

Fluid Concepts and Creative Analogies By Douglas R. Hofstadter **Nonfiction Fluid Concepts and Creative analogies definition** Some chapters are.

Symbolic analogy questions and answers

Douglas Richard Hofstadter is an American scholar of cognitive science physics and comparative literature whose research focuses on consciousness thinking and creativity. **Fluid Concepts and Creative Analogies nonfiction best** Hofstadter is College of Arts and Sciences Distinguished Professor of Cognitive Science at Indiana University in Bloomington where he directs the Center for Research on Concepts and Cognition which consists of himself and his graduate students forming the Fluid Analogies Research Group (FARG). **Fluid concepts and creative analogies epub free** He was initially appointed to the Indiana University's Computer Science Department faculty in 1977 and at that time he launched his research program in computer modeling of mental processes (which at that time he called artificial intelligence research a label that he has since dropped in favor of cognitive science research). **Fluid Concepts and Creative Analogies nonfiction best** In 1984 he moved to the University of Michigan in Ann Arbor where he was hired as a professor of psychology and was also appointed to the Walgreen Chair for the Study of Human Understanding. **Fluid Concepts and Creative Analogies booker** In 1988 he returned to Bloomington as College of Arts and Sciences Professor in both Cognitive Science and Computer Science and also was appointed Adjunct Professor of History and Philosophy of Science Philosophy Comparative Literature and Psychology but he states that his involvement with most of these departments is nominal. **Fluid Concepts and Creative Analogies science news** At the University of Michigan and Indiana University he co authored with Melanie Mitchell a computational model of high level perception — Copycat — and several other models of analogy making and cognition. **EBook Fluid Concepts and Creative analogies definition** The Letter Spirit project implemented by Gary McGraw and John Rehling aims to model the act of artistic creativity by designing stylistically uniform gridfonts (typefaces limited to a grid). **Book fluid concepts and creative analogies pdf** Other recent models are Phaeaco (implemented by Harry Foundalis) and SeqSee (Abhijit Mahabal) which model high level perception and analogy making in the microdomains of Bongard problems and number sequences respectively. **Fluid concepts and creative analogies book free** Hofstadter collects and studies cognitive errors (largely but not solely speech errors) bon mots (spontaneous humorous quips) and analogies of all sorts and his long time observation of these diverse products of cognition and his theories about the mechanisms that underlie them have exerted a powerful influence on the architectures of the computational models developed by himself and FARG members. **Fluid concepts and creative analogies book pdf** All FARG computational models share certain key principles among which are: that human thinking is carried out by thousands of independent small actions in parallel biased by the concepts that are currently activated; that activation spreads from activated concepts to less activated neighbor concepts; that there is a mental temperature that regulates the degree of randomness in the parallel activity; that promising avenues tend to be explored rapidly than unpromising ones. **Fluid Concepts and Creative Analogies nonfiction best** [F {site_link}](#) Readers of earlier works by Douglas Hofstadter will find this book a natural extension of his style and his ideas about creativity and analogy; in addition psychologists philosophers and artificial-intelligence researchers will find in this elaborate web of ingenious ideas a deep and challenging new view of mind. **Fluid concepts and creative analogies book download** 528 In this book Douglas Hofstadter and his colleagues from the FARG / Fluid Analogies Research Group give away details of their findings on computer's ability to make analogies creativity and what is called "fluid concepts". **Philosophy Fluid Concepts and Creative analogies worksheet** For example the program called Copycat operates on letters only and is able to give answers to problems of the following kind: Suppose the letter-string abc were changed to abd; how would you change the letter-string ijk in "the same way"? This does not sound like much but it is a very interesting and wide field if you take a closer look at it. **Fluid concepts and creative**

analogies book pdf This video is from 2015 which leads me to believe that the themes and general architecture of the programs described in this book are still relevant and my time reading it wasn't wasted after all. **Fluid Concepts and Creative Analogies science news** 2) Change everything to abd so that ijk becomes abd which is even less subtle or elegant (at least to me it might be different for the current US president)3) Change every occurrence of c to d so that ijk won't change at all. **Fluid Concepts and Creative Analogies ebook reader** Here's another problem: Suppose the letter-string abc were changed to abd; how would you change the letter-string xyz in "the same way"? This is rather similar to the problem above but it obviously has some obstacle built into it. **Fluid Concepts and Creative Analogies philosophy** It then slipped these concepts and instead of going up from left to right and change the last letter to its successor it is now going down from right to left and changes the first letter to its predecessor. **Fluid Concepts and Creative Analogies science news** There's a lot of talk about AI and "intelligent machines" and how those might overcome humans in the future the so called Technological Singularity that is the time when a artificial superintelligence emerges. **Nonfiction Fluid Concepts and Creative analogies** Today there are "neural nets" of cause and "deep learning" and there's great progress in these fields but to me and to Hofstadter as well those have little to do with intelligence and human cognition. **Fluid concepts and creative analogiesb bbc news** This is only the simulation of a rather low layer in perception (the neurons) and a neural net seems even less aware of the concepts it's dealing with than any ordinary program like for instance a word processor whereas programs like Copycat & Co seem to be more like the real deal when it comes to actual thinking agents. **Fluid concepts and creative analogies science a level** I lavori si basano sul cercare di vedere come un sistema possa riuscire a trovare delle analogie su ambienti molto specializzati: ad esempio trovare l'elemento successivo di una serie di numeri oppure rispondere alla domanda se abc diventa abd allora cosa diventerà bcd? o ancora come riuscire a disegnare le lettere mancanti in un alfabeto costruito con una serie di segmenti. **Fluid concepts and creative analogiesl lesson plan** Though Hofstadter warns in the preface that this book is meant to contain overlap between the chapters I found the repetitive nature of this book a bit of a roadblock to someone who was determined to read it cover to cover. **Fluid concepts and creative analogies pdf** As neural networks continue to be the hot topic in today's ML/AI communities Hofstadter's criticism that there are merely quite skilled in manipulating language and not truly understanding the concepts/data they work with is worth thinking on. **Fluid Concepts and Creative Analogies ebook reader** To use his technical jargon they succumb to the ELIZA effect (presenting the illusion of being more intelligent than they really are) and would surely not pass the Turing test! However since FC + CA was written 30 years ago his concept of neural networks is a bit outdated. **Fluid concepts and creative analogies war 1995 der erste** It would be interesting to hear his take on the modern Generative Adversarial Networks as Hofstadter makes the bold claim that connectionist networks will never be able to generate unique compositions in the style of known works! Hofstadter proposes architecture that [he claims] does not fall prey to the weakness of the ELIZA effect. **Science fluid concepts and creative analogies pdf** Whether or not Hofstadter is truly successful in his claim of higher intelligence is up to the reader (though I think I would grant that the answer is yes) his unique way of thinking execution and presentation is a welcome beam of light in academia. **Fluid Concepts and Creative Analogies science news** I found that chapter 3 the description of the Jumbo model to solve anagrams to be of most interest since it contained one of the more detailed technical descriptions of its implementation (spoiler he does not use an exhaustive brute force method to solve!). **Fluid Concepts and Creative Analogies epub air** His proposed parallel terraced scan + idea of many minute stochastic decisions creating a culminative deterministic effect is quite flexible and could be used in many areas of research outside of his own. **EBook Fluid Concepts and Creative analogies definition** Hofstadter is faithful to his primary goal of modeling and respecting the emergent properties of human creativity in a system and not just focusing solely on the end product of his programs. **Fluid concepts and creative analogies book download** Much of his critique on neural networks stems from the fact that they do not respect the central feedback

loop of creativity that humans are gifted with and do not clarify the inner workings of the human mind. **Fluid Concepts and Creative Analogies nonfiction best** Several interesting projects are detailed and discussed in this collection and I largely agree with Hofstadter's assessment about what constitutes real decision making in a program designed to carry out some intelligent task such as analogy making but the projects and their underlying architectures are all quite similar and thus grow a bit boring to read about by the end. **Fluid concepts and creative analogies book download** At times I'd lament the level of detail thinking I don't really need to know how this specific program does what it does to understand how human minds identify the key concepts underlying novel analogies; but in hindsight the level of depth is really spot on -- without it the whole project would have been too high-level and hand-wavy and unconvincing. **Philosophy Fluid Concepts and Creative analogies worksheet** Even generative connectionist models which might be considered creative are vastly different from the kinds of models discussed in this book which really try to get at *how* human minds originate ideas. **Fluid Concepts and Creative Analogies science news** Unless novel ideas and analogies are truly randomly sampled from complicated distributions in our brains then human creativity is *not* well-modeled by generative networks (though indeed it seems at best to be well *imitated* by them). **Fluid Concepts and Creative Analogies kindle cloud 528** A collection of papers authored by Hofstadter and the members of his Fluid Analogies Research Group this book presents the results of many years work in cognitive science research,

Fluid Concepts and Creative Analogies science news

Anche se la prosa di Hofstadter è sempre piacevole e infarcita di giochi linguistici che ho per quanto possibile conservato oppure adattato nella versione italiana. **Fluid concepts and creative analogies book free 528** Today I officially cry UNCLE! I read and skimmed 273 of 491 pages. **Fluid Concepts and Creative Analogies kindle paperwhite** The author builds a series of computer programs to solve rigorously defined but not automatic-t-solve logic games: **Fluid Concepts and Creative Analogies philosophy** We get to play these games with pencil and paper but do not see the actual code. **Fluid concepts and creative analogies nonfiction ks2** There is a lot of discussion of the problems other AI researchers have chosen and whether the solutions they have come up with constitute AI to any degree: **Fluid concepts and creative analogies book pdf** He is best known for his book Gödel Escher Bach: an Eternal Golden Braid first published in 1979 for which he was awarded the 1980 Pulitzer Prize for general non fiction: **Fluid concepts and creative analogiesb bbc teach** Hofstadter is the son of Nobel Prize winning physicist Robert Hofstadter. **Fluid Concepts and Creative Analogies science news** Douglas grew up on the campus of Stanford University where his father was a professor, **Fluid Concepts and Creative Analogies philosophy** Douglas attended the International School of Geneva for a year, **Fluid concepts and creative analogies war 1995 der erste** He graduated with Distinction in Mathematics from Stanford in 1965, **Fluid concepts and creative analogies epub free** in Physic Douglas Richard Hofstadter is an American scholar of cognitive science physics and comparative literature whose research focuses on consciousness thinking and creativity. **Fluid Concepts and Creative Analogies epubor** He is best known for his book Gödel Escher Bach: an Eternal Golden Braid first published in 1979 for which he was awarded the 1980 Pulitzer Prize for general non fiction: **Kindle Fluid Concepts and Creative analogies worksheet** Hofstadter is the son of Nobel Prize winning physicist Robert Hofstadter: **Fluid Concepts and Creative Analogies kindle direct** Douglas grew up on the campus of Stanford University where his father was a professor: **Fluid Concepts and Creative Analogies philosophy** Douglas attended the International School of Geneva for a year. **Fluid concepts and creative analogies epub download** He graduated with Distinction in Mathematics from Stanford in 1965, **Fluid concepts and creative analogies war 1995 der erste** In April 2009 Hofstadter was elected a Fellow of the American Academy of Arts and Sciences and a

Member of the American Philosophical Society, **Fluid concepts and creative analogies book download** Hofstadter's many interests include music visual art the mind creativity consciousness self reference translation and mathematics: **Fluid concepts and creative analogies epub free download** He has numerous recursive sequences and geometric constructions named after him: **Book fluid concepts and creative analogies pdf** The Copycat project was subsequently extended under the name Metacat by Hofstadter's doctoral student James Marshall, **Fluid Concepts and Creative analogieschluss definition** Fluid Concepts and Creative AnalogiesOne of the denser of Hofstader's books, **PDF Fluid Concepts and Creative analogies definition** Not light reading but no more difficult than Godel Escher Bach: **Nonfiction Fluid Concepts and Creative analogies definition** Took me a good while to finish but am very glad I did, **Fluid concepts and creative analogies pdf** There's a couple of programs the "FARGonauts" developed over the years, **Fluid Concepts and Creative Analogiesl list** The different chapters had been published before in science magazines but received an overhaul for this book. **Fluid concepts and creative analogiesi in english** There are also newly written prefaces to each chapter and a very interesting epilogue called Creativity Brain Mechanisms and the Turing Test. **Philosophy Fluid Concepts and Creative analogies worksheet** The book was first published in 1991 which in computer terms is ages ago. **Fluid concepts and creative analogies pdf** One can assume that in the meantime many new insights have been uncovered. **Book fluid concepts and creative analogies pdf** Nevertheless I think the concepts and ideas presented here are still relevant today. **Symbolic analogy questions and answers** There are some intriguing approaches to imitating human cognition into a program. **Fluid Concepts and Creative Analogies science news** In particular the formation of analogies through programs and the "slippage" of concepts are very revealing, **Fluid concepts and creative analogies pdf** The systems presented here all operate on so-called micro-domains that is on tiny sections of the virtually infinite real world. **EBook Fluid Concepts and Creative analogies meaning** The general idea is also addressed by Melanie Mitchell a co-author and developer of Copycat in this video of a lecture which I highly recommend:<https://www>. **Fluid Concepts and Creative Analogies nonfiction best** The problem above looks like some question from an IQ test but in fact it's not. **PDF Fluid Concepts and Creative analogies definition** There is no right or wrong answer there's only answers that are more elegant and "deep" (one of Hofstadter's favorite expressions) than others, **Nonfiction Fluid Concepts and Creative analogies definition** Humans when faced with this sort of problem usually start building analogies that help them find a rule behind the given letter-change and apply this rule to the other string: **Philosophy Fluid Concepts and Creative analogies meaning** In this case there are several possible rules one can think of: 1) Change the third letter to d so that ijk becomes ijd which doesn't seem very appealing: **Book fluid concepts and creative analogies pdf** This I think seems a little better than above but is still not satisfactory: **Fluid Concepts and Creative Analogies epub file** 4) Finally; change the last letter to its successor in the alphabet so that ijk becomes ijl, **Fluid Concepts and Creative Analogies epubublishing** But why is that the case? Because of the analogy you discover between the "rising" string abc and ijk and the knowledge that d comes after c in the alphabet: **Science fluid concepts and creative analogies pdf** The concept "successorship" doesn't work for the last letter of xyz anymore. **Fluid Concepts and Creative Analogies science news** Copycat (at least some of the times) offers wyz as an answer. **Fluid concepts and creative analogies epub download** This might look strange at first but it's actually a rather deep answer, **Fluid concepts and creative analogies epub free download** The program has discovered the rising sequence of letters a-b-c and the change to the successor in the last position: **Fluid Concepts and Creative Analogies ebook3000** How is that for analogy making? There are a couple more programs like that presented in the book. **Philosophy Fluid Concepts and Creative analogies meaning** This is all done without any maths or actual program code. **Fluid concepts and creative analogies epub download** So laypeople should have no problem following Hofstadter and his colleagues' reasoning: **Fluid Concepts and Creative Analogies epub reader** This was actually the first book I read about

artificial intelligence AI and the possibility to mimic human cognition. **Fluid concepts and creative analogies book free** I think this scenario is still far down the road if it comes at all, **Fluid Concepts and Creative Analogies nonfiction best** Unless some very clever people have some very clever concepts hidden somewhere in a drawer I don't think computers will achieve human intelligence anytime soon. **Fluid Concepts and Creative Analogies science news**

A little tidbit: It seems that Fluid Concepts and Creative Analogies was the very first book ever sold by Amazon: <https://en>, **Fluid concepts and creative analogies book download** This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3, **EBook Fluid Concepts and Creative analogies worksheet** 528 Non è facile commentare un libro di cui sono il traduttore e nel quale sono citato e ringraziato nella postfazione, **Fluid Concepts and Creative Analogies booking** Il libro è di lavoro nel senso che è formato da vari capitoli che raccontano i progetti portati avanti dal gruppo di ricerca sulle scienze cognitive guidato da Hofstadter: **Philosophy Fluid Concepts and Creative analogies worksheet** Tutti questi problemi non hanno una soluzione univoca nemmeno per noi e costituiscono pertanto una sfida che a volte riesce e altre volte no: **Kindle Fluid Concepts and Creative analogies worksheet** Per chi non ama questi temi il libro può pertanto risultare pesante verbatim papers which the author has previously published in scientific journals. **Fluid concepts and creative analogies epub free download** It is heavy sledding and I did not find enough illumination for my feeble intellect to invest further time. **Fluid Concepts and Creative Analogies kindle direct** 528 I picked up FC + CA after being completely blown away by Hofstadter's acclaimed GodelEscherBach, **Fluid concepts and creative analogies epub free** Though the nuances found between each research project and how a group of core ideas could be applied in a multitude of different variations was of some interest. **Fluid concepts and creative analogies book free** I decided to ultimately promote this rating to 4 stars over 3 stars because of Hofstadter's commentary on hollow connectionist models. **Fluid Concepts and Creative Analogies science news** Is this true? 528 Thought about giving this 3 stars but because I find Hofstadter's writing so readable I bumped it up to 4: **Nonfiction Fluid Concepts and Creative analogies definition** This does serve to reinforce many of the key ideas of these projects but as a reader it became tedious to finish: **Fluid concepts and creative analogies book download** I feel as though I could have taken just as much away from this book if I had read a handful of chapters instead of reading it from cover to cover. **Fluid Concepts and Creative Analogies science news** 528 How to build a fragment of something that does something quite a bit like actual thinking at least about analogy puzzles: **Book fluid concepts and creative analogies pdf** 528 Provocative exploration of computer models of human creativity, **Fluid concepts and creative analogies epub free download** Given today's strong emphasis on perception within AI Hofstadter's book is a refreshing departure into the mysteries of mental fluidity and analogy key bellwethers of human intelligence, **Philosophy Fluid Concepts and Creative analogies worksheet** This book is a collection of articles by Hofstadter and his fellow researchers that describe a series of computer programs developed to model the mechanics of analogy-making and creativity. **Fluid concepts and creative analogies epub download** This work stands in contrast to much modern-day work in AI (like deep learning) which importantly does not attempt to model human thought and perception: **Fluid Concepts and Creative Analogies pdfescape** Though much influenced by human neurology these systems are developed to achieve some particular engineering task (e, **Fluid Concepts and Creative Analogies nonfiction best** recognize stop signs or translate spoken French to English) not to emulate any particular human mental characteristic, **Fluid concepts and creative analogies epub free download** It seems likely that Hofstadter's take which is utterly original and skirts the boundaries of traditional connectionist and symbolic AI is the more believable proposal. **Nonfiction Fluid Concepts and Creative analogies definition** This work occupies an important (and increasingly less-explored) corner of the AI enterprise and remains a key contribution to the field. **Fluid concepts and creative analogies epub download** Note that I started this book in 2006 and am still trying to get through it, **Nonfiction Fluid Concepts and Creative analogies definition** Douglas Hofstadter is most famous for Godel Escher and Bach and

I haven't gotten through that one fully yet either, **Fluid concepts and creative analogies epub free** He has dedicated his life to unraveling how we think and looked at it from the lens of various fields: physics philosophy biology mathematics and in this novel computer science, **EBook Fluid Concepts and Creative analogies** I'm reminded of a Richard Feynman or even a Robert Pirsig although I think both are probably better writers: **Philosophy Fluid Concepts and Creative analogies worksheet** Also included are a couple papers pointedly criticizing some other approaches in the field the main criticism being a failure to model human cognition in a realistic way, **Fluid Concepts and Creative Analogies nonfiction best** Hofstadter is always worth reading and this collection is no exception to the rule. The subject is Artificial Intelligence. He spent a few years in Sweden in the mid 1960s. He continued his education and received his Ph.D. He spent a few years in Sweden in the mid 1960s. He continued his education and received his Ph.D. in Physics from the University of Oregon in 1975. Ruminations on thought vs program.youtube.com/watch?v=I1ay-. That's the answer most people think of right away.wikipedia.org/wiki/Amazon.0 Unported License. I picked the book up because I own it. I cannot remember when or why I purchased it. I am making an effort to read the books I own now. We will see how long that can last. However I was admittedly a bit disappointed by this book. Hofstadter at his core is a cognitive scientist.g. 528 Ugh. However I am intrigued by his continued search for I. I appreciate Hofstadter because his breadth is tremendous. 528

