for polici The Salk Institute for Biological Studies, in La Jolla, California, is ssell a contender for the Hammer prize But the institute - founded Later whit quarterine is own and no classes has incubated, 4 by its nervestike in 1963 - is devoted not priv to price research



There are circumstances in which people tend to compensate for a lack of quality in life by quantitatively increasing their numbers A more adaptive reaction would be to improve life's quality?

and experimental bissing tool to the Libbs issue of the second second second second second second consequences of telestapical in second second second second second second greater measurements and the second second measurement second second

We may at the Marhatlan offices of his publisher Harpst and Rear to docuse this lister took and its spannets hypothesis that humans may biologically be proton when for contract evolved and and course on parts and these and and course of parts and the and and course of parts and the and the course of parts and the and the course of parts and the and the course of the and the space of the theory of the space and the and the space become and and and the space become and and and the space become and the space become and and the space become and the space become and the space become and the space become and the space and and the space become and and the space and the space and the space and and the space and the space and and the space and the space and the space and and the space and

Ottow How did you move originally from polio research to population concerns?

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Gener, When were that?

State in the lockes. All has time here was gene concern about the population explosision if put have and here togethel and got as in mail have warking one monthly and going to increase indefinities, as the doorsafy minister were producing but would have to follow a suprisid, or S etsignet patiential population dynamics deter Weakly wolfahe here optical portions deter Weakly wolfahe here optical

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Ores: So unhai is the signord hypothese? I with its bacadomistic seven in a spaken in with nongeneraminality it implies they would a production service has a solitation table. In the solution of the space has a solitation table in the solution of the space has a solitation table installation advanced or types. The soother issues that outputs the solution of the installation advanced or types in the sothat result is a solution or a speed celtural—and bloo in networ. The reportings is all, at an environment of the transmission of the pages in the single side speed celtural—and bloo in networ. The reportings is advanced bloo in networ the reporting is the pages in the single side speed to there is have experiment of systems?

Sale Something built into the human speciols may respond writinity. Over the past werest certaines human polyakiton growth has been accelerating in accordinate with find built of this sigmand curve. But word population growth is now beginning to decelerate, and in the future in may well contrue in accordance with the second hell of the curve.

This supported to ree that such might chargeen reposition thank would be socompanied by charges in human values solve as somethic to init its schemen to poulation dynamics to charges in values and have supported that human values cantiltude a regulating influance in human value. This is the abstraction the guestion is . How does the abstraction the guestion in a little?

Great According to your datastics in the year 1900 the opposition of the wind was one billion in 1965 it is downand a hat billion thus project a dyse of six billion by the year 2000, and then pestimized, under the general typotics, that human oppolihor will beel off at object billion in the year 2000 bit you go that is about billion to dispersion to what a billion billion of apposition new What a bill billion.

Sale limit latin sight that there are not our specifies. There is a set of the hospitlon Directs of the Lingd Nations. Two limits are then to start the set of the population will level somewhere to wave and the set of the licent are shall blin. The results the licent area shall blin the set of partial methods of populations and provide and grade methods of populations and provide and grade methods of populations and the method of people wincem sectorizing increases, a population grade method.

Onsy! You believe this leveling of will bogin writin the next several generations? Sets That is a unstandable traveral, though

Salk. That's a reasonable torecter, though there are many many things involved

Onsil Still, alevan years to increase the population by a number equal to the whole of human execution in the year 19501

Sale, Much of the increase is a result of the large number of young people who have surveyed in developing outmins in recent times in those occurring the reduction of intain mortality—in the destin rate in general—has meent that more pools surwe to reproduce. Because of developments in agriculture, solahite, and technical in technical probabilities, solahite, more disobsets are prevented, and note papele are capable of surviving Death rates during the clineal more rapidly than have birth rates Great How should we wave the notational pubetween that and death rates?

Bak is no difference before both or closed of the test discourse both on receive and record to an originate of the set of conservation of the set of the s

Creating Significant in reality as closed applaints in the analogy of the closed boot that there is the advanced in reality patients? Saik Thin earth is both an open and a long as bits and characteristic to long as the sum continues to early that protoches the sum continues to early that protoches the sum continues to early that there the comparison of the insecuries and have the comparison of the insecuries that have the capacity to existing unformation have the capacity to existing a protoches the protoches of the comparison of the have the capacity to existing a protoches possible openation (comparison).

Ome: Still with yeall calls there is a homogeneity of individual organisms, which is not the of human beings.

Solk: Well, of course there is a marked diff is not only a question of homogeneity, the method of reproduction is different, and the two obviously differ in a whole host of other ways Novertholess, when we speak about population chatameter there is correspondands in that the laws of nature apply generally to populations of large and amail orcanama, in both availants- given a limited there is a level beyond which a population can't watend. For the yeast culture, we're main tak on about the party to capacity of the outure medium or the number of orcenterre that can be sustained in terms of amount of wasle that can be talevised. The same is true for human populations

Onse: For the sigmoid curve to be valid, humankind must act as a hortogeneous system is that not so?

Salk Human beings don't have to be idenfical or act identically for papulation to level human papulation boards or borrogeneous However under similar corumstances, people tried to impediate and in amiliar weys. Those in developed countries behave similarly to one another end of literativy from people in developing countries. After part in history trough to site population.

growth and to solve other problems will require occeptantion and the perception that people in different parts of the world share in these problems and solutions. Ideas about survival—or perceptions about what is in man's best intervest for survival—are undersond in chairse.

Crevel: One can't have it both ways Humans cannot act in a way that promotes there survivel and simultaneously act in a way that ensures their dreatworkph.

Salk truly a just put your truger on an exsential point. Human banga have the capacity to reapoint adoptively, but they caalso respond maintaprively. If they respond maintaprively this could must be maasses the capacity to respond adisplavlay and to behave as have other living systems that have achieved long-term survest.

Over But there is so much exclence that human beings have behaved maladaptively You could have an antagon it writing proceety the same shot of book, making

Given a limited amount of space, food, and resources, there is a feel beyond which a yeast population cannot expand. The same thing is true for a human population ?

the opposite hypolhesis and arriving at the apposituatio conclusion.

Salk Yes I accept that This is an etempt to counter that point of wew This is a deboerate allowed to pessent the other side Owen The committee side?

Balk ites Since we're tslung stocut the luture, n'n snytocity's guales what the colcents will be We contary have the copbility to cleatiny ourselves. But in saving that its sites which our capability to world the catastrophe. I'm drawing on biological analogies to say that it as kappether possible that we are programmed for survival world for contrawal analyticm.

Ottel' Flogrammed*

Bek Programmed in the series that we have bein deposition will can be destructive and we can be constructive. We airs writering our time the deposition of these two tandencies between free with an exist of these behaving indepletely. The's where the control occurs, between these registrations and these we forces instruct as this important control table is a charge part.

evolution. We need to correct the errors that, are taking us headlong toward cloaster.

There are two different belief systems One says that we have it within us to get beyond the current state. The officer says that we do not have this capacity and are going to destray ourselves

Omst But its a learning tath lash in the A peson a other an optimistion a possimist. Your hypothesis is the scientific underprining for the collimitatic view.

Sake them is it regretes a nonitor optimize that masters obscured acknowledge the possimized was and any training matching any source of the second second second boologies who recognizes the way setsingulating systems — I third here a good chance that way is known that build had ear evolution. If this hypothesis encourages and watching systems - I third here a good chance that way is known that build had ear evolution. If this hypothesis encourages a lot of watchild here completes.

Over You make a clashiction between developing ocurrises and developed ocurties ity the year 2000, developing ocurties will account for eighty percent of the world opputation, with a continuing growth refer of 2 4 percent What exactly does that growth rate mazn?

Sate Actually, the proven rate in the dwaloping work as a whole is presenty 2.4 percent By the year 2000 if the projected to diop to acruate Bennoent. Acrown hale of 1.8 percent means that the population in constant with the year before 11 a imporgrows, when the constant works the hearth of added each year increases. It is the same with the compared infinite works.

In a datation where the world population is so billion. In B propert instead, would mean the addition of one numbed would missing the addition of a specific the tight. The growth rate, the faster a population do use Brasil has a growth rate of 24 percent to population will double in termneyyests. Officers now has a growth rate of about 32 percent, its population will do be in High-origination. All others have be observed will be more than one thousand watchs of object in term.

Ornel: These statistics of tapid growth in the developing works, coupled with the laveling of the population in the developed world, finghten many people. Why should the not lead to a hysterical attracts in the developed world?

Salk: It's for this reason I liet impalled to present the big procue. I wanted to help reduce the hystella. We must begin to understand the forose at work, recognize what we need to do to amoif orate the profilams, and adapt ourselves to the new counistences.

Ormat: These is talk in West Germany: for example, about a moski imperiative to produce more children, to hold off this "Ide" of the development world is their hysters?

Salk In a way yes in West Germany the



you can delete the radio and install Jensen."

betwee know a lot of new cars can be ordered without their factory installed JENSEN price? It's called a "delete' option. Investigate it After hearing Jansen® you'll want to exercise it

When it's the sound that moves you.

very alouty at a rate of 0.2 percent a year bath rate sightly so that baths and deaths Germany can hold off this "ade" in world enormous increase in population in other

Orne. Theirs the bysieria, ext] it-the perception of a cleatining population in relation

population crowth in the developing pourtries is to a great extent knkod to the econamic conditions and the poverty in those

tres that are responsible for this state of people level to compensate tor a lack of would be to improve the quality of human 102 CMN

Omy What would be no asful about a

mently help to manow the global catchslowing of population growth

Ower Then there is nothing magical about

Safk There sont anything magical about the state of affairs in a stable population

I its population growth is slightly above or beine zero. Whit's important is how each

Own: Of course the population curve is not the only graph with which matikand is mample, there is the so-called thate dehate With Imited procuroes, the purefuln

come together in order to develop strate-

earth is not really like that

We do have a crowing population, but we cooperation in the use of world resources. prease corres with improvements in social. that's something else that doesn't cost in a

curvers a pathway for evolding, or atteast

Gessi How does that relate to population

Salk That's the issue. If we think of the pention is going to continue. It's going to **Grani** What if I in the United States and I

of resources, or of the world's flood supply, to the developing countries? Doesn't that make it an adheolor situation, such as we ve never hed before?

Bate wait in the interface targe, yes, we way owned to conversing Statistical target page see data is both/and statuster. Where we take tables surveit - about the owned loading of the on Earth, in which we all have an interface table tables and one of the isothesized statistical could be all isothesized in the statement provided the isothesized statistical could be all benefits both to the developing countries and to us

The second contenence of world leaders in Canada, Meason is some evaluations that we may be gatting beyond the initiations of the entwork's protection. We beginning to recognize that evaluate the attempt and work in Canadham and a the second second and work in Canadham and a the second second and work in Canadham and a the second attempt and the developing counties.

This resolution of a upd screezes will are quire an accorrections, and adigote assporters 1. activit these is less evidence together than of the observice prelocation of the other than a the observice prelocation of the other to a bondy emerging. We are write to make it has poned of dynamic scatfactority will have forwer now expletions. We have a centrary in which is possible offer. Which were a constrained a possible of the populations.

Safe is would be quite different. The econony will have to adjust itself to a work in which numbers do not automatesty increase to constitute more maniata. A work in such as that will change not so much in numbers as that will change not so much an numbers as in quality for the workson will occur atthat time but adjusts at helevel.

Ones A world that is Swedlen, writ large perhaps?

Salk Sweden is only one example. There will be many different ways of adapting depending on conditions and cultures in different parts of the world.

Ornel Could capitalism as we know it exist under those circumstances

Saik I don't link any accal, potiesti co economic system wit lernian unchraged Allways of hinking are going to othrough exclutionary charges. This applies to both coptability and occasion in lose a read for scottministerior in both sales. We rend to sea Sing's in both short a time timetre income control in both a time timetre income control raw tomese or magne who me common traw tomese comesciones.

changes that might take place? Balk. You can already see some of them in

offering workers profelenancy plane and partial ownership of a company it gives them a vested indexest in its success, as well as an added responsibility

Owny: A developing world with eighty per cant of the earth's population, higher liter



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Scholl designed them to support and strengthen your pinels. There's one for ankles,

ons for knees and one to elbows. Each made to esse pars and help prevert swelling. And to



acy rates and greater economic strength will demand more of the world a resources. Even so, do you say we should continue feeding people and improving their medcal care?

Salit My philosophy is that we should help them to help themsolves. In this way we alike them to develop and not to be dependent. This helps reduce the burden on the world as a whole – in a sense reduce the negative by enhancing the positive

Understand that at this point in history these not so much a moral obligation as it is a pagenatic necessity. The well-being of people in other parts of the world is increasingly linked to our own, and our own likewase is writespartic inder the teen.

Onno. Even if the result is to got them on a teach table taken's comparison with ut? Salk Directly caliborative and cooperative. The difference of collocation does result we can make adjustments in our consumption and course of discusses if it benefits us to do to Them are courses of action that can be beneficial to both addee Com. That becames that here's plenty of welft to go around.

Bath The developing works has a gear deal more to contribute both for its own benefit and for the rest of the works. Dewelgoing nations can begin to make economic and social contributions if the orheath and wel-being improve 118 in our basit means as well as theirs that present differences be miggated Losia the attenative: Suppose we continue with two year' Ney atclude: We are constantly going to be in a writikal state of wer.

The secondrive help the sist of the world become self-sufficient, the more resourcas human and manwai, there will be Other matories an inclusive as greedy a way are in that respect. Perhaps it is our greed that will be abcommodiated with time. There is a need to look at our responsoldnes to the rest of the world as well as our rights as world of banks.

Owner Beyand helping the developing countries to eliminate dreved discesses, do you thank we have a moral obligation to promote abortion there as well?

Sale Abacher is juid one technique You imgist juit as well ask whother we have an obligation to promote the use of condons or the way loop. The important essue is faithing control — the induction of barthmans where that is dearable. Finally, ocritic task being carging of for centuries. In insware that abortion is a persitive assue. I abort want to and inthe and eleater on personal methods.

Ceref In the headlorg rice to modernee the developing which there is much concern about the pallage of land and resources — the destitution of the Amazon ran forest, for easing the - as well as the doshubshold generation and general moments and instantial species. In a sense has alimentates backgrand howeds, and balances at the same time that has human population explosion is occurring. Date the even year? Salk, Yes, it does. What we do to the ecosystem is cond to constitute a limiting factor for us. As we disturb the ecosystem on which we depend for our survival, we will be threatening ourselves. This is a limit back mechanism revolved in the leveling off both of numbers of people and of the consumption of resources. What we do to too in which we re obliged to look at the problem as a whole, not just at one facet Greek Smultaneous with this destruction of reputal apeques is the advancement of antidotes to diseases that nature could news: produce on its own. DNA research is natural apeques at the same time first we

Balk it can be But we can also use this very success has created. At this point out mornary has to work to check the effects checks and balances on a higher level

Onny: But who is going to introduce them? some who have a sense of responsibility ally and collectively I do not see one individual calling the shots I see no single captar of the team

Only By team, do you mean the scientific

Salk: It s not suit the scientific commutity it ife noncoverfists as well as scientists, ers, workers, managers, Inwyers, Inw

Generi Woll, E su poose Loopsulet musel' a whether the scientific community develops

Salk To be informed. To the extent that the sure that this information is used wisely

Orser. Do you think this check is coercore now with DNA research?

Salk I think so. The research was over process. We ve had an opportunity to see advances. The challenge is to evolve incr

ues an emphasis on quality instaad of quartery on collaboration instead of compendence, on consensus insidead of power But you have not focused extensively on

Why shouldn't we now them epochs. your first epoch with the world bent on penflict and competition: your second.

Salk You could very well do that We deouts the to some extent in A New Peakly. the book my son Jonethan and I put todeal of tension, conflict, and flux. We could out the present period in some perspecvalidity But I see such a hypothesis as a evolve beyond the present state. These values and attudes and stralegies of the

6 Any kind of ouclear exchange will have unimaginable catachesmic and anocalyptic implications. We can't tamper with toys of in that sort of saber ratiling.

new age will pertainly be concomitant with

Great. But what you're traiking about is such Salk Yes Lagree That's why I talk of the asbeing of evolutionary significance. We are to adapt and to live under new conditions Great 1 and don't take a concept of how this cataclysmic change is going to take

Salk I don't nee 4 as a catacivatric change it is an evolutionary change in difyour own ceneration as companed to your father's. You were born into an eronaly different opportunities. That makes for different choices and different bahavor

perfectly appropriate decision. But the cause of the unique nature of our time. such changes are guite precipious. Fo

Ornal You wrote in your previous book. The Sarwhal of the Wisest. There is evidence that a new transformation is occurring in the prounstances of tuman kie, previo the not be taken as the only basis for redoing history of man is no longer valid? Salk: On but it is

Sale No. What occurred in the past was valid for that time. But it does not necessarpressures are quite different now than they

see as artipoor and intensity competitive Salk Well, you could say that There as a tendency for many people-not rust the forward, to look to values that may have what I call this new epoch. In this period of transform there a much uncertainty. So it s natural for people to try to find values that work. For many the first place to look is breck to what worked earlier before starang Owned So that one can view politics in evo-

Balk Absolutely You can look at different philosophes and dogmas and ask the member. "Does this particular phécsophy antevolutionary or devolutionary? Great Wouldn't the cynic sale. That's suit

Salk Gal it anything you like. But I would have to analyze any liberal to see whether adaptive. To be adaptive, you have to be both conservative and it benal. It is more imnorthant to evaluate collics and philosoplags in terms of human well-being than in serms of traditional left/right (beral/ conservotive dichotomes. There is a dele-

Occor for President Response associated emphases on concensus. You talk about the tomb is getting more attention nohi now Salk Thots true, and I think it is perhaps

Owny But we re not acting as if we re concented about it

Salk I think we will We will be found to mous economic and social costs to the

MR. CHIPS

CONTINUE FROM FAGE ??

world clearn't said still long encough to be dissected. Even it it dut in it is too large and complex to clearningle cause and eflact with any certainty Green all this, is computer model is a dharm come tale, a working microcostin of the economic unvine to food around with

But amodel adome is not ancugh to make secarities (research is had to be sherred Haintin upgent is involved. "No don't ystrpuch a turther and latities model churril out, Cason-explains in addition to model, his time employs 25 Jul time economist in in National Texaciating Coup, and the lesistate ultimately are made, not by the computer but by the shift.

Those an an bind dan't work, "Eckstern asserts Judgmart corres in interprinting with they don't work seriesby Waat was a data errors labor strikes, bod weether, changes in the structure of the economy? Waat suite government claim? Most successful forecasters have Wastengton expenence."

Do you also need some kind of infutive atality? Sure, Eckstein answere What you have to be is a foreet economia mit a "regri economia" You must have a modell in your head of how the whole economy henge together it you don't even with the mast wondhinkul model in the world you. probably turn put nothing but nonserials

So much to the contributers auto of omreactionso. Burn is model must be helpedalong, what exectly adves it do? It imposes description and consistency on the thring of the staff. for one thing, and it acts as an extension of the controllable, and it acts as node: control of the controllable, and it acts as node in and we can a formaout the down seeminght to do manaters, they simply overraid all and where in turners execution -

Bearing view new close have spit the world decorate moting. Uher a more many two of which regore DC, consulting the same to some highling or DC, consulting the more town highling or DC, consulting the more than the same set of the same set of the performance and the same set of the same set o

Both theories were designed into Californian Caremont Institutes model which Stockman and other Respin advisers drew on in charting the Pesidents economic course Cr so John Fullerige Clavemore to president were to cutodoin



can check this out. Rutledge has lended off any independent evaluation of his model by keeping its dation secret.

Building also beloves in another lived in econometeros small compare models the mestic one big advantage of the small model is its apity. The large models are appreciate that amply confirmed that enough to changing conditions. They are interesting to changing conditions. They are interesting to changing conditions.

Evens now uses a model that is much smaller - having only 200 equilabris -then the one he designed for Chase "I dont three the human mind can about more than that," he successits

Classics, of American Express agrees The large models have gather to huge full in one generation in any originatable can whally understand that. His own department has designed about 20 models for its our use they are small How small? They be equated. The optics "with maybe two variables."

One areas where him models have proved aspecially successful is foreign reachings. A recent survey of 10 currency forebastics in the final magizone Euromony fund that smaller models often produced foretasts better than the bigget, more complinated ones. The best were the stepleequation models.

Barked test was a New York company, Predex, which has considerily besten althe big barkes in obtaining accusacy to founder. Dr. Charke Barrond, boasts that he has newel taken a course in economics He PH D is in peerheave

"I believe in simple models, Renerad says, "We use a single equation, which singly status that the velocitie clanication in the second control of the second second and domand for both. Every guerts we write the model with the very beat new dals, and wery right we obtain sinite projects to dool that the structure of the system works channels.

The Prodex forecast is usually - 70 percent of the time - on the highl' side of the correcty forward market minal as to say in makes money for its coder of offents, a list that includes Guil Oil. Xence a else of bonks, and even the servery Wall Struccontrodity house and money trader Salomes Reches

But orrol is not always beautiful Predess limit lowcast wrongly predicted is 1975 new in the value of the dollar the fail dramatically) and Predex's Canadiancollar predictors were poor unit rearrily when the company built a special model for Canadian technomistic

Like algobants weating first, Eckstein and the other bancalant who use targe models failly reject the other to yernalize rade that then there as insufficient of outstated. If the big incidents' forecasting existing considers. T with it with bitar —there are there poor dispose

First, the fuel on which the models run is impute The raw data ted to the models are

Contracts and our Seliger 30-200mm scom lang. I better because you run aroun to compose the shoir

SOORNE STATE TO A STATE STATE AND A STATE

CUSTON DESCRED LENS There's may be sense popular canase made Conce, Missila, Nikon, Olympia, Peaks and scient Crosse electrical close upo seal detail shots: he subled perbasi monut

> COMPUTER D'ITEN Rere secté plane processoi et processo i 22 alemant construction, nucleosand; all the family pasting instrume, you'd espect al Solapor, plan se aphenizio provi

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instrui mon, lorus and many sportborn, all while in worms rour eve in the sales

> stams up. "No one knows the luture on God. And Hels not in the business."

As 1992 begin Oten asked for top economics ferensiting time to protot global and inflator in the spring use immer particles of the year the disport his obscirrar will hit be disported where the Contineore Department means the weaks on the backhild of the merchifologues the weak in the backhild of the merchifologues the site of the backhild of the merchifologues the weak of out out the Annehilter of publishes evented focus on

Convolvently for the laws accurate wears, this is not the mind of the second particular Further revealers may follow in year or more ther Last year the GMP figures in other winther last year the GMP figures in or the winther discute were radiauted in accessibility all wears interfailing of the models (a contained on the relation of the models) accessibility propher to claim that the models pools, always from the relation of all maccessibility propher to claim that the models pools. Users and particular

Process numbers are not he key targets of the model locacasters, however Most argorithm is the question whether they accurately glace the turning parts of the opnomic cycle when been begins to faillet or when rescuercy gathers stream.

All the firms lorecast a decline in cutput during the first quarter of 1982. According to these figures all are expecting a turning point in the spring when they expect Americe s economic growth to teams.

Polecassing Firm	(Annual rate in percentages)	
	April- June	July- Septembe
Data Resources Inc. (DRI)	+1.5	+5.5
Wharton Econometric Forecasting Association	+23	+4.7
Chizte Economotics	+3 1	+4.7
Merni Lynch	+4.2	+6.0

	Inflation in Unixed States Consumer Price Index (Annual rate in percentagies)	
	June	September
a Resources (DRI)	+6.6	+6.9
artian nometris scisisting occialies	+81	+7.9

have a construct abatelog, which the tech oral government is considently rewards This a terteendous fructiation cave Ecosien "Every year, when they restation before we have to resolution the model at termain dous effort and cost—ando the whole thing all celef again.

Second there are the 'expension varisible'' input data that can't be derived from pair statistics. Policial and serve times even economic factors can only be guarand at 'We may break cut' Anto of producers may name prices, federal spending may change: the money supply may reparate accontact.

Theo thirds of our error knotwes doping out what Volcker is really doing what Sharkh taithen is ready up to " save too solin. That part of the error is irreducible.

Texel terms the shifting structure of the scontence world. To keep piece with big changes, models have to be continuelly mergynered. The suddan ascendarcy of OPEC: or Prevadent Resigns is curtained. OPEC: or Prevadent Resigns is curtained of the welfare rolls, to core just two esamples makes is which new economic bell cores.

Unquestionably the less stable the real account: watch is, the handler it is for readits to project its path accountibly Gweinthe current increases in occounting stability of moort years. Existen considers it a minvelose achievement that forecasts have not paths domaticable with the Utmethy is a



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Can we trust these fugures? Noise, the comparisor of it all inside that model storeraining on the which had been ruscessful, and its pering been. "When it alread both years ago. If have suit which we have expected to do this well. To project U.S. food production a year whach, plus or minus one or two percent on takes at hange, its extremely security. I levik.

In 1973 we know at workd receiser of stout the right order of magnitude as toom as the oil ombarge was enfrounced, against the contention of Prosident Nator in 1979 we get the right movement in real GNP each guidter in 1980 we lide forecast a lightweight toomset, and we was either revel. Tkins uses intended.

The operand operand "waters the performance will imported, on the mproved surbar Kien is doubth. For one hong here is the podelen of the invested of base, days by the Commerce Department Ministration of the underground economy. The parties are interested to obtain avoid the underground economy and parties are interested to obtain avoid the underground economy and parties are interested to obtain avoid the underground economy.

Paul Samueton of Massachuetta Insttute of Technology who wrbit an elementary techoek on economics that made them a millionaire and who won the Nobal Mamonal Prove to economics in 1500, thresh that begaalate a seane or later will come up against a well of uncentarity a limit bayond which they will be unabled to follow entor

They If reach a borner, stong the lives of the physicstic Hexenberg Indeterminacy Principie I Semurateos peckdos: When you try to guess next year's inventory investment for exemple-you have to realize that Got Himself heart must be primiting yet

Model forecasting may not have reacted that point, but Semiainent furnice that even if thes the current level of inaccuracy is not intolerable. It's an alreasy nather than concort if here also says that model have contributed much to the reliability of forecasts. The computer mathetic would have to be rerownited if they chappened.

Experts in the business generally reem to be optimistion occurs offer him accurncy. We may not be able to impose accuracy may much. Keen says." but we should be able to give more information, over a long time, with faster reporting and a wider time of watebox.

One thing that should help is the staady expansion of computer supatifies Not only does the mean that the quarky of the data—the raw economic statetics—that models use should impose but a also means that the models will be able to hertic and computer more your information

It so, economieno modela may come

closer to satisfying such critics as Watsily Learned the 1975 Nobel Memorial Przewinter in economics

The end of neal-thes-systems approach the envisions is simably largely in proce in Norway Lecroted asys. 'Deleve is or not fleey pat held what are bahavo with bit the last census there. 'Nu know witry' Because the data row flow in every city. A completely computersation system absorbs a dairy flow of information or lectroslogy, demography, monetary, operations, and with every complexity.

Such a setup naturally cuits a planned, socialist economy better than a freeomerprise one. Eckstern reports that a Soviet delegation visiting DRI was instally excited by the polential application of compare fectivology to economics.

A high level Russen official asseed Euksian whether he could gut 50,000 acmonemic units on DRI scomputer all internating is real time. The Russans apparently fixed studied their accounty into 50,000 fact, takes and other productions units and they deserted of connecting them at to a contraticomputer. Than the plantees tak, they could really no the economy.

We had to tell them that the current technology allows only two hundred units on the computer simultaneously." Edisten recalls, "and their titly thousand was quite a law years area."

These are even suggestions that economic data could be improved by eosial photography Sty contreas new used to monors Soviet military movements could study the volume of U.S. transportation testte or agrouphial crops.

Even now the growth of electronic transactivities, from supermarket checkout to check cauting pormises beater data input for the American models. A captiless oconany, where mat transactions are electroncally performed, mght provide the same land of instantareous picture of the oconony where the alter super for a

With this potential new complications array The prospective CRI as thencelous of this computational economy would be fanfaulo. Eclation believes DRIs forecests could be rackedly improved if Texshin were propagated to tap critecity into his offents' own plans, say, for investment spending

But there are service instruct prestrum. Do you really went imper companies to pool their information into a computer? Existen asks DRI leaves it to the government to decide because you have to ask yourselt whether you are tempering with the vietter. "Is this fair to small business?"

The current outlook is that econometric models will be important tools in forecening but will not magically replace human subment

Recently one of Semuelikon is collesgues found him reading a computer printeet and asked him. "Paul, is how many yeas will is computer make you obsolve?"

Since he asked Samuelson says toki him "Not in a hundred warm "DO

Run Abouts



Terries to the Guil Stream some of the warnest water north of Florida amputes next to bluts, benches and and damas Pictureszue saling resumons lone on up



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Horton told of her abduction by kindly aliens who took a prece of her leg back to their world®

ANTISMATTER

trang Dake Kitam trang Dake Kitam bit reserved off her 1973 - He arrenged trom the vehicle or and trom the vehicle or and trans and several back turtinansta tack turt

applies of the myste-



cerrenti denomia terrenti cerrenti denomia della l'Arra della Maria della Carla della dell

UFD UPDATE

lous time gap to artist Budd Hopkins, who had been taspristed by UFOs ever since he spotted lights in the sky sum his Cape Coshome. Hopking persuaded kitsum to indergo hypness, and in the following months the young han bild the brave store above.

Seeve Kilbum (rock his wal nume) wilk to be the find of namy UFO abducted i interviewed by Ropkins and ris issociate psychotherupist Aphrodite Camer In his new book Meaning Time Hopers cities 35 similar ebiductions and he assignts more herw been mousanos more and he assignts more herw been mousanos more and he assignts more herw been mousanos more

Because of similaries in dicents of adjuctor stores reports has concluded that the rational are being pergement by a single rose of extratementatic. More than 80 percent of frequentier were obtained to the single of by "dour-fact-fail humaneds with huge heads obtained by store address the mouths. The markety were been into chambers, litted with pessi-coored as And most were inscende to balance and become of incentific century of PairWut Gematry Then under hypotoxis. Horton total of her adduction by stens who took "alter ty pace" of her log back to their world. Hopkins has interviewed 11 often double-toduction victims, each one, he say, has a perfectly streach score on the upper part of the call.

We have the "estatementals" trad to conceal them cellulation? We may be writely as a large-term study of furners. Hopkins suggests "The alreas could be tang of children with monitoring devices and amoving them decades their. The algo beyong his lever may be arraighment to extend the study beyong his lever may be arraighrent. It is extended. These of the rule about one comtage standards with they had organis, specularity owner has it and end so calced on suby.

While other UPO researchers are assonated by Hopkina a theorem it may be impossible to verify them To protect his subjects from rickovie. Hopkins has kept their true derifiers under lock and kept — AL FURST



MUMMY'S CURSE





STAR WAR

Adversament used to belevel that the galaxies word extributed more or less werely through space. It tai lately they verify the galaxies ansent. The prantosady of these ratespaticity here to costed next the construction bodies massionals more that 00 - siloning panet.

Active by the where a boot time on ourse's presentate about the valid a neight scales intum on general cith. Schuessen chilging/, came up with a fractione with the power of annihize a social anythin annihize a social anythin anything the school and our superior landers restricted a chem reaction that power lowers patients and our superior landers and our superior landers and our superior landers and our superior landers and our superior landers.

even a less than support orwitzation, ocid ingger such a cataciysm he main bans. We could districy the earth with weepons tows on trawing boars or alrestly -ust possession. That -ust upositive gravitational ust ance of the solar system, and the chain could go on from there. There is no telling how far the destruction most solarid.

His scenario seems upo tra questioning. One of the richt & discoverings, aninterment Paul, Schedher of the Center for Astrophysics, assents that the gap may not behavy watchnit, just popular which by palaxies is not drive astroby palaxies is not drive be seen. And Schossie in homefit spocuraties is train them at hope mass of anite mattere was more thinked by the appendiments astrophysics.

The those indees docend or special conditions that may not have existed at the tormation in the universe As terromains have yet to accept any of them. This pretty deftion is once you will be one planation more before safe that inder defails war Schuessels roombudes don, thick was can note the the ont — Gives Devise.





THE JERUSALE

Note: Dispersion was been applied a lower of the acon of the negative the acon of the negative been applied to the second second been applied to the second accusation the originally accusation the original accusation the second be than a second been applied as a secon

Accounting to the tours beginning explains. Out Joursalem was respect shapped and interchind from easily to work. Yai mod em Jerusalem (above) ruis militaria to soch. It is Ean burgh the notes that tours from easilitaria easilitaria tours from easilitaria easilitaria tours from easilitaria easilitaria tours that other that bulata the a real promittoor.

And according to the ook of Deuteronomy lerved emistic opposite. These has a white a paraloc on the highest converses held todars Jecusiem " as a Stochards, a these any such geography. Austo the weet of Eontraph. However, here is a mountain cahed here passes and a casto Moreover. Anthr is Bear one exactly like a lion inteceding the balance descripion of Jecusieham as the and where the interpret of the second conversion of Jecusieham to the second to the

Finally says Stephanos, despite references to the Hoty Day a matchy waterwear modern. Jerr, say this is more hair 35 million has been the port of lutha – hardly clase by ancent standards Edin burgh, bowear is a immer Variable, howear is a immer haterestingly enough is named access

Stephanos cialms that Jenuselem was moved to the Middle East around via 342, when Constantine the Great departed that a site closer to home would here him control the energy Christian ret, port fur political instants, he had the Hebbiev soribe Exangent te the Bible to over up the move

HEITIGRA WEITTI DUD

ANTINNATTER



LOVE MACHINE

Friends say Wilkem Waldron lost his job at Wal-dat Engineering in England because he fell in love with a computerised tiams-outing maphine. The the one above

he vectory rule. I didn't ove the machine i he says 1 just found if extremely msensong. Futurisco, if you like As a precent ma chartry. I was ferbands

Waldson explaints. Every morning before work i'd take the machine by the hand and program into perform cutting maneuvers. When the machine tweets When the machine my own Drain.

But men he Weldeall Company switcher mechanisto Londen tor composition upgrading and Waldrion rehised to work. Despitie our offer to lid him operate the consentional machines asys Wuhdlab Environal chelo to John Himsley, despite ou promise to retain the mothree de scentifica. Walcron stayed home for ten months without pay and was finally front

Sust call me stubborn Medicin says: Bat no other machine can take its place Weldron, stry three, is still inemployed

Pater Rand rone

Man are most api to believe ehist Way feast on densard "

JFO WORLD RECORD

The Guinness Book of Work' Nacarots should not warbox Hancy Ruitedge partmant at Southwast Mocount State University Nels s seen 158 UF08 - more than my other Southest

Is all began in February 1973, when the residents of Pedithert, Massouri sav mystenous lights howering store that homais. They thought chalates from oute space were about to initiate and so they started carrying guins. Foos named, but quile skeptical Rutedge decided to structegale

Compare Heat man reserve the same YSS under third lywing objects with his own eyes and his became geywhered that many of then were a charamstrail ships Based on his unmercus sphrings. Rutadge wrote a books antified Region Admin Goadge, First Scentric Net Study of UPO Basesconter

The book, Rutisdije ways is memoral to schertidia, who want a botter glaspio di hermany (special UTOR hild exact Tor example). I division glassic three schertidia, and discher the schertidia and dischertige auf and sample (EC) auch ya another site change points and wannik i Kohange points and wannik i sistericiqueal point of wee match and schertidia point cau autobia strategi balan outch doen to bonything outcomorg might balan

The book also suggests has some UPDs are applied to US mitistry Ruislage charms hav Ar Force has asked to see some of his unpubliched research, incusing protographic But has and sumendoining his data. He threak his should have and terrendoining his data. He threak his should have and the hinks his to being followed, lob By wherm Thailinght both the subject of a nother book.

There were man from the sky in the earth in these risks

- Hebrew Book of Light



SATELLITE SEANCES

Matchell McLuhans Interrythal Terretorum is the message may alks on new meaning when Statikits Shandod appears on oble Ty hes summer Produced by the National Spiritualist Association of Charches and Weegarphy Studies of Log Arguine the program will laboute bear ces in which church methods is show a communicate show a communicate with the deald

According to Bob Kaper of Videography spinitual kits have bing tosened Hollywood is concept of the sense: complete with condisa and stroud of figures loading above tables. Now, however, they are furning to table size in hopps of regensivnal bank lear provide to

Today with misst spintualado wer socyhole, die netgen seens to be dyng. Bat Triespozue Roder Says could make it one of the trypes seligions mithe world. Spinualism ha e psycholasma between spins and people. In says it Norman Laarhad the full opins and people. In says it Norman Laarhad the full opins of the Catholic Church Livegukth hande som — Raken Basch **ORIGINAL CAST**

CONTINUES OF ROM PROF SY

"Agein, "Whitten said.

Well, I am damred

"No, squrei God is very metoful, and the biasaud sants Gathenne and Margaret, who speak to me every ----

"Net Now you sound live you're spating with him! This is not some damned wighteerth-century drawng-some impattant Joan absolutely means if The voters are absolutely lead to be You must do it again. Barbara, "bu must the into the religious arroughese of your EBH You are not trying! Do it again."

Batcas bit her to 1 saw Kellig dance fromher to Witsten, and I ouddenly had the improvision-1 don't know why-that they had all been at one another earlier batcen had arrived Boatching beyond the usual one-batcal hubbits way going on here Tenspon, unmissikable as the small of arrive, ruse from the three of herm

Well I am damned '

"No appine 'Cod's way merciful, and the biosoid sames catherine and Marganet, who speak to me overy day, will interest for you. You will go to paradise, and your name will be contentibleed lotever as my with helpen".

- 'Agan," Whitten said "Woll, I am demned."
- "No squire! God is-
- 'Agan'

"I need to hear only one word when it is is bed as theil And what in account hell is that the fick of the west supposed to be? Joen is not a discus thrower She must be—" Whiten stopped dead, staring offstopp

¹⁴ All tests upsured with his had cut himmail office stands down ill holighthe was having an attack blacme kind. This obtain his have we high sittered back Back we high himself was and smat, and then I heard the series coming closes landing on the nottaining of ill havis cover hom the direction of laminer – which was, I auditedly remombered, the only hospital in New York that would do 1318.

A very young man in a whoe cost humed across the stage

"Wr Whitten, Dr Metz says could you come up to the coptor right away?"

"What is it? No, don't hold back derm it, you absolutely must tell me now! Is it?"

On the young technician's face professional restrict battled with set-impotiona. The lattick with helpid pethaps by Whittan's sezing the boy by the shouldkers. For a second I actually thought Whitten would shake him.

TS his at theelity is We were tasking for fitserist-century ESR. Ite you said and we had the noos for upper class for the lades in wating and at we were gatting were passance or non-Europeens or early the own. entridhood deaths, and then Dr Metz deagaing rout as mach as possible Witdeagaing rout as mach as possible Witmus and leader that he was hearing has persons Dr Metz would share here hearing has persons Dr Metz would share here of builings and diverses and cowlet and shall be personable with would share would be personable with a data the meta eugency commitment with one we was and Dr Metz personable with a data the meta eugency commitment of the west and be for the personable with the data the share and the personable with the data the share and the personable with the share and the meta personable with the share and the share personable with the share and the share of the share and with west in the share of the the share and where we

Whitten lat out his breath, a long, exploorve sigh. Kellig leaned forward and said Was

"Joan" the boy said simply "Joan of Ard."

It was as if he had should, although of course he had not. But the reme hung in the dusty silence of the empty hoster cacled and underlined by everything there.

She behaved with the gestures and attitudes of the world as she believed it ought to be, a place of rational individuals with enough style to create events in their own image.⁹

the heavy vervet curtains, the Gust motival the ark, the waiting shocks the clouds of mothike extors, or memores of actors, in the varius. They all existed to land weight and probability to what had neither. One in a million, one in a belien

"Is Dr Metz sure?" Whiten demanded He looked suddenly volent, capable of deaseembing the lectrocen if the histonish wate tod sure

"He s sure!"

"Where is she? In the copier?"

"Yes

"Have Dr Metz bring her down here. No. 11 go up there: No. bring her here. Is she still weak?

"Yes, sit," the boy said

"Well, gol I told Dr. Metz I wanted her here as soon as he absolutely was sure!" The box werk

So Withlen had been informed of the positivity earlier i looked at Barbarn, suddenly understansing the lenses on a tage. She stood amling her chin raised a littleher body very straight. She looked palescere tack of lighting, some motionless tactress in her shoulders made me three her an instant that she was upon to list. but of ocurse she did not She behaved exactly all knew she must have been witing horself to, wailing cycleby through the Intermetale tame until Jasim of Are should appear. Which hogoletic Kellig lounged, his ayelids lowered harkway. Nether of them indext all faithans.

The tachencium and the historen welf-ed cot not be tachencium, each with the historen welf-ed ether eldow of a young girl whose haud wise basicaged. Even now it force in (dfb adhamod where) elementer mang ballway or doon of Arc, shor was as welveard, demay plan-taced girl whomat disc been demay plan-taced girl whomat disc to the disc disc.

"You were Joan of Arc?" Whitten asked He sounded outously formal, as out of character as the can

"They, in the event of the second sec

"What's your first name?" Written said

Whitnes winced & stage name?

"Nos lont is prety?

"You must absolutely use your real name What acting have you done?

What," said Kellig slowly "is your real name?"

"Does it methor?" The gri's smile vanshed and she pouted

1985

Yon Fractard," she stad sulkly and I know where the "law commercials mostly" as well as the supersive ESR audition had come torm. Twice Freedand, of Freedand Computers, was a heater backer for he own embanemiati, mach as I was He was not, however a co-backer in this one. Not we

At the Friedland name. Keilig whisfied, a low, impudent note that made Whitten clance at him in annovance. Barbara still had rot moved. She witched from mently

Regat your name. Written said Absolutely loget it. Now licrow this play is new to you, but you must read for me Just sead cold, don't be nervous. Take my script and fait there No-there Jason, due her?

"to werk me to read Joer? The part of Joar?" the girl said. All her assumed sophistication was gone, her face was as and looked away not warring to like her "De welke Gran. Selan and Watten De welke Gran. Selan and Selan

"Oh, really, Greg," Kellig said. Whitten ignored him

"Just look over Shaw's description there, and then start. I know you're cold Just start

"Good morning, captain squine," she began shiely but stopped when Barbara crossed the stageto school a benchmeer the wings. She was difficming a small fozen amile. Ann glanced at her nervously then began over

"Soci morning, capitain squ'ine Capitan, you ann to give ma a horse." Againt afte Sopped: A puzzled look came own her loca the skimmed a tew pages and her closed her syste. Immediatly it through to the real Joan learning to vocces But this was the sail. Joan. For a morning the slogseemed to fisial in fort of ma, a meaningless collection of lines and angles.

"It wasn't like that" Ann Friedland said slowly

Like what?" Whitlen said. What wasn't like what?

"Joan Me. She dich't charge in live that at all to ask de Baudhoourt for horse and armor it wash't at all she was more

means, I think What he has written here. Shaw ... "She looked all each of us in turn, training. No one moved I don't know how long we stayed that way staring at the thin ord created

She shambled, nearly failing to her knoss. The histonian leaped forward and caught her. I chart thrik any of us could have borne in that patis, downeiled figure had shall and becaulto paty.

The next moment, however, though vebly fighting to control hereaft after knew where - and who - she was

"Doctor cloch, I'm all right now it's not-I'm all right. Mr Whitten, I'm sorry lat me start the scene over!"

"No, don't start the spare over Tell me what you were going to say Where is Shaw wrong? What happened? Try to feel it again

Ann's eyes held Willtan's They ware beyond all of us, already regotisting with every inflection of every word

"I don't have to feel if again 1 remember what happened. Thet wave of I won't do that again. If was just when if all came rush-

"Pilot pens! You have to hold onto them with two hands."

-Rodney Dongerfield

"I don't get no respect! I make a depasit... this guy's making a withdrawal – including my Pilat pen."

"It's almost criminal the way people go for my Pilot Fine Iner. You know why? Is fine point has the guts to write through options. And Pilot has the guts to charge only 78+ for IT, People get Their hands on it and they target it's my per Soli got no per And no negadd!

That such all, begole go rule over my Pitch Rouse Point as well. I writes which occurs encode with an earlor this line. And is custem if match calls helps way the point from going actuals. So people love it author only Set They should be y

some respect for my

Fine point marker pens People take to a Pilot like it's their own. reg back but was inserted to it, here it i compared it, have the begin has a low or used as the second to be the begin has a low or was a second to the begin has a low or the to exercise the backwine to be against the begin backwine to be the second to be a low of the second to be the provide the second to be the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be a low and a low of the second to be second to be a low and a low and

"I know it al. Mr Whitten —all that really hoppened. And it happened to me. The real Joan of Arc."

"Cospill" Whiten sed and I saw Kellig start. Lawrence: Cospill' had won the Pultare Three for dam't the last two years a row He wrote powerful, desponing plays about the loss of individual monthly in an instautionational work!

"My clear Gregory," Kellig stict, "one does not simply commission Lawrence Cognit to write one is play He's not some hack you can -- "

Writen looked at thm, and the was qualt understand with the damp diet as the only of acaded with the damp diet as the only of acaded with the damp diet as the only of the only of the damp diet. The damp diet the whole point She had been a claps, the the whole point She had been a claps, the damp diet damp diet damp diet the whole point She had been a claps, the damp diet damp diet damp diet the whole point She had been a claps, the damp diet damp diet damp diet damp diet damp die damp diet damp die d

"I'm the real tring." Ann asid. "The real there I'l olay Joan of course."

"C course," Keing dewied He was already looking at her with diskes and I could see with their nheadsh would be the chance upstart and the bit player who had ged steppy hulfes a daws for twenty years. The commander and the Dauphin would at her the make leadsh. Kelling team could only gove smaller under Amthinal threat

"It play Joan" she said again, a little more joudly

Whiten, flushed with his vision, stopped his extratic pacing and acowind. Of course you must play John?

"Oh." Ann said. "I was straid-"

"Atraid? What is this? You are Joan."

"Yas," she said slowly "yes, I am." She frowned, snoemly and than a second lake splaced the trown with a smile all colosiotion and relef. "Yes, of course I am."

"Then TII stocketely reach: Cospirit"s agent today Hell jump as it. Nou will need to workwithim: of course. We can open in wr? cospirit can tape you Nou do twe in low? Cospirit can tape you Nou someone also can do that before he even—Austhif 16. Gets "You're largerting something, aran't you, Gragory in this sudden great waan? You have a contract to do Shew'

"Of bounse I must targetting the contract But you absolutely must wirn to contrave. For this new play Coogn!" . "He stopped and I knew the particle of things that must be in test mind, deadhnew, backing, (Freedered Computers), contracts, schedules, the percentage of my commiment, and behavioring Bartises.

She still sat on the banch at stage kit, half in shadow Her back was very straight, her chin high, but in the subclud light her tase with its faint amite locked older, not haggard but set inelastic, i walked over to her and lumed to foce Watten.

T will not back this new play even if you do get Cospill to write it. Which I rather doubt Stew's drame is an artistic masterprior. What you are planning is a tendy exploration of some flashy technology Look elsewhere for your morew.

Silonce Whitten began to turn red. Kellig

I saw everything through pastel-colored swiths My arms and legs feit III with a dry, papery fire that danced up and down from shoulder to wrist, ankle to hip.⁹

snickened – at whom was not clear in the salence the historian. Dr. Metz, began terady. Thi sare Mrisi Friedland's information would be welcomed warmly by any academic – "

The girl cried loudly "But I'm the real them" and she structed to sob.

Bacters last riter to take my arm. Now she chapped it and walked over to Arm. Her voce was stortly "I know you are And I wish you all luck as an actrese. It is a binlant opportunity, and I'm sure you'll do splenristly with if."

They facad each offse the stream g and who had at least the gaze to look emforressed and the smilling, humilated women. It was a patitic performance, at occrss, an illusion that all Berbaru tet's was a softesi. gazedul warmth, but it was also more than that it was as gaitart an act of style as I have ever son.

Ann multimed "Thenk you" and furthed a metitize marcon Battania tooking lang and out of the frequer. She walked cambuly, chooling har stags har haad high and lips together and selection. Ike a women on her way to a white tummic. I wern i could way their my quarket genture had an immodiate of classitours of lot of a Withman guns. The terms in this and the second sec

Backas senses set on the whore subget Backes we recenny on a way from two whore pour load. Save Photony the two recent set of the set of the uninger the two the two we set virgs on the set of the when we the set of the

Do not assure the literacy trust be based on a runal display of some 1 appaud the public fluoron of contri runs Howert 1 these Socials and exception Howert 1 these Socials and exception are made being and and the fluoron of the decast scripts had been indirect her and the outwrist hand to been kind over the tase of Samr Jake. Backen had been back to call scool to call scools for them to they humiliated callebry is in direct japotter humiliated callebry is public.

Then one hot night in August I arrived at Borberu's opartment for dinner Lying on a hall table was a script.

A MAID OF DOMREMY

Lawrence Cosmit

Incredutous. 1 picked it up and leafed through it. When I looked up. Berbara was standing in the doorway holding two goblats of whe

"Hello, Austin. Old you have a good fight?"

"Barbara-what is this?" I asked stopidie

She crossed the hall and handed me one of the poblets "It's Lowrence's play about Joan of Arc."

"I see that But what is it doing here?"

She didn't answer me immediately She looked besultui, every illuson seeming completely natural the straight, heavy silk
up the hair out in precise lines to curve ment one cheek. Without woman 1 was instatud by all of it. Busions. Arm's length

Why on earth should I?

Because you really could make quite a lot of money on it

"I could make guite a lot of money backing auto gladiators I clorit do that wither

shift did not know how the conversation had

'Are you tungry? There are canapés in the lamp room Dinner won't be ready for a

Tm not hungry Barbara, why do you want me to back Whitten's play?

I don't want you to if you don't wash to the run of her goblet. "Its the best new script five seen in years it's subtra com set two it's going to replace Show s play as the best we have about Joan. And on the subject of victorization by a world the man than Sheetpar or Joy Ride A hundred

It a not like you to be so extravagant with

'And you want me to linance the play for

Sy the setsfaction And she added quely but timly "because I we accepted a

rast had headlined ENLIEN SWA LANDS ON HER PRICE

It's a very small role. Yolande of Atapon the Dauphin's mother-in-law She intribuild on the Daupten's behalf when he was scene bul & has possibilities

"For you? What does it have possiblities in your role? Did you read how much her agent is holding Whitten up for? No wonder

question. Austin. is #? Why do you object to to my choice of roles.

Tim upset because I don't want you to be even more if you play this Yolande with Meas

"I know you do Austin She smiled Domremy?" warmly and touched my chook. It was a perfect Barbara Bahap centure arrows. plete that it promised nothing more than whet takes list on to nothing else, it out off comparing the arrest of the register of the re or, rather, more effectively, since a blow can be arswered in kind. I stammed my glass

of their articulty cut down, the flawless make- on the table and stood up. Once up, howevent litted nothing to say and so stood there What did I want from her that I did not

"I wish." I said slowly "that you were not always acting

She looked at me steadly I know the look. She was waiting for retraction on acceptionation arrealization. Accinicourse after was not to expect any or all, of those turos What I had said was inscrutely She was not acting. What she did was something subly different. She hehaved be, a place of generous and rational indeevents in their cain image. That people's behavior was in fact often unowirzed, cowantly and petty she of course knew she was not staped. Here was a debberate, con trolled chorce to ignore the pettiness and to cost to all of us-actors audence.

6She was going to marry the widowed King Charles of England She was a drug addict. a Mormon, pregnant, mad, in love, clairvoyant, ten years old. and extraterrestrial

press Whitten, Ann Friedland, me, herrable motives concervable

it seemed to me that this was proceeded

Why then, did it make me feel so lonely? acting Imegit -- Imeginthet i'm concerned for your Standing for a cluthin call at the back of the stage while that get, that

Not I will never play Joan in A Meid of

She finished her wine. Under the expenswe cown her breasts heaved "I had ne business even taking the part in Show's Joan I am forty-five years old, and Joan is seventeen. But at least there-at least not play her as a petitul workin

Blanche Dullois and Opheka and Jaeae Kane They re all victims

"I won't play Joan in A Maid of Domremy?

I saw that she means if, that even while she admost the piny sheway repelled by d stand I set down again on the sola and put Barbara Behop sgain, amiling with rucful mockery at both her own violence and my maiodrama, drawing us together in a cove nand too generous for quarteling

Look at us, Austin- actually discussing goes on for the lading star. But I'm not has ndiculous I'm sorry low. I didn't mean to

Istood up and puted hernex to me She always was But alterward Ming with her stand Was it because of ESIR? I had knowledge of those hundracia of other lives Were the earlier types intel in the theater an different, so less easily understood, because they had "creative temperament" Induction that was 1 or because of ESIR? 1 how much of Barbara was what she was here, now and how much was suble reebeen I wasn't sure I wanted to know

Long other Barbana fell askeep. I kee mote sounds of New York beyond the winsome large silence where my own ESIR memories might have been

tech crew from rehearsals of A Maid of Downlyny, press, minimum backers, mile the imagination of the public-or at least financial ancels went along cheerfully with VIDOR

Another disector castled for a production powered the remoternation of Shakespeere and speculations. Then the credentals of

the central commuter of the AMA water

Backed care (for the care) reaction with the particle councils (council and council and council and particle council and council and the council and particle councils (council and council and particle council and council and council and the council and council and council and the council and council and council and and council and council and council and and council and council and council and the council and council and the councel and the council and the council and the council and the c

"The whole thing is becoming a circus." Become grumbled. Her shirt was loose at the breasts and her perie gaped at the west the had loot weight and color

And this, too, shall pass, I told her "Think of when ESIP was feat introduced. A few years of wild quales all over society and hen everyone adjusted. This is just the efforther is on the headst.

"I don't expectally like standing cirectly on the fault line

"How not rebuscials comp?"

About the same afte said her eyes hooded Since she never spoke of the play at all, I don't know what "about the same would be the same as

"Barbara, whe' are you washig tor?"

Danslahtly now you have that look of wating, howing to yourset, looking as if yourse scrubibling something. Something

Austin, how indeu/ous? What I m looking at is all roo public, opening right for the play.

"And what do you see?"

She was salent for a long time. I don't know

"What don't you know love?"

I don't know" She laughod, an absupt, opequa sound like the sudden dowing of a ourtein. "Ko sity ent tr? Not knowing what I don't know A tautologic allmost."

"Barbara many me We'll go away for a weekend and get marned, like two children This weekend."

I shought you had to try back to Bogota

Table But you could come with the There is a world outside New York you know it isn tempty all one vasi out of town tryout " "I do there you. Austin, you know that

"I do inami you, Austin, you know that But I can tierweinght now, I do have towark on my part. There are still things I don't wat. Such as what?"

"Me," she said lightly and would sity no

We notice the the books werks on Ancles or of I heary at Statistic with the Add dispersion or vice of Add the Add the add the add the Add the Add the Balance of the Add the Add the Balance of Add the Inspection of the I balance of Add the Inspection of the I balance of Add the Inspection of the I balance of the Inspection of the Inspection of the Inspection of the Inspection of the I balance of the Inspection of t

Interest in Ann Enecland was not dis

He wated until the long applause was over, then continued bullying his wife. Shorthy afterward two guards entered, dragging between them the confused, weeping Joan

poleid by her same a People of months claming base a radiable ligare from the parts was growing order. For years people had bons terming to be automatic Prais of Mutammati entering to be automatic Plant of Mutammatic growing and her and bons disposed and the groups (to be showed list now a Listicas reme had not only beah volked, it was apply to be showed the restription that camed the most of losses rags auto do polysission. The polysission is polytocet, despite Am Theolismic auto by polytocet, despite Am Theolismic auto by beam of here the same

Bie was gong to many lie widowed king Chreleo dingland Slew was gong to awar answard of Carbolizon and was being pope Site was a dog alcolat. I domon, biegher mad in love clanvoyert, we yaaa old, existenceter Site was mulang to go on opening might Gisegory Whiteh was gong to the her monover the peri ocening right. Retermote west a disadate of Behore, Buhorp wood peri the part Behore buhorp wood peri the peri to go no perior of the site of the perior and Behore.

Not even to this last did Barbara offer a comment. Also silent were the reputable papers the senous the ter offices the men

and women who control fite money that controls Broadway They too, were waiting. We all worked

The week has A listed of Dorotory was to open in New York took SI in a Boyodk I had open a down with a low-grade treat week in the prece of weak. I chass to grade By Sarustay I had a temperature of one medication could seach I are weak too medication could seach I are weak too medication could seach I are weak too water and bogs bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the area and bogs to bit I with a sky palawi (the bit area and bogs to bit I with a sky palawi (the bit area and bogs to bit I with a sky palawi (the bit area and bit area and area and bit area and

On the plane to fee which is fept thereming of Barbara in the middle of a valit solar bottery i cerelied the custade calling to the despensally. Unaware, the eat reveling a script amid the cereate and sharape calls, upit the time of the sam busit out all around her and papels shit had known from other level denoes the manufacture is larged.

At my separations in load mole pills and a deling basis term for the land mole pills and a deling basis term for the land term between the second and subject acceptor to the between many fills and on terms pills and term and in the deline term for and term and the deline term and who follower and the pills and terms and term and the pills and terms and the follower and the section which and the server. The counts was single to the terms and term at the section which and the server. The counts was single to the terms and the atterms and the section of the terms and the atterms and the terms and the server. The counts was single to the toxing the terms and terms at the terms and terms and the terms and the atterms and the terms and terms and the terms and the atterms and the terms and terms and the terms and the atterms and the terms and terms and the terms and terms atterms and terms and terms and terms atterms atte

Bettonal clocked entrevol stage HHI is that doctanizate that the scaling general the play. Due camed a matiows carrols ecross the stage bench were a wooden table and it bes more cardies from the large close. If generating the stage that the large close and generating the stage that the stage close the generating the stage of the stage close the the systemic means has speak, before they cataly saw the food. Hot had be been told that blands was timed, not catal belong for an and the stage of the

Maryl Where we you suking now Mary? Barbars said She straighend and draw back her hood Her vous was low, yet every somen named May in the submean alread guilty. Datage Mary of Anyou consol of the uncowned Daspher of France, compt suited/ from Dahrad a tapathy facing harmother like a whipped dop.

"There I am for all the good it will do you or anyone" she whined, tooking ther own feel Bactera's motionless silates walk eloquent with contempt Mary burst out with her final impassuenced monologue against the Dauptin and Joan, the play were transford. It was a strong emodified





DIND DE LAUFENTIISEDNARD R. PRESSINAN ARNOLD SCHWARZEREGGER JAMES EARL JONES .. "CONNU THE BARBARIAN"

centring, fueled by the conviction of Barbostranger so that I forgot both my invench There was only a room in Moenth-century us were illusions abactule good and abaosubance's beliefs, sonor and more tempositive could allow Yolande and Mary and and killed with svery fiber of their elemental clience until Barbani delivered her final the unwelcome remembrance that they on namow hard seals in a wooden box in New York, a foneion country because it was oct modewal France Then the applicate

The Daupten and his consort still onstane, did not break character He worked trued bullying his wife. Shortly atterward two quards extremed dristoring between dience loaned forward eaperty They were

is the skil? the Dauphin asked and Many seeing a woman even man abused crot, sticky py The guards let Joan go and

In the name of Sant Catherne -- 1 She weeping, viccous, but without the chilling

Twill do whatever you want. I swear it in mark have been demanding that a frac-

breething My heart beat skipped, beat twice, shoped Each breath sounded

Unes sloped in and out of my hearing actors swifed in tery paperdry pastels Once, joan seemed to turn into Barbara. and I sat down egen to gisree from those been a fool to doubt it. It was not Joan of ISI CAN

Around me the audience begin to mus mur despectly Just before the first-act our how she is being used and makes an inact wanchingly pathetic attempt to manapucontrol. Ann played it nervously, with an ally empenassing. Nothing of that brief at her autition, so many wooks and work present now Between waves of lever. I thed to packare the M Whitten must be hearto

Christ," said a man in the row ahead of

Her ferror gave aff a smell, sickly and sour escape the room before that smell could spread to me I was helpless Nother she nor I could escape

women next to tem. Her yoppe humitted with

Smug. The man said

It doesn't matter to me what you do with her said Mary of Anou gratage. Why

different Ded you remark #? Ann Friedland, who had not seemed different fell People were getting to their feet, exhouse lights went up Just as I stood, the curians onstage parted and there was and then nothing

as if it were not my head at all

I opened my eves. Yolande of Arapon her face framed in a wool hood gazed was still in costume and makeup the

tone too often tooked nervously aprospite heavy, high oplor gate/h under too bright

You are there? Oh that's spiended How delinous love you had such a fever 116 is the hospital Lanfmor They've courts you

Imhere Austri, Imitight here

I opened my eyes slowly accustoming them to the light I lay in a small private characteristic of EL particillers that mitacle longed to someone else a mend for whom I

What do I have?

Some impical buo. What did you diffic

Number These any choice. She took my

She bit her in 'A ist happared When precisely do you mean? I wash t there for

I was confused If Barbera had missed made me miss before the legitle of great sagging makeup her eyes darled around ment half-alimpsed in the hot swel of the

ran out and valled something II was

Yes Barbana let go of my hand and action was so uncharacteristic it was

You saw what the first act was. A catastophe She was trying --

scene was wasdarful. Was-the manage on your role will be very good

Yes," she said distractedly I saw that she had hardly haved the Them was something she had to do had to say. The best way to help was to let her do it. Words tore from her like a gale

The trend is so the whole pay examples the set rate for CER and and the set result of the set of t

I stand at her She tidn't notce. She lighted a cigaretic if went out she lung the match and cigaretic on the floor. I could see her hand trentbing

likewithatil Gingory got at hor she was done. She wouldn't even go back out after internesson. Of ocurse the play was a top already but not to even sheat the dami herg. I waven threining straugh All could nee was that he would dearroy her, all alus. So I bet hern."

"Nou what?"

This time with Yolando's candisatics a took time behind a fait to by to calm time down and resided I right mill Mitout Anowing / was poing to Something strange were brough me and (packed up my arm actual here. Wholey Khowing I was going to?

She wrapped her arms alound hersell and studtered i raw what had driven her to this unbearable strain. Webout knowing / web going to

Historebecane way surpress and he la floward No on same ne Singary lay there, breathing as if he way and a surprise and is load a phone and called an antilarios. Their I sist the stage markingar table wither head as a load table and is the head and was unconstronce. I well sound to the wege and swell for Arm. When the currant come down and also are mit well. and table of stored and and he was Joan of Are and I was an aging table who were the relief and relief.

I theil to petime n—the abusive grill the appalled, democlased cast the director light includer, bashed with a cancel attois—without knowing / was going toit and, out thoir, the poster cartiller the great grily ortics from the Times and the New Yorks, the directed graphic bashes from Sources the graphic graphic graphic cartiller Sources to graphic graphic graphic graphic Samples graphic graphic graphic graphic graphic samples graphic graphic graphic graphic graphic samples graphic graphic graphic graphic samples graphic graphic graphic graphic graphic samples graphic graphic graphic graphic graphic graphic samples graphic graphic graphic graphic samples graphic graphic graphic graphic graphic graphic samples graphic graphic





assists for an entriecte chink and a smoke

play the role that I deliberately undertailed Then suddenly she darted away from me and went through the curtains onto the stage. The house johns were up.

away She looked carmer now attrouch them was still an underlying taumoss in her voice "Oh, #'s just too ndiculous. Auton She made an absolute fool of herself, of Lawrence, of all of us, but it wasn't her tault Stars an mannetenced child without telhis ecorrection pot all tangled up in hisvitalize the theolet, take the next historical papers will say She loughed weakly with pain. And I was no better, hitting poor

the autimosi? She stood on that states

"She stad, 'But I'm the staf thang!

side the window rose blurned traffic noses.

You're right I said. The whole thing was an egomentacial ride for Whitten, and the press turned it into a carrival Cosorill sect, magin importation. What should have happened, not what did Reality doesn't make good theater

take was to use Arm's renity instand of

It's not that clear! she cred. 'Don't you

under the cracked makeup her eyes glitfused she was becking away from me

Tueon and reality" she said. "My God

She crossed the room to the door, closed

In the name of Sarr Calherine-" she becan choled and started to wrom The weeping was territying, shall through with latener on the edge of perio in case the weeper should love control entitely and 126 CMM

also keeps him fascinated for the same I traw upy teverity ob line 1 normal fell, making the piep rate a prover to her captors, and so the first blashore I fertified gale How could she look cells scrous of all that gansh makeup?. There Joen's spense. She went from hysterical fear to inept memoulation to the brused, starrad hatted of a vector to, finally a kind of complishinger; but from the clear-aved vimen could hope for But she was not Cosnoti s vesion: she was a seventeen-vesir old get Her ligute was slight to the point of emacation Herface was young-I saw its

6Sbe moved with the gaudy, unpredictable quickness of the mad, now here, now darting away now still with a catatonic stillness that excluded her eyes?

of my own bornes. She mayred with the med now here, now darking a rooms length away, now still with a temple tupped eves. Her desperators made mapened And it could happen again it could

Har terror gave off a smell, sackly and sour I wanted to escape the room before I wanted to desition her so that what was is But Leould not destroy her I could only the sold of that digney, share that I had Twas guilty as guilty as all those others who vectorized and when Joan stood at the

stake and condemned me in a crolosout wanted only for her to burn wild so be quet "Burn! Burn!" already desparing that ro tre could sear away what she, I, all of up mo, stretched out her hand, came toward me I thrust out my ann to word her off

Austri," she seed

Barbara came loward me it was Barbeenly proposis and thirty years. Het lacs was tred and kied under gaude peeling makeup Confusedly/ binked at her I don't

That was the reality," she seed, and stooped to key her head on my cheet

Berbara and I have been married for mar site doesn't know herself. But I kneedaiato that the right A Misd of Dormany then at least becaul. When she struck Wheinto both within and wetwater as easily as again (Gradory Whitten no less flambownity exercises for his basheto with a candissterk actually asked her) She has adamantly relused both Joans. Show's

Was her performance that might in my member? I was drugged emotion had been running high, I loved her Anv or all of that rould have oplaned my reactions. But I rwed that waiti bayond both the illusions of amote ESIB only unlocks the individual Complex life what other identities, shared scross time and space might still be closed in them beyond out present Nach-

Next wask I will be hospitalized for my stustors more multiple realities if may yield nothing. But I want to know on the able, will be valuable in untanding the and-

Even if the chance is one in a million DO

NTERVIEW

CONTINUED FROM MAR 108

arms rape. The Russians are feeling it, and so are we

Ormy So, in other words, we are simply going through a temporary expenses with an antervolutionary president?

Batk then in a way Build spectrally lives it many people not just President Aleguan that jusy into incustant delivation. This may be apple of the service of the service endances that the service of the service endances that the service of the service that a different sector before the service the additional service of the service the service of the the ser

Down Lot's dree the posematic scenario in whiting down them is a conset of Nutual Assume Destructor between the vector's ructore reachings. Latissiphia, in a word in which agity porcent of the population is in the Third Word the large population is in the Third Word the large population is in the Third Word the large population and the dwelpide word destrues, faal. Would your sprend curve still be

nuclear exchange be equivalent, say, to the blip in world population caused in the Midde Ages by the Black Death?

Salk The signad carve is emply a discription of how possiblers (grown inside who can intervene and obstray a large percessing of the human race while mailabilitie holoscent II we do, and if a significant instructor survive. The population will resptative in heat as it did after the bitamic pilipieuru (p to the carving capacity of the affected and so-celled unaffected regress of the obsets.

Ormy. In the event of a nuclear exchange, would human beings simply adaptite a new geography in which the northern bar was a wasainer?

Salk: A nuclear war is far more sensus then that: We cannot imagine as making do, that part of the world is just going to adapt Any kind of nuclear exchange is going to have unmeginable dataclysmic and apocally the implements. We cannot need that lightly

Earlying Involved discussing terms from a dense to suid that lead of calabtrapies of the a focus of the second of calabtrapies of the second second second second the vacies. The remains it as a dispetiant to be left to the policicano it is for this resonthat large numbers of pooplem and variety of forums and groups throughout the work as againing for the prevention functioner wort. This is one of the event indexidence than actionary mental dispeta. And parasite



deserves in the developing world. It is for this reason that this book (A New Resky.) was written—to make clear that we cannot temper with toys of that kind, or incluige in that sort of saber raffling

Other is this recent organizing against to clear win the Siggaling mechanism to which you refer in your last book, signaling danger to mankend?

Salk; Yes

Orear: Why is the scientific commutinity now so docile on the nuclear assur?

Sale Lin to more doce than other og metter of society the scenario comunity consists of societhist who are of scenario metter of societhist and present of concerned whither harms conditions. But these any topical in controls and physicasis who are active. Users of Compared Sam-Ware allocat Physicasis of the Prevention of Nuclear War. Redention of American Senting society and them are contrapopale with allo the more concerned whether the society of the society page with allo the more contrapopale with allo the more colver physicasis.

Oversi: Is there anything more that scientists could be doing — say to eliminate research in gern warfani?

In particular definition the need for wait, base and the provide a strain of the need for wait. We need to cook at the product of any motanting of the need to cook at the product of the need to the strain of the need to be needed with the the need to cook any strain to be needed with the the needed to cook any strain to be needed with the theory product in the needed of the needed product be needed by total or on right of most sky paratolic modula (removes The product here and to behave that hads to product the needed to be needed the needed product the needed of the needed the needed was explained and the needed the needed the needed to the needed the needed the needed to was explained of informations.

Other: I was thinking of the protects made after World Wer II by atomic sciencitic, such as Rebart Opperhiemer agained the further development of the bomb. Do we have any equivalent in the scientific community toplar?

Bell Spring and to the southers well as a enseme of the Markatain Project. Lot soon table in other values. There is very police means of the Markatain Project. Use the non-well for the Strain Strain Strain Strain to the set of the set of the Strain Strain Strain and the policy and strain strain well as another policy and strain strain well as another policy and strain strain Strain write and space. In colory, they be the strain strain strain strain strain and the policy and strain strain strain strain and the policy and strain strain strain and the strain strain strain strain the strain strain strain strain strain the strain strain strain strain strain the strain strain strain strain aparets policy and strain strain the strain the strain strain strain strain strain strain strain strain strain strain strain strain the strain st

description that a matter of serrenhea? Sale, if you lead that a table a matter of subacy think we may get further if we try to set up structures for parce and percentirelationships - instead of only fighting agains the wepons of war. The path forwar is welveen. We need to avoid it but we also have to become up paths to called.

BURNING BUSH

CONTINUED FROM PAGE 33

to do? Kif me? Even the quickest poson wont work then

She let the gun drop to her sole. The credit notes lluttened to the floor but she made no move to pick them up.

"Please help me, Mr. Bin. You'ni the only one I know who can help me." She toked, har kpa, and I thought I saw a tear in the carrier of one eye but them, it could we been the start of a fingerlocalt zone.

I alrock my head clowy writing for he one question trail iters aways ak. Purhyps she tuty could not kil heined! tot! doublad i She was city mere braten in het desreto iscresse heppenkity of cohternations belowing that the booth of my hands as i liked her would give her is geder chance of immortally like! woudeed whether killing all her would (include a shace of the disease's beging from me builtet the though take in her isake conset the putting my head and her lake include the

ers are to die "Get out Lynx."

She turned and wirit to the door his arms imp and her walk almost a shuffle She had one hand on the door handle when the looked back at me

There always actived you DeecMen Ever since I can remember The sicrishiped you How you come back after each death Hew you die with such grace, such dahm¹ "It word" work. May "I said "You'll have to da it yoursel" four on 1 pay me enough to make me help you die "

The door stammed as shelleft ispertition next half hour prolong up the credit notes counting and shuffing them into next prices is my operant whethere is man finds in his own housing is this.

This party was even more opulant than the one the night before. It had to be, because it was Hansa's party.

Topologi rink for regime in the held regime hands in his semidal sky, origining my fingen hard in greeting. I had had my fingen hard in greeting. I had had had a sky of the semidal sky of the her gaaa and samed could regime the whet Hama da and have were aincid the whet Hama da and have were aincid the whet sky of the her gaaa had samed could be whet have a sky of the her gaaa had and the her aincid the sky of the sky of the planker traking such I have who sky of her were and the her sky of the sky of the her sky of the

Propertouch was drifting around the room as it were ash left to the ground after a live 1 actually save one main adheady paned into oblivion throw a small book of the stail most live air and watch it float to the carpet. The press of people around Hanes and me was solo thack toget through and as



I had to well until a waker went by with a tray of touch and a single gless on it. Hansa had remembered my eccentric taken for plcontrol

Local look has their part preve against mine as the lakes to serve of their guides. In this do what whe waited it was the party and take had good need for good to keep party and for the right I looked as ther again and respectively. The serve of the server shis had ance level is not prevand it. The local party of the server of the server that had ance level is not prevand it. The local part local party is not server to the local part the data had been local part does but the data had been local part does but the data had been local party of the local party o

I turned to look at the enough again and see Layer, this lide bits, here was on the other sade of the room and so I couldn't feels whether her eyes were globay or not. but i know this had book watching the Layer here sum the head quickly when i spotled hir i tubbed the paints. I dim y hands down the sades of my pants. Somehow she made me ownerse.

The tingertouch pusher shoul in front of me blocking my wee of Lynx. "How can I be a DandMan?" he soled. I heard I can be one if I de right. Ill pay you whittiver you want.

His forehead was gray from the overdicale of ingerbach he had presside into his shat He wouldn't dia banght he was too zoned to do anothen into another

Leave me sions I sad

But Harsa sted you ditalk to me 1

"Hansa was wrong. No ther can be a DeecMan. Subdenly I wished it were true Hansa wasn't paying me enough for this

After a half-hour of emel sek with har guests, Horse pot Hemho chara a chole hor me. The creat in font pressed in hell bit of angotouch into their skin. I smiled lothers all knowing their threat quarties of them were having a hard three focusing or me. I had counted on theil when I had an abention metators had threas of

¹ tase in the cleared spot the legre of the legre encoding me 1 publied out a small glass bottle learn my brains pooleet took cat the stopper and poused the legral own my need and shoulders. The lamits whe own powering and smallad somowher weet 1 looked at the legre should me through a strumpeng wave of tarries. Then 1 public out the middh.

In tracent software to here to allow 1 and interpretent of the endering why Learned to statulate with inty protects death. This time was not unities only other Porthage 1 was in may age more, which of the Porthage 1 was in may age more, which is death of the This Wo had popelen of it. Keel Samani Faala Langley Shores and I when we discovered the acade by the deatese. They all hist more acaded by the deatese. They all hist more too in them of the filters. The more death of the is assame human they have needed.

Theirs the small piece of wood that Thed

several minutes taking in the oplors of the

this Stop it, please stop it Not nov sives no

I died for them twice more that right rahed, but it was a large party Each time I awoke was belter than the last. The rust in each time I awoke from the clead. By the me after I died that third time

Good work, DeadMan, ' spronore capharned in see who it was Latix stepped

edged the blaster to let her know she could swing it fast enough. Hanse backed away

Only a DeedMan may kill a DeadMan

quistly her largers tracking the ourves of her breasts as she stared at me

I haven't even asked you anything yet

You're going to ask me if I'll help you match for you I kild you before no deals with lifers 1 kill only myself

the mouth of the blaster droop, and

Wolfschmidt Genuine Vodka nit of the Czar

support forward. She thinked it back up and mailed a hink the for all lev offamistic horminy led I allopped Heriveen was to catal the interright has been mysoil. I need someone to guide the hough Novbeen firms taking mysoid allow mail level to be a white Thypologi She back up expectivity. They all believe they will be the one to sket the discount and the mail of the support of the discount and the support of the support of the support and the support of the support of the support and the back of the support of the support and the support of the support of the support and the back of the support of the support of the back of the support of the support of the back of the support here backs on the support

I looked at her letting rage build up

"You have no right to louch me" I belowed the works and the moved backed awy tyre stead har ground. She looked at me with surprise as if she didn i know what here bad dones. "None of you can focub mit, "to exact to die?" Here, let me show you how to do it. Wer".

I werit right up to beer gradbing the end of the blaster as it I were gong to test it been the I could hear the other Mes in the room poneuming when I brought the mount of the weapon to by privil along the bill be But she couldn't liet go of hee the -or else she knew I didn't mean to go through whill it.

She was taken then I was Why should have learned to be clever in strongfor?Sho moved her wrot back, then hasted in around, using my movements to strength a her own and pointed the blatter at my bely i all held on to the wespon. But I couldn't help looking down at the point where the blaster's mouth disappeared mo the flexh of my abdomen.

I feit no nervousness, no last bastistion in my mind, as I watched her finger lighten on the frigger. She was going to kill me

There was no pain, perfugat because the bilater was on grads, in its destruction. No there was here the unique pressure heat was used to expensencing where I resurrected I saw no sweeping range of impostiole colors no ell watch the reson theses said and undertail in the second term of the result of undertail in the second term of the the same in my being I had my tenses all, but they was bland. Was this what the lifes hoursed for?

Lank was string on the four in front of the crashing the biastler is her hands, hugging a Shewak crossing to here straight a volce too low for me to hest the words. The room was still ful of Herma's question. Lost they work pressed back, near the wolls, too for oway form lynk as they could get.

The interception had not quested the hatrodin me lifet is in the skarmerig of my poles in my totrol I wellight her and scool over her She looked up, but her opes were vocant. Had at her to press hereif with ingericach? Had I been dead that iona her time?

"No killed me litter" I whispered so that only she could hair me. She dich't look up I grabbed her by the throat and pulled her to her feel. My frigers were creating white to: Comi patients in her skin

Look at mo. 1 paused. "How will you pay me? Sou owe me for one cleath. Taghtened my grip, then loosened if so that she could answer. "How will you pay me? I don't de cheatek ifter."

"Killme," she spat, "and we're even."

"No deal. I want my fee. I want money for my death."

"I don't have any You can check with the banks Ack Hansa She knows Ask her Go sheed. I'm Maced, not a credit

"You warriess little bich?" I should The little may deen close to the wells. "Nou killed me and you can I pay? I sherghered my gip to he re reads, wolchmpher mouth high as the teed to daw an min he la range. The work pay? You want to dro? Feall then. Her teet if 'Wy woo was out of control new loud wough to highten even Himai. I saw her from the corner of my even and previous write factor the one was pressing fright buch mymmer. No one hals to I was giving them a cont who hald the in the little is the short of the little is the short of I was giving them a control may hald it in the little given a control may hald it would be the short of the little is the short of the little is the short of my hald it is the short of the short of the short of the little is the short of the short of the little is the short of the short of the little is the short of the short of the little is the short of the short of the little is the short of the little is the short of the little is the short of the short of the little is the short of the s

> iet my hands fall from her neck, dropping her to the carpet
> I could hear her body hit the floor and her gasping breath as if from a long distance

expensed before

I pressed both hands around Lymck neck and appeared unliher forgut begain to inch out of her mouth. Her face was faming colors. First red then rust, then an indigs that eministed me of ink. Tabook her the way is dog sheles a pace of meal

'How does it feel. Ifer? Good? Let me know when you see the pretty colors. Yer

Then I saw her strile. Through the grotesquences of her motified sker, even through her thrusting inorgae. I could see her smile. She was getting what she wanted twisigiving its her She wanted to de, and I was doing all the work.

I let ny kanob tel from her neck, topppp her to the carpet I could her her body hi ho toor and her papping broth a fitnen allow gateries I arood tell and athered a her for a long time. There i loads at he fitnen allow gateries I arood tell and athered a her for a long time. There is loads at he fitnes the con and of Hans. Some were appropriate to her dowler and foreheads. Hereas is too had solutions is not heads. Hereas is too had solutions is no heads of were leven before gat me lang wodely as othe mode her paint of theads the without on Lynx was coumpled on the carpet her toce pale but her breaking almost normal She had toor her high nocked brouse away from her throat, and it hung around her ward. She was addated

"Airrost Mer," I whispered. "You almost made me do it."

She looked up at the "Why did you stop?" You gootsammed DepotMan why did you stop when it was so close?"

I wanted to ask her whether she had seen the monest of shifting colors, the bretest freeze-framing of the room But I costed to everyome my disput

Because I hate you "If will have you "I know it was true as I skid it. I know that I depended on them for the feel of okin on skin, the taske of sweethreads, the sound of the word throach the clubbes.

But I feit contaminated, soled by the gift's obsolete use of me Perturns I had always known that the live no obsaland me as they consumed their gitsy drug, but hed related to acknowledger I. Uvris use of my death, once so exquase. had made me ase the lives for what hew yoon

They used me as lused them Bull could still feel without them, while they could not live forever without the DeadMan and his dispase. I was more receivery

Thete you will "I and I wanted to shoul it, but my control had relumed and a Deso-Man doesn't about to infres. He takes. They listen i turned and strode out of the room I don't even stop to collect my fee from Hanse. She would send it to me

The right as was clean and smelled of a storm coming over the mountains. I putled a storeed liask from my tank pocket and chark doopy of the burning inquor. I heard a scream in the dataroo if weemed to be coming nem the other sale of the towning building, whose Hansa's goartmort was Portage they were insold throwing themeakes from the window.

When the scream onded 1 knew how to get back at them. The stence told ma how

The Hers wanted to die. I would make them two as if fixed. Maybe I could nell every window shut. Maybe I could duil everyloifeinithe ony Maybe I could buy all the rope and matches in all the shops.

The clear result fair thindhold times for team the law loan hundhold times for team to make a set of the law loan to the result beaution to the law the team to hereal the team time the to the to the lange a blader would be them a leader soon her

Levitimise the shifting colors and the testing of warmhin my bely light from dying in front of them. I will not quit dying; I don't their licouid do the But I will stop dying for them. I know i can do shifti show the mage of Lync's shifts to knop me away from that kind of both forever.

Editaric the last drop from the flask and put it back in my pocket Ethought Eheard another scham from around the correr of the building. I humad back inside and bucks to skill the stars we did in the CO.

FOURTH-DIMENSION CHARS

INNOVATIONS

By Phoebe Hoban

evaluations and in bactering revealence of the second second second revealence of the second second second revealence of the second second second of Waineystein DC and La Bots of Demandr, include the aid of industrial designer Juscib Astrian (Importable for het neyholds Bag and Oktore Intere system) and attern of Damin privatiggata I abd y CF Barri Notocck. The second of their three year 51 St million research project in the Oktore private research of the Second Second

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The char can be educted to match

individual idiosyncrasies. An LED panel in its aim displays actings for solt angle, backbeecht, and scher dimensions.

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Typically, Differit builds a mechanical model of every string device he datagris, such as one recent char with a public button-controlled pneumatic cycleder that assess and levera the said Below the customer ever sits on one of his investigors. Other trute al least as month of least on the mean the set.



Heart of the Cynoxy crear is a hidden hysteadic cylinder system, providing hidden rocking 134 DMH

Chains We the Operagine storacy from the anthrobusky ordered desare created by such luminaski as Frank Loyd Wight Mas and er Robe. Le Corbusies, Marcel Brouse, Eller Sassmen, and Dhalae Branse, Bild wein wiehn Beauty-Ather than confert is the object. Colografy in chart is operative and profiles and it's hypertaper is almost easier. Those sity Chapterdals Isfortowic

¹¹ Blockmann, Stater, control Helm, Sangel Carl, San

Xiesety observa Water B Kleemen Ar, an international ergonomic consultant, companies like IBM environment without setting for their computer experiment. They have to The vociens are beginning to complem."

Not all chairs are cleaged with productivity in mind Frankin D Rossewith had a specially cleaged wooddin high chair to take the load of this feel while the was sheking hands with heads of take President Kennedy's orthopedist started is contrained or head in



the bottom of the bartel Americans are

says 'Trash cars are crammed with wine countiess other furnes, especially from the

Rathin however has faith in a partnership between gathology government, and mdustry. The aluminum packaging and amment have been supporting his gar belogy projects for several waars

errment and garbology is in full exerci-

latce project supported by the covernments National Consumer Institute The tional products as temperown bears to ucts Studying Mexican trath. Gomezcally constant about how to package #.

Because of the Mexican people's Ikn Perhe's to find workers. Those who crutes So Gomez-Bellenos tres to hold parts component of Mexican parbage. Evendroty in Gomer-Bellence's lab wears a mask but the masks sometimes are not enoush. When Rathers lab chief wooled

But the results. Games Bellenge save occurred in Messoo has data showed that worse many Moxicars, fearing the loss of headstart in preventing milk shortaget in

Roth Rather and Gomez-Bellenod brrates and accordies at the University of Southern California She has found that down and they were abling at least one Incusand delars a semester DG





in effectir "obstraction tag." Dely the both geocordina, a dera space injection stage, would have to be deviaced have assumed to obstract the subclear organ of an advanced populsion system such as an effective or an elicitorengenic calapit. (insist dirivar). Under these conditions, Polycian web, parentry dybris fail das bothy most and were allevers (fail film paper by character and the subclear and the subclear web subclear and the subclear and the subclear and the subclear and paper by character and the subclear and the subclear

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The prevange goal implie to expert to: bupertience of Ministru Excellencing up and organ manufacty insulanding of china on the source of the

A man-to-Mass expedition may hervisit more than mark estantic knowledge and valuable raw materials. It may normal peaks on Barth Such a project may an comage or over rely on rhowsked rhomiternal space cooperation—a fusion of U.S.F. USSR: technologues—and all the oblicatiocomportuna that would follow

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How does anyone-man or woman-achieve greatness? Is it not by the mastery of self?

Why Were These Men

Benjamin Franklin the statesman and inventor, Isaac Newton who discovered the law of Gravitation, and Francis Bason the philosopher-scientist, like many learned men and women were Renetrucians. Bod practices application of matural laws they learned to generate useful, constructive thoughts.

The Residence in a medicational, cultural organisation, have been in existence for centures. Their practical and rational Baschings are not a second to the second second growther insight into your life. This knowledge will mean a new awareness by which you can group the potential of mind and self. Using the abilities of set between full and loyous loying and sedocrity.

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The Andromeda Galaxy

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Hansen Planetarium



nucleon-powered space tags, reportedly under development by the Pussens. And the Earth landing module would look a ful lane an Apole command medale. Theseleres the Unned States should build that component of the mesain, soo. The result would be a thinky intermisational space varture, tying Soviet and American internets teagether for all least how years.

So much time in needed to gat to Marsing have that in addes some to step moson quere that is mades a some to step in surface Service fight prime stowed theorem and the same the service of the solution of the same the service of the solution of the same is the second capacity here and have a same is the second capacity here and have a same is the second capacity here any solution of the same is a set of the same particular to the second capacity here any solution of the same is the second capacity of the same is set of the same particular to the second capacity here any solution of the same is the same is the capacity of the same is set of the same is the same particular to the same is the same is the same particular to the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same particular to the same is the same is the same is the same is the same particular to the same is the

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Mainwhile office toath specialities have ownmod more terrescripting and mainbogging possibilities for Main. According to graduate subdates Christophere Wolky and Steven Netich turns settere to Netic my eventually a cable to able the control of a provide the setter of the control of the setter of the setter of the set provide the setter of the set

The neclessary political decisions are the vary last hardle between the dream and the rearity and arguments for a go are be covering more compelling overy year. Mars is waiting globering brighter DO

CNEDITS

Angle Carlos Terror Terror and the second se



altering the size of the scen and hence charging is acoustic properties. The result is a performance hall of the command of the musicians and a magnificant issearch tool amend at isolating the elusive elements of accustor, devon

Affatte and enhansitie, Proze clas the gam made in the 25 years as an accurse concultant "Preptie make someting magreal of socialisti", he says "but it's not a preparatific process We can come writin ten percent of a choose newsborntonitime (amessure of influentity or antibusis) more process than a structural engineent who upunity certificities to a factor of these

For hear, yoe best name in truth his spenned is partly attrictable to the expenned in partly attrictable to the exloss part the most herm is now correct hair promotes will actually descend using the exoneurs of accumularly descend using the correct part of the expension of the sould contain a comprome statistical contained index- using the original local on the Network of the expension of the sould can be a comprome statistical contained to the expension of the expension of the sould can be a comprome statistical contained to the expension of the expensio

In particular from the interval instantial to match from teachers and the particular to the base bases and the second s

It was Pouts who inside that the size of LEspice as well as the intents suffaces, be objected. The mobile coding pochers alow respectives to hold the reversation time constant while along is often guilties. Their hope is to replace the social that be all senting halls, or to test concert hall dearns will, or the dearesh hand.

The chairings of IRCAMS new mitumatin a learning have to glay is. Positor an a loss of its contractignments, but the mails can be and the second second second second and the second second second second second data. Barriest explains berrotestrating data to estimate the particle wave sector estimators to particle wave sector estimators and the particle wave sector estimators and the particle and primers of the spaties of the operang commonly in Celebaer 1975, when these partmentary is compared and explands of the spatial sectors and the spatiest partmentary in celebaer to spatiest and the spatial sectors and the spatiest partmentary is celebaer to spatiest and the spatial sectors and the spatiest and the spatial sectors and the spatial sec

Beyond efforts to predict and analyze

Benet begin aching an an even rices base quasites what does the human dar line to hard? This second constitutes the inter theorem of psychologoustics where the new holl in uppricipationality interaction rooms, chraphanter a united " benetic rooms, chraphanter a united" benetic auguments. He proposed to joby toxis a proceeding psychologoustic model auguments. He proposed to joby toxis a proceeding psychologoustic model and the proceeding of the line and in preference. With the performance shard when in the part of the risk has an in the risk of the performance shard.

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Bennet has since turned his energies bawed systhation the anging vecations the rank of LEspace were turned even to Jean-Hern Ammed who havis IRGMs accesses talearisery. Annual da instacts some of the more process thislese to tos test with the N3 such as many that it meas frames in a staffic yoods. The Fernit building Burssouth doorded the terminations. If the more process the event of the more process the intermination of the formation of the memorations of the formation of the process of the process of the memoration of the formation of the process of the memoration of the formation of the memoration of the formation of the memoration of memoration

Even with those problems solved LEspace is proving a hard restment to massier. Armend has been sitivate to destants in even organise qualities at the sametime drating outside help to wid in the ordereze. This is uprepare influe workage the Franch experimentalist. We went to make it avefable to all who can benefit orderator is free and open to reserved retrievants.

BCAM, which operates its part of the controversal Pompidia Center is now considered a loader in mascal research. Many of the operations incode sound synthesis such as Bennat's project of computer assisted composition. Public performance sorth a secondary dispective.

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ARCHITECTUR

between--- and under the ticor The look is reminiscent of NASA's best efforts, but them is another possible to the Books about the Sahara line one counter and on the ktopen table oils a primitive hardcarved vecders bow, revealing the hadden influence behand the ADV---Ahoa

After tadying formesco gutter in Spanin in the samy Sources, Batswall spart at year and abell driving across the Sahara in a Land Rhem on a spart to fur the nenoread Bersin acrisism Wildow That gut was at Ellingen in the 1930s. He sucoacidat in Inding Iwn in the Navyan batwas of Bersin acriss the Navyan batnet of Thatogen head Basswell plan a solo time across central Bitmogin. In environ batters by cased Basswell plan a solo time into across central Bitmogin. In environ participation of the solo table of the solo participation of the solo table of the solo participation of the solo table of the solo part and the solo table of the solo table of the part and the solo table of the solo table of the part and the solo table of the solo table of the solo table of part need and when you well. Toot tags

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You are invited to became part of one of humanity's most challenging exterprese help us chief the unerseen beyond our native plenetary system. Jam us is we ask scrematic in their offorts to detect and sudy planetary systems beyond our own.

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The ADV ways an experiment to text out some of the basics physical needs of autonomy. Janzen says Already some of the hardware is obsolited. Belowed has to go ensembles to do the i samdry and the caprule and a vehicle in the true some but a true mit a vehicle in the true some. But a true mit as to be pulled.

But the ADVInities is strength as a descrition of new deeps settletic graph gapted the physical locativast new minip Velon the charge of the settletic settletic strategetoxing architecture that were constrained as trategetoxing architecture that were sometimes stated of Popple cord. If is to have then anotherize charged in hand sometimes that of Popple cord. If is to have then anotherize charged in hand NV has been acceptations of the wey it locals. The contrasts that is more reporting a transmission of the settletic settletic that a house beneficient were average of the sortical contrast.



effects—they are important. They should be integrated by the division. That is not as archestration, that is performance. And performance is everything. There are ontain momenta is films, cartainly in Block Assess: where the backgotund whother it be a figure or landscape, is just as important with a actor?

With its result uptus argument are well as the second uptus argument are well as the second uptus areas are as a part of the second uptus areas are and the second uptus areas are and the second uptus areas are areas areas areas are areas areas areas areas areas are areas areas areas areas are areas areas areas areas are areas areas areas areas areas are areas areas areas areas are areas areas areas areas areas areas areas are areas areas areas areas areas areas areas are areas areas areas areas areas areas areas areas areas are areas areas areas areas areas areas areas areas are areas are areas are

Mead a style is very specific. Scott elaborates: When he delivers an illustration, you can tak about his subject in great datal bacause you have an inflicted repersentation in horid of you System reasoning is anways based on lact, or industrial specifiction if you will softer it subject or industrial specifiction if you will softer it subject or intercord

Dog by Turbal—synthetics canadsed by gravitorizational effect inform the water the gravitorization of the term there are an effect on the participation and a hest of durit trides, Turball produced the first model caycages spinner and water metal dictations are laboration and the second and the trides that will meanly became an intelectual speculation that water an effect and speculation boot water the cay will look like in forty years. Nathering mate: The first first waters called the second and parts and the second and the first first and waters are an effect and parts that will be a first years. Anothering mater the first first will be a called the second the first first and and the second and and

Bent down, however, care about his characters. Reine Pariner – whoch by the way is the code have be the bordry humer — is warrang written a scient of so antital character. Harrison Ford's role is a bit Marcespan. New porceine cui of a spectral bordrafter. Harrison Ford's role is a bit Marcespan. New porceine cui of a spectra Davide r his is inducation have who patters bo work alone, inducation have who patters abb us on station, who patters abb us on station, who patters abb us on station or should be found to be found and a special register of the found to be found and the found to be found

Biede Bussey's tep loant population also

raises ethical issues in Scott's mind that he cannot totally subsume under his preodcupation with style

This specify decided to proclase in seond-class grantation or specials. The senders, "If could based from the tuber of the perfect both of male and termin speciments to a used all again and thin do tranments to a used all again and thin do tranments to a used all again and thin do trantation that society would probably devices them with subtranes capacitales. You users were special to the complexities the subtrane for the society of the period of the subtranes of the society of the second of the subtranes of the society of the main related in the period to the society out here a huge monitor and the society out here a huge monitor provide problem.

I must say tim not combutable with fecesissue, the conference Missing all m localisations the working all must paid a weaport them you have a clean-out posterior that you immissing times the artisttic synamic strategies and the strategies and strategies and the strategies and the strategies designs the information of the strategies designs the information of the strategies all of have the multilevent of multilessand these. It is employ the ball of our a work on a designed to ball on a ward on a design of the strategies and the strategies of the

A creve regin tas an exercise of the Minn suppossed for initial convents at the Minn supsected bern in the site limit suptemportant support of the support of the support des unables down the steer. I may no memory management of the subport of the memory management of the subport of the memory management of the subport of the memory of the support of the subport of the memory of the support of the subport of the memory of the support of the subport of the memory of the support of the subport of the memory of the support of the subport of the memory of the support of the subport of the support of the support of the subport of the support o

Postrolis Philip K. Diek originally conceived of the androids as fairly emotionloss souliess, inhuman enfilies. Sooil has environted the replicants all quark-superhuman on the spinitual plane as well as in physical provess Style or content? This interactive Will never tell.

But maybe this perultanear range of the maybe to the perultanear of the this peet Watch Although the inspective function against the "marketion" of the Electric Streag movel the soften that utilization costs: pointing out that the new operand this ancourse dispelled the marketion to the standard waterioration to boots. Dock the integrameware with the latin's production Deck was than show? 30 murules of Notice and the standard the later.

The final irony, of course, is the fact that Phil Dok is nower going to see the first full-length concentration adoptation of any off his profile writings. Not only can death sometimes be unspecefied, but if can also be ferrably utility **BO**



12 The map is an outline of those states of the Union that do not touch either an international border a coastine, or a Great Lake



15 Florida Georgie and liness Indexes 14. As a nute will east weat highways in the United Status are own-numbered; thoroughtases that nun generally north and south are given odd numbers. Hence the Wearming to New Mexico Divide 15 1-25

15 Four Corners Monument marks the common point of contract of Colorado. New Messas Areona, and Utah

16 Honolulu is closer to Sen Francisco (2.392 miles) tran to Los Angelas (2.567 miles)

17 Arkansse As shown below its an southerly neighbors ana Masouri, Tennoosee, Mississippi Louisiana Texas, and Oklahorta



16 Jan Thorpe, Perruptisana In 1654 the town of Mauch Churk minamed itself to honor the athlete who hed died the year before

19 Toshini Consequences, New Mexico The popular safe show how more by Paliph Educates othered to hold its testimannexessary proglaminiany of yor benithed would change to mane to Truth or Comwould other to mane to Truth or Comtion Springs New Movice outed Surviciones to accept the other The new memic took effect the next day Advid Tosi S Deal

(If you said-Prink Robye Arkansas give yourself the extra-credit points in 1026 the town of Waters. Arkansas, officially changed to remote Prine Ridge intribute to the fuctional only that was the least of the 142 OAN

popular radio comedy Lum and Abrer (

20. Delaware, Permylvanki, And Qual barely) New Jersey A can be seen hole the mothroast boundary of Delaware in the ato of a crole. The sex was mightly serveyed in 1701 to define the used garded to Welliam Penn by the Duke of York in 1882. The clude granted Penn the land within a content years a 12min attack acoust?



and of ye Horae Dyke at New Castle. The center of the crolle was later defined as the countreuse ages in New Castle. For a very short distance, all of which is over the Datawate River, the arc wise separates New Jerrers and Datasetts.

21 The Salori Sea, Beginning in 1905 thy "Colourdo River broke through some wak levels in southern California and be two years continued Rocking & huge sait much caseling the Salori Salo. It give to 45 square mides before tiles controlled, but seepage and evaporation have reminent to evaporation Do20 organization.

22 The world's shortest named river is the D Rivet Lanceln City Osigon II conmects Davids Lake with the Pacific Ocean and is 440 feet long at low side



23 Lake Humm Manitou's Island, on the Carradian (Ornano) side of the Neis, has mass than 100 freshwater lakes the largest being Manitou Lake. There as several inlands in Manitou Lake, the largest called Repart Island, as approximately 1,500 feet land.

24 No one knows. North and South Dakets the thirty-rinth and forheth offers wore admitted at the same time, and Poardent Bergame Hamson kept the toxics onread while some pool proviemblos

25 Colorado, There is a 1500-repuestmée popten of this state that was not included in the busiliants Parchaste of 1603 or this amenation of texas in 1845. Nor was accourted through treatly with the Lube Indians who appalately never lad claim to it thermolose.

In 1966, according to the Colorado Hatrimat Desity the artis, which includes the own of Becklamidge officially beather part of the United Balaia. The agreement however came with a stpolation that the action of land keep the right to be a file and indegender lengthan their days actiyear. Standards in a "No Naris Land" (setval has been hald there every year in Arquait the balain they every term in Arquait

26 Q

- 27 Planda and Phote Island
- 28 Wyomin
- 29 Utah
- 30 Kentucky and Now Jersey

S1 OfHO

32 Wrangel, Alaska and Agawam, Mesachusets (nair Springfield), have the inghast and lowest top codes of any U.S. orige (99829 and 01001, respectively)

33 Barn Bernnicho Curry Colfornia e antianti- the loggest with 20,115 square miller, it is togget than nice states of the square States. The loader of Hawkin modwell AC 20 square miller Michaelin million of largest than Diskware, with 2007 Michaelin that Disk and the Statest million modify and the Disk and the Statest million New York Davity is the smaller county in New York Davity is the smaller county in Park is about twois this allow for states Cammal Park is about twois this allow of the onthe emission of New Yorks Cammal Park is about twois this allow of the onthe emission of New Yorks Cammal Park is about twois this allow of the onthe emission of New Yorks Onthe New Yorks Cammal Park is about twois the state of the onthe emission of New Yorks Onthe New Yorks Cammal New York New Yorks Onthe New Yorks Onthe New Yorks Onthe New Yorks Onthe New York New Yorks Onthe New Yorks

34 Florida The highest pont in the state just southeeat of Parton, in Welton County, is 345 feet above see level

35 Colorado Ite Iowait spot some 3.350 fast above sea level is the Arkeness Byer in Provers County

36 The highest part in the contiguous satus (Woard Whoney California, 14 494 feet) is about 85 miles from the lowest point in Coath kalley (~ 382 feet). They are both in here Create Deliferria

137 Namest sumber 30 Canada so software of contra Middle Mand get south of Pavala Mand get south of Pavala Mand Set South Set So

38 Resulters of Point Roberts Webfing on imatic drive through Briths Ocurrises to get to the next of their Allike. The north-States is point, thermedic Build performance that evends from the power one of Markeba that evends from the power one of Markeba that evends from the power one of Markeba the Northweet Angle of the Real Like indian Reservation. Galang from there to the next of Markeba models a drive of the next do the robert of the Real Column.

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39 South Dakota In the 1980s the Ins surveyed down term the north masked the one that had been drawn pitrom the south by about a mile. The two lines were connected enyyeag and a signif jog can be seen on any map of South Detoda, where it meets the Montaro-Wooming backeting.



40 Alaska Anatignak Island, in the Aloutan Islands, at 179" west is the westernmost point

41 Applied The 100° line of longitude cuts though the Assubancia and deviatal aliands are tacknowned by the Eastern Herrsphere. Semicoportion Island neter 170° net longitude incl just each of the 180° line, is the essentiment point in the contraction of the technological semicondenties and the semicondent point in the contraction of the technological semicondent in the ontigence states is West (1) Quodidy Head Mare DQ



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Baset as all henry, an implicit possible problem when the sub-structure of the sub-structure of the subtructure Baker based that when much of thructure Baker based that when much of the sub-structure Baker based that subtructure Baker based that sub-structure Baker based showed there was offering these to defaunt and the sub-structure Baker based of the sub-structure Baker based of the sub-structure Baker based that sub-structure protected on a wash-well as in the subcervice distance based on the sub-structure higher of the the sub-structure Baker based based and the sub-structure Baker based based on the sub-structure Baker based based based based based based on the sub-structure Baker based bas

But here may well be a magnetion incomtion or sense engine, in our heads, arrout where Baker in its book produced would be He and a collection, arrout where the Mathat here executly located a concentre of form regression material an oracle of the muse. There could be the magnetic only guess at hear it may regress to an profession magnetic or determal integre produces magnetic or determal integre

It is included to prove this one change of incois a magnetic receptor because was is deinitiated throughout the human body. "Still, It is encouraging," says Welcolt, "that Balow has found non inhumans in the same place is found in mice lung and poppose".

Less encouraging and convincing use other data. For instance, in one chapter Bake regists that because men are prodesting and an analysis of the second prodesting and the second proproduce to because more second prodesting and the support of the second prodesting and the supporting data and second prodesting and the supporting data and second prodesting and the supporting data and second prodesting and the support data and second proteing and the support data and second prosecond proteing and the support data and second proteing and the support data a

Still the notion of a stell serves is teaorating Even more fasonating is Baker's notion that this server can even be improved. "Get nd of those bits of nose, he gave, "mol it and bad." CO



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HOUSEWINES IN SENCE - Cases waters horizertwiser, sawlid grandmällov), tigas too an existence of a souther the average waters horizer with a 125 and the Breaker's Core to find out whaters the average waters horizer and the top's out to calculate the provider overhead that the existence of a south out provider of the calculate the provider overhead that the existence of a new south one in the souther overhead of horizers overhead that the existence of a new south water core sources to be provided and the souther south of a new south water core.

The MARKETING OF ON CAVE, SAGAN—The kinned approximate has decomtering inclusive and —diminishing obligations in the power layer takes and make layers and the Coverse second which a Sogar takes are taken in the second second second second second second second second second bases the tooks and the Coverse second which a Sogar takes are taken in the second second second second second second second second second bases the tooks and the coverse of the second second second second second bases to the second seco

LOREN BEELEY SLOST ADDIEDOCKS — For most trail 20 years this maxward and opticities of an annual provide and an annual provide provide provide provide to mainter any strain the public provide provide provide provide provide the strain provide the public provide provide provide the provide the public provide provide the public provide the provide the public provide the public provide the provide the provide the public provide the public provide the public public provide the public provide the public public public public the public public public public public the public public public public the public public public public public the public publi

ERCTION—In "The Accelent," by Polish science-factori writer Standaw Licz, a recour party is organized to search for a holo think has variantled. Howard Wildow, who sciel a Natolia Award for his scient, "The Ugly Chickers," has writen another werrar, like at the Wild " about tracic and politics the write her might have been.



renaissance in rocking chars what she prescribed one to app Komedy's acting back in the Oval Other Planst Claims Gould shi on asswed-all char instead of a prins bandh Bobby-Richter instead on a Earnes other for a work chess charmoniting game against Brait Spasisy. Line shoes: chars should be the proper fit for thar individual purpore

Here are screw other seats to match funcban as well as the human form

The Bodysons, developed in Japan is a muscal char lines abulkin sund bytem test baraly plays the musc through the body using bone conduction to enhance the base response. The Bodysone system is available in easy chairs, office chairs bar spots or simply customs.

Charago-based architect Davy Bonner's weatable often is a minimal seeiing concept the connexts wright of a par of preted leg braces that are strapped to the call. The utilizepristic often relow people onthe units of clown. But all sets has in more senses application, as in ortholic device to orbitine writes.

Amsteur stimptom John Rugs, of Kenmeen New York, ngged himself a chara field is a dutail y a ministrie observatory. The air toperne's char hers is built in Makscope a cashioned headrast, and is foot controlled azenuth adjuster so that Rigs can scalin the heyvens in complete comfact without wer steam Dom this soat.

A high facil buttering clear hain Century Manufacturing Comparis in Availab. Nobrases allows Weblern extrem to do whe bugglast extrement in more budget form any other than a spone position in uprofit esther than a spone position in formal since the troussessue of wealthy women other included particle with a social providing performed in statemarsial for their legars. The modern statemarteed version of the last and statemark of high

A group of physiotherapists in Norway determined that the healtheat way to all is on your knees. The result of their research is the senies of kneeling Balaria chairs, masked by HAG USA of Chocoo

To see just what a start is drag or Micros Arcan Ard Murae Bau III should not be a support with 2 course present and the Arc Mark Murae III should be coursed – term should be to be the should be the coursed – term should be to be the should be the and the should be any and the should be the should be any and be the ultimeter bol in degraged and any and be the ultimeter bol in degraged and any and be the ultimeter bol in degraged and any and be the ultimeter bol in degraged and any and be the ultimeter bol in degraged and the analysis of the and the should be the should be the should be and the should be any and the analysis of the an

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EARTH RING

STARS

By Richard Levine

In Versient they are called (stor clurg) Australians isourcement as they, demonds ' And in Computine Italy and depined as gravitation is anti-centrary Baddhat sample. They amplisses, thereic autoles available and automation as features appropriate and the ALO Needs, a gravitypical and the ALO Needs, a gravitypical and the ALO Needs, a superhytocial and the ALO Needs, a automatic and an anti-centrary and the automatic and an anti-cent charge of clanate millions of years in the pained a centrary paint

O Kredic between that some 34 million years signitisme was a powerful solotanic ourprion on the moon. The force of it period makers likely to the moon's weak grantalized by the solution of the believe of releties (which contrast from a likely too tracking moon in the obstance) is the oparity of approach by Earth is grantly and wisped microstrower the oparity moon was a solution of the oparity of

In time the randomly orbiting cloud of textutes collapsed into a flat, gauzy sing of carticles measuring approximately 7,000 miles welds but a mere to Dayada thisk. This min, D'Nobia dais, at a finde dott of about 8 700 miles would have cast an exercise an about the final of the initiabitisting out the surv whenever it moved above of below the registor. The caud opplan. O'Norshe raye, why there was a subdan odd agoli on Earth screep 34 million years ago, a temperature shift that has long mystelian scentrains.

Of Keels theorizes that the ring listed between 100.000 and 1 million years between the could and the paintoles which Of Keels says respectively and the paintoles include an enormous deposit an even called the Green North American Blawm heal it barries the Carloban, the carried Pacific and parts of the instan Geam Cherneral analyses that the instan data uncertained analyses with the time the uncertained calls and the says of the uncertained calls with the time of the uncertained calls call and the uncertained calls call the says of the says of the calls of the analyses of the says of the says of the analyses of the says of the analyses of the says of the analyses of

The traditional scientific explanation for technics is that they are bits of fused glass formed when asteroids and meteorities hit the earth. O Keels sign, however that report chicovones have challenged this



A lunar volcans, the the pro-may have been the cause of a preductors ong around Farth Ma. (2003)

theory A learn of respectively who analysed wiskes loand the particles contained taxoes of inform, a graps the whore realistic element often present mestationeristical bodies. But they found that the particle factorial contain other elements usually present in deep-spece celematal bodies (like metacotrias "this clean that texture leaf celemana of the oby. (75 celemata) bodies like onto some any distance onther every form with that the moon."

He interest is lettere begin after the main a sub yob potanist J. A. Wolfe, who incovered evidence of a subdam 35- to 40 signese activities in Edmits thempschure by above glaint foosite from the stewart which about 54 million years ago activities head about 54 million years ago activities activities water the plants become activities water begins become activities and accesses and activities water that the vide activities and water water that an excess for the tompsch activities and activities the activities and activities and activities and activities activities and activities and activities activities and activities activities activities and activities activities and activities activities and activities acti

These is also abundant evidence that the month has been viciaiscular, alchive Searnet in two observed orughnose and the viciaity of operator the annual viciai the observed on the property of the annual observed on the property in viciai acception of the annual viciai property of the annual viciai recorder what they fought viciai acception the annual angle of an end Antarchous The first manual light of the capacity for an angle of the sector of annual capacity of the annual angle of an end annual capacity of the annual light of the capacity for an angle of the sector of annual capacity of the annual light of the capacity of the sector of annual sectors and the sector of annuals as annual light of when a patch annuals. If sector is the sector of annuals is a sector of the sector of annuals is a sector of the sector of annuals is a sector of the sector of the sector of annuals is a sector of the sector of the sector of annual sector of the sector of the sector of annual sector of the sector of annual sector of the sect

The earth gradual evolution has been velently stranged on service occasions. What actual these disciplions remains upgetains. For exemption, the work responsible to the exercision of the cinopaura spense of emittien years rage has not jet been replaned auxiliationity. However O Kadau claims there is exclosion suggesting these range may have termed accord the auxiliation of the field.

More and more people have come to believe that what caused the estimation of the drastaut was the same thing that caused this cold speit. O Keels says And if prother ang descrit form schedule in the next sense of miscan dyeas. The mode, would be surprised CO



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Before Columbus ever set sul it took hen more than 10 years to persuade the autoretise back his proposed voyagen had mere it ways the sproonce of these rules that almost prevented Columbus from taking the unknown coarse and discovering America.

Today a sender lock of understanding is preventing America fromristly harvesting the energy and material resources of outer space Even though we know these information and provider

A.

The space shuttle will rever be fully utilize in this base-banes budgetary climate.

Scientisis and economists say we could build industries and settlements in outer space for thousands of people that would make visibile products using the enormous distorming these councils

Bit a major government report concluded that America is in danger of losing its abstry to take fail informage of this new incense.

Stackes show that the space program has been one of the most productive researcents the United States has ever made. And it containes to be one of the best prospects for sustained economic growth. Already communications meetines high brang education. Information and alternatureness to malions of people around the weak! And weather more and other resource and money Medical compare rate descinance technology have also descinance and have also descinance and have also descinance and have also descinance also also descinance also also descinance also descinance

PACT The Soviets hold the world record for the longest stay in space 87 month) And the Rassan goal wa pressee(f) inhabitied space stance by 1983. For the Soviets indusives and colonias in pace adure whe post logical step. Yet the basic Startife is two years behad schedule and is facing see Hudget cuts

You can help America and the world become more acrive in explaining and developing the space borner by becoming micolved with Unimp For SPACE, a non-profile educational organization

A major mak of locus of UNITED FOR SPACE is Congress and the Position Your support meeting these key government papele with these key government papele with the and development. Without their individual development without their individual to the set of their individual to the set of the American is proceed program.

Perhaps yos saw Star Way Star Test or The Empir State Back Maylor you saw them several times And maybe you we speet more down a few dollars to play Space Twisters

We have all probably spent many

dollars to be entertanced and to structure our imaginations about space explosions. In order for ou detains to become reality though we must unite to create a strong space program.

Space holds betweendous premise for America and the world. But our space future is still very uncomean NASA is budget is banely 33% of what it was in 1965 Transfirst for our space future has not even kept up with Inflaced?

We think that is wrong, if you think is wrong write the President your Senators and Representatives to still them so. And you us in the effort to speed the development of other space.

Use the coupon. Your participation-united with others-can help make the difference

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PHENOMENA

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51

Geography 101: You are here



By Scot Morns

What and Xanna see, boys, what did Torata see?

She saw what Arkan saw boys, she saw what Arkan saw

have shugh does to wargh?

Stoweight a Washing ton, boys, she wanting a Washing ton

What and Dalla wear boys, what did Dalla wear?

- Trad tional song

Beyene class the north deals with experiptly -- north esponts (abtook isratios, but with the location) (abtook isratios, but with the location) (abtook but about the state of the stream of the state of the stream of the stream of of an the good 60 U.S. of A Carle states is and the cursteen about for append to the state is an of screen stream of the stream of append to the state is an of screen operation of the stream of the stream of points of the stream of the stre

Boory yourself victoriting to the protectification provides permittating yourself for wong generates proceeding to partials. A performation across 60 but your may go to this haad of the class with any laity hafter than 25 some quantizers in a quase pergraphic jaited and cary names for exemption. Dress der with last that fave accepts are likely to know offland. Just chock the accesses to any farthermal. The amounts begin on the rand page. So no perform

GEOGRAPHY LESSON

1 Which state of the United States borders only one offer state? (1)

2 What two status border the groatest number of other status, and how many neighbors down each have? (2)

S. Which siste or status have boundaries formed only by straight knos? (1)

4 Which state or atuaxy have boundaries that are formed with no streight lines? (1) 152 DMNI 5 What these states are named after formous women? (3)

6 Which state extends for ther west -- Witging or West Virgins? (1)

7 Which city is farther west - Banc, Nevada, or Los Angeles, California? (1)

 Which place is farther dati — Washington Island, Wisconsin, or Pensadola Rostda? (1)

9 Which is the largest state east of the Mission ppi River? (2)

10 What state has "Home on the Range" as its state solid? (1)

11 What large U.S. city has the same name as an an mill? (2)

12 What does this map represent? (2)



13 In an elohaberoal ordering of the 50 status there are only nor instruction which status from an eligibation on the list are also adjacent on the map. Name the two pairs of states that we meighters both alphabeterally and geographically (2).

14 Interstate highwaye 25 and 70 both crops the entrie state of Colorado and both pass through Cenver On which of these two highwaye would you travel from Weatmon to New Mexico? [1]

15 There is one spatin the United States where it is possible to stand in four states at once. Name the states. (2)

16 Iz Hanokulu oloset to Los Angeles of to San Francisiot? (1) 17. A contain state — call s X — borders in so other states: By choosing the control starting points it is preside to travel due south four X mite sech of the six adjuiring states. What state eXX, and what are its as souther the additions? (3)

18 What LI S. city is named after an Otympic athlete? (1)

19 What U.S. only is named after a radio of TV abov? (1)

20 What states share a cominon boundary that is the arc of a crole? (No. we renot counting lines of leftuide or langtuide as circles 1(2)

 What great American Isla circl not exact in the 1800s but was formed by accident in the twentieth century? (2)

22 "The world's shortest river," according to the Guitmust Book of World Records, connects a lake in the United States with the ocean. In what state is this shortest river? (1).

23. The photograph below shows part of the works a largest stand in a teau (7,688 square miles in rares, according to the Guarness Book of Workf Records). On this island is the world si largest take in a take (41 to a square miles who according to Guarness). In what lake are these geographic curatorises to an locard (2)



24 Which state was admitted to the Union tinet -- North Dakota or South Dakota? (1)

25 in one state there is an area that list

28 Whit is the column of the alphones state?(1)

27. Two states have names that begin with two consonants. Name them (2)

28 Name the only state onding in g. (1)

30 Name the two states ending in y (2)

31 This state begins and ends with the

32. What is unique about these two Agewarn Massachusetts (1)

33. Bank the following in alea, from

state in what state is the invest bothout

38 Approximitely how far apart (in mées)

37 Approximately how many states of the

the country in what states are these two

39. It is a cartoonal a clicite to show two true in the 1680x when the bonter of one

longitude from Greenwich England/? (1)

41. In what state is the easternmost spot

missing words. For example, "26 = L. of the A would translate to 28 - Leiters of

Athough a few equations may have

1 = Wheels on a Unicycle

>1 = When to Skin a Car

7 - Wonders of the Ancient World

- 14 = Days in a Fortright

24 - Blackbrids Bakert in a Part

50 - Ways to Loave Your Lover

Chackerboard) This courts only the

sides up to 8x87

90 - Degrees in a Right Angle 200 = Dollars for Passing Go in Monopoly 330 - + Perfect Game in Bowlins 1,000 = Words That a Picture is Worth

1 Mane borders only New Hampshire 2 Missouri and Techannee each touch

3 Colorado, Utah Wyoming 4 Howar

Wroenes, both named after Endendis

7 Reno is faither west

11 Buffalo The city was not named after the animal however According to Willard



LAST

By James Randi

 The Pentagon spent about \$6 million to close the dreadod psi gap. Same of the money went to a propert examining whether atomic weapons can be medio to exclode in the past \$ Green spectra is they to areculate the sprang of the area of the second second second after the payohe apportant who gave up provide the second second second second provide the second second second second provide second second second second materials. Are that marks suggests the materials are isotropic that platter base materials are isotropic that platter base materials of a charge charge platter base special to cognition to adding mail to the special to cognition to adding mail to the special recognition of payohers to the state of the special recognition of a special special to the special recognition of a special to the state of the special recognition of a special special to the special recognition of a special special to the special recognition of a special special to the special recognition of a special to the special recognition of a special to special special special special special to special s

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And in the Spaces Award Dategory there is the largest and space waveled as Galact I means, who wild had as he ofter of 2000 Data to anyone who posted a placetine to Bandward News and placetine that to conclude the was a parameter posterial to a conclude the was a parameter posterial to be conclude the was a parameter posterial to be conclude the was a parameter posterial to be conclude the was to parameter posterial to be conclude the was a parameter posterial to be conclude the was to parameter posterial to be the other to parameter posterial to be the parameter to parameter posterial to be the parameter to be basis or notive

And now to entrouting the writtens. The envelope, please

In the Performance Galegory Tamara Root, for pure brittel

is the Funding Category No contest, the Persiance

In the Academic Galagory: Charles Tarl for such a statiting depowers-

And in the Nedia Classics, NSU's Note Show for a coupling and then designmenting the Rend hose. (The Nedicity English) which set the standards to the category (inally had to be interned as is contained to give the competition after chance at the prior).

As usual, each of the winners has been ryprived totapathically of his or her oward. As usual, none have roppied DO