A Picture Is Worth 1000 Words

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An Experiment in Dinosaur Aesthetics

 $Imagination\ and\ Identification\ at\ the\ Limits\ of\ Knowledge$

Chris Wildrick

Chris wishes to thank everyone who filled out the *Picture Is Worth 1000 Words* form, including students in the Foundation Colloquium in the School of Art and Design at Syracuse University, students in the Say Yes! afterschool program at McKinley-Brighton Magnet Elementary School, and the many visitors to his exhibitions and performances at the Redhouse, XL Projects, New York State Fair, and the Museum of the Earth.

A Picture Is Worth 1000 Words is an ongoing project conceived, performed, and presented in multiple formats and locations by Chris Wildrick, ©2008-2010.

This book edition of *A Picture Is Worth 1000 Words* was analyzed, written, designed, printed, and hand-bound by Chris Wildrick, ©2010, and published by INPUT/OUT-PUT PRESS in Syracuse, NY.

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The typefaces used in the body of this book are Arno and **Futura**. The charts also use **Gil Sans** and **Century Gothic**.

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INTRODUCTION

Chris is studying the role of dinosaurs in our culture. Each project in this series approaches this subject from a different angle. *A Picture Is Worth 1000 Words* seeks to find out what we think dinosaurs looked like, and why.

Methodology

Chris gave the participants a booklet that included 5 different images for each of 12 different dinosaurs. There were 5 pictures of triceratops, 5 pictures of apatosaurus, etc.

The participants were asked to decide which of those 5 images was closest to their own mental image of that dinosaur. The specific language is important here--Chris did not ask which dinosaur looked the most "real," or the most accurate, but the one that looked the most like their mental image of that dinosaur.

He then tallied the results.

Chris did this project in several different contexts and with different groups of people. He did it with adults and children at art shows, a science museum, and the New York State Fair. He did it with a large college lecture-style art class. The result is probably one of the largest and most diverse cross-sections of people for any of his projects, and thus the most statistically significant.

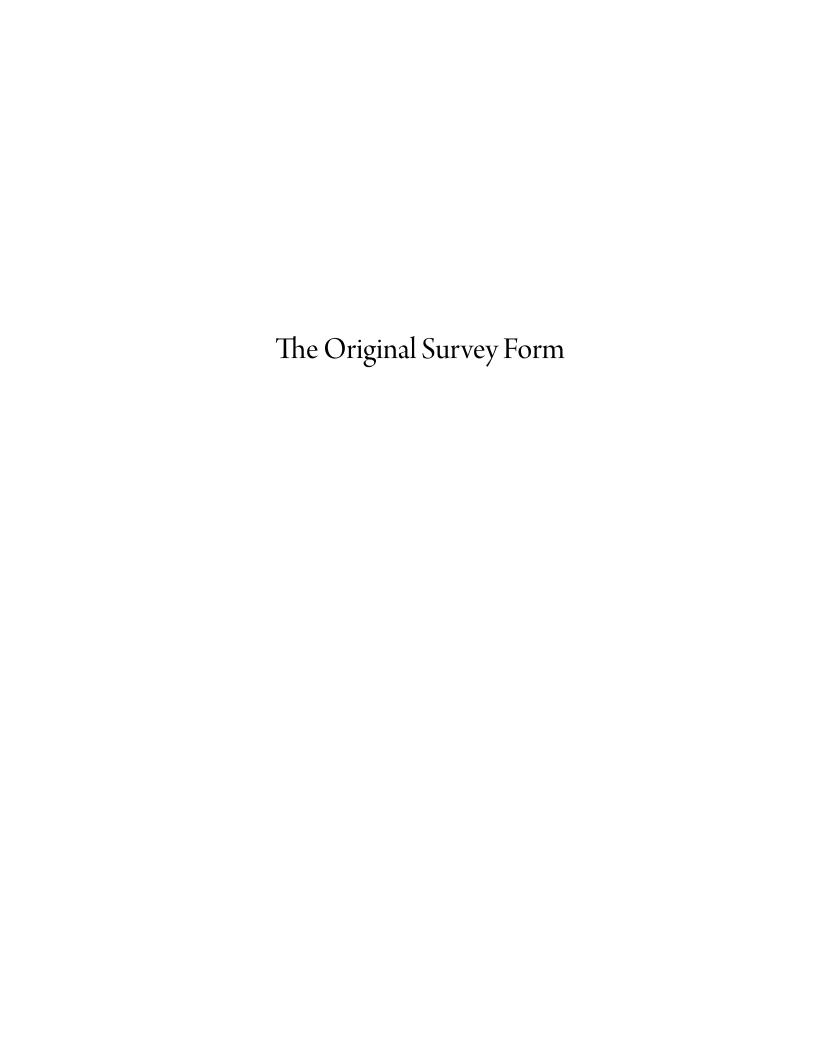
Objectives

The goal was simple--to see which dinosaur images had the strongest connection to the general population, and why.

Chris selected the images for the project so that there would be a wide variety of *kinds* of images--some scientifically accurate, some out of date by a couple decades, some out of date by a century. They were rendered in a range of artistic styles, from highly illusionistic to very cartoonish. They were shown on their own, in realistic backgrounds, and in anthropomorphic contexts. Some were made as scientific illustrations, but most were from children's books, since they are the first kind of representation of dinosaurs that we all encounter as we grow up, and thus should have a strong pull on our psyche. Some were fighting and hunting in a stereotypical dinosaur fashion, while others were just passively hanging out. Some were rendered in bright colors and others in dull colors.

The point was to see which, if any, of these variables influenced people's responses to the "persuasiveness" of the images. Did they respond to the dinosaur itself, or was it more due to the artistic and design elements instead?

The following sections of this book provide the original data supplied through the experiment, then analyze that data for answers to the above questions.



This is the form the participants used to fill out their responses. The following pages show the actual images of the dinosaurs.

Chris used a few different designs for this form, but they were all fairly similar.

The 12 specific dinosaurs Chris used here are more or less the same ones he has used for most of the other projects where he needs to provide examples of dinosaurs (for instance, *Dinosaur High School* or *Skin and Bones I*).

They were originally chosen due to their general familiarity to the public, and because they fill out most of the main branches of the dinosaur evolutionary tree (at least as the general public understands them).

As explained elsewhere, several of these animals are not actually dinosaurs. However, they were included because this project is about the public perception of dinosaurs, and these other animals are obviously lumped in with dinosaurs in the public imagination. Chris often uses this as an opportunity to explain their difference between the various branches of the prehistoric reptile (and dyapsid) family.

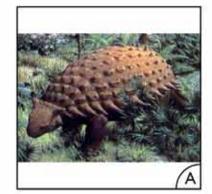
A Picture Is Worth 1000 Words

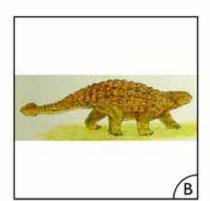
Response Sheet

For each species, please write down the letter corresponding to the image that best represents your own mental image of that species. In other words, if picture A is the closest to the way you imagine an ankylosaurus to have looked, write down "A" next to "Ankylosaurus," below. You may also fill out an optional reply as to why you chose the image.

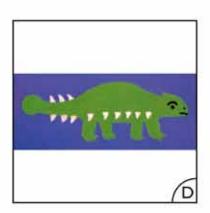
<u>Species</u>	<u>Image</u>	Why did you select this image
Ankylosaurus		
Apatosaurus		
Compsognathus		
Dimetrodon		
Ichthyosaurus		
Parasaurolophus		
Plesiosaurus		
Pteranodon		
Stegosaurus		
Triceratops		
Tyrannosaurus rex		
Velociraptor		

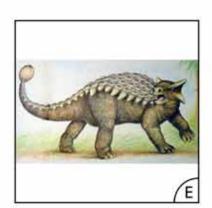






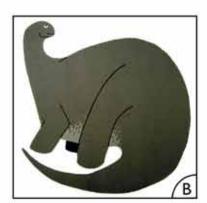


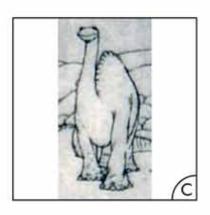




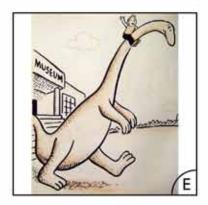
Apatosaurus



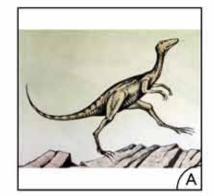


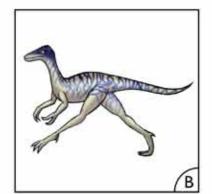


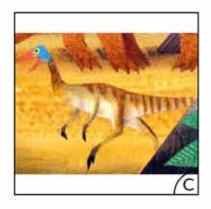


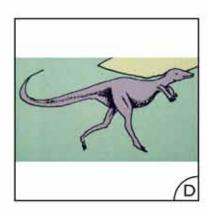


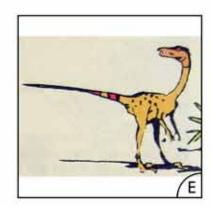
Compsognathus



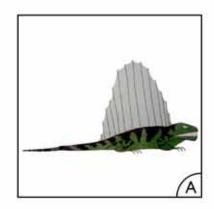






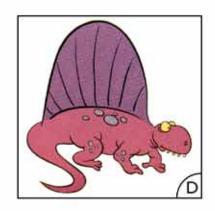


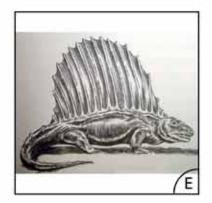
Dimetrodon



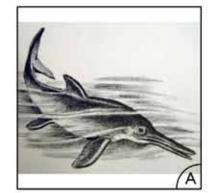


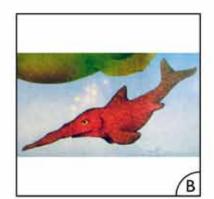






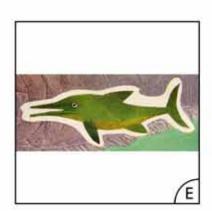
Ichthyosaurus



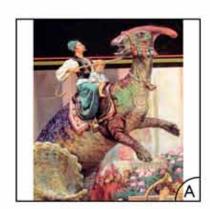


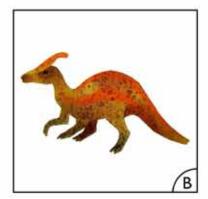






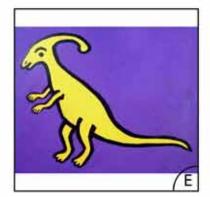
Parasaurolophus



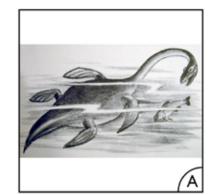


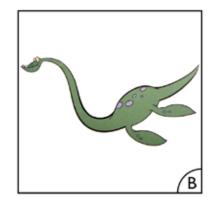












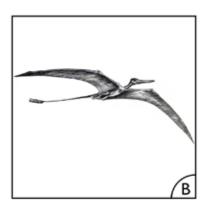


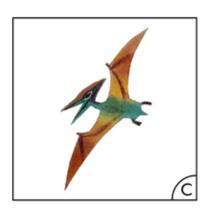


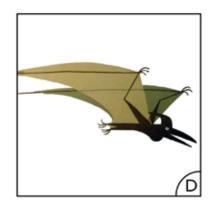


Pteranodon





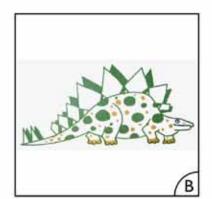










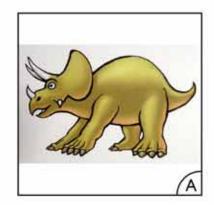


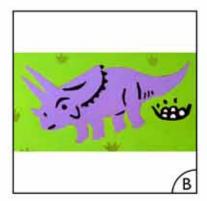




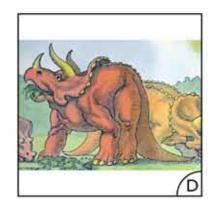


Triceratops



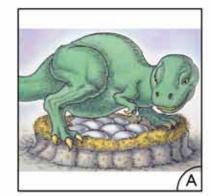


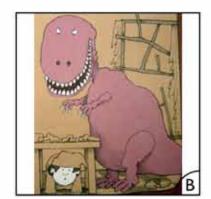




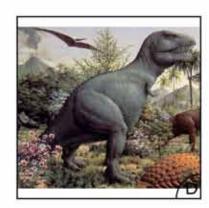


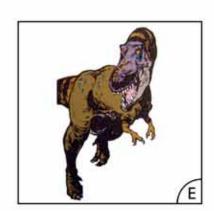
Tyrannosaurus rex



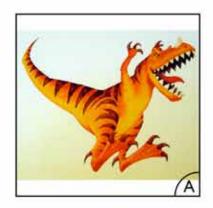


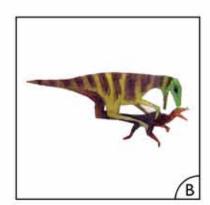




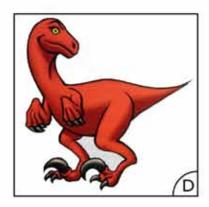


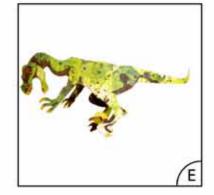
Velociraptor











Artists' Credits

Aliki (Dinosaurs Are Different): Ankylosaurus B

Byron Barton (Dinosaurs, Dinosaurs; Bones, Bones, Dinosaur Bones): Ankylosaurus D, Triceratops B; Parasaurolophus E

Michael Berenstain (King of the Dinosaurs: Tyrannosaurus Rex): Triceratops E, Tyrannosaurus rex A

Lee Duhig (Draw Dinosaurs!): Ankylosaurus C, Compsognathus B, Triceratops A, Velociraptor D

Allan Eitzen (Nature Sticker Stories: Dinosaurs): Compsognathus C, Ichthyosaurus E, Parasaurolophus B, Pteranodon C, Velociraptor B

Michael Emberley (Dinosaurs!): Apatosaurus B, Dimetrodon A, Pteranodon D, Stegosaurus B

Robert Gartland (A Book to Begin on: Dinosaurs): Apatosaurus A, Dimetrodon E, Plesiosaurus E, Pteranodon C

Gail Gibbons (Dinosaurs): Compsognathus D

Mario Gomboli (Let's Look at Dinosaurs): Ichthyosaurus B, Plesiosaurus C, Stegosaurus C

James Gurney (*Dinotopia*): Parasaurolophus A, Stegosaurus E

Syd Hoff (Danny and the Dinosaur): Apatosaurus E

Christian Kitzmueller, Davide Bonadonna, Eliza Carey (Uncover a T. Rex): Tyrannosaurus rex C

Charles Knight (untitled): Triceratops C

Arnold Lobel (Dinosaur Time): Compsognathus A, Stegosaurus A

Winsor McCay (Gertie the Dinosaur): Apatosaurus C

Bob Ostrom (Dinosaurs Then and Wow!): Dimetrodon D, Plesiosaurus B

Tomie de Paola (The Tyrannosaurus Game): Tyrannosaurus rex B

Edouard Riou (The Earth Before the Flood): Ichthyosaurus D

Richard Roe (Dinosaur Days): Ankylosaurus E, Plesiosaurus D, Pteranodon A, Triceratops E

Robert Sabuda and Matthew Reinhart (Encyclopedia Prehistorica: Dinosaurs): Velociraptor E

S.D. Schindler (Boy, Were We Wrong About Dinosaurs!): Parasaurolophus D

Gustav Schrotter (Discovering Dinosaurs): Ichthyosaurus A, Plesiosaurus A

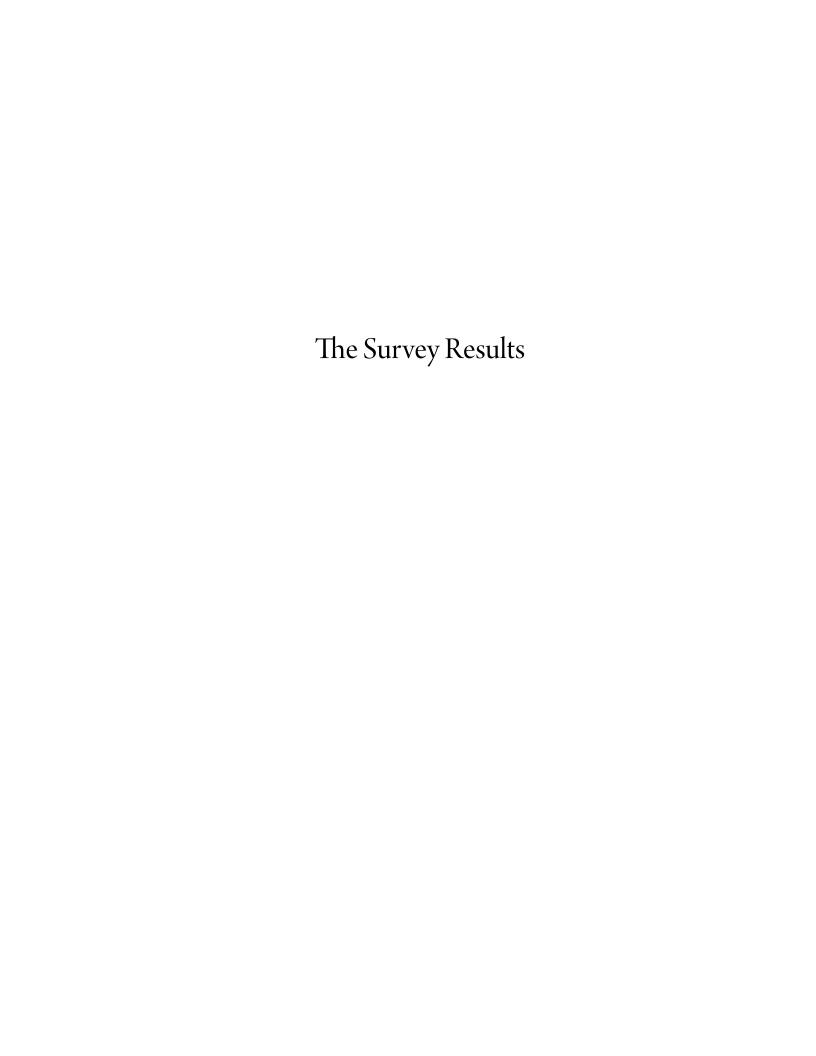
John Sibbick (My Favorite Dinosaurs): Apatosaurus D, Stegosaurus D

Paul Stickland (Dinosaur Roar!): Dimetrodon C, Parasaurolophus C, Velociraptor A

Mark Teague (How Do Dinosaurs Count to Ten?; How Do Dinosaurs Get Well Soon?): Dimetrodon B; Velociraptor C

Bill Watterson (Calvin and Hobbes): Compsognathus E, Pteranodon E, Tyrannosaurus rex E

Rudolph Zallinger (The Age of Reptiles): Ankylosaurus A, Tyrannosaurus rex D



The results of the survey can be seen to the right in numerical form, and on the following pages in graphic form.

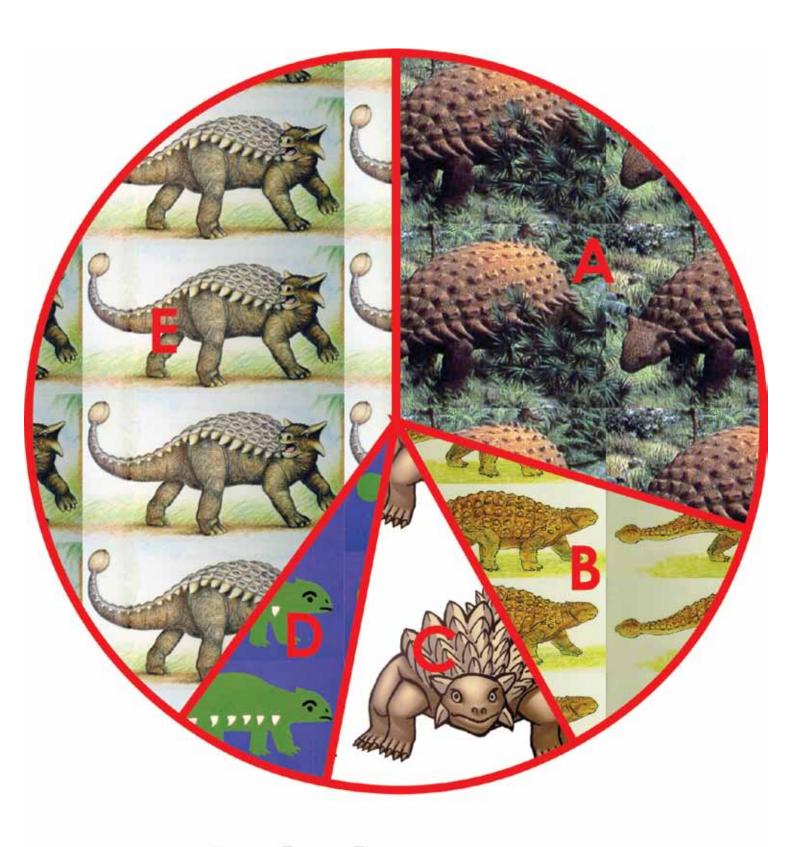
The table lists the 5 choices of images from A through E, as seen on the preceding pages. It simply shows what percentage of the voters voted for each image as being the most representative of its species.

For example, 40% of the participants thought Image E was the best picture of an Ankylosaurus, 30% of the participants thought Image A was best, 12% thought it was Image B, 11% thought it was Image C, and 7% thought it was Image D.

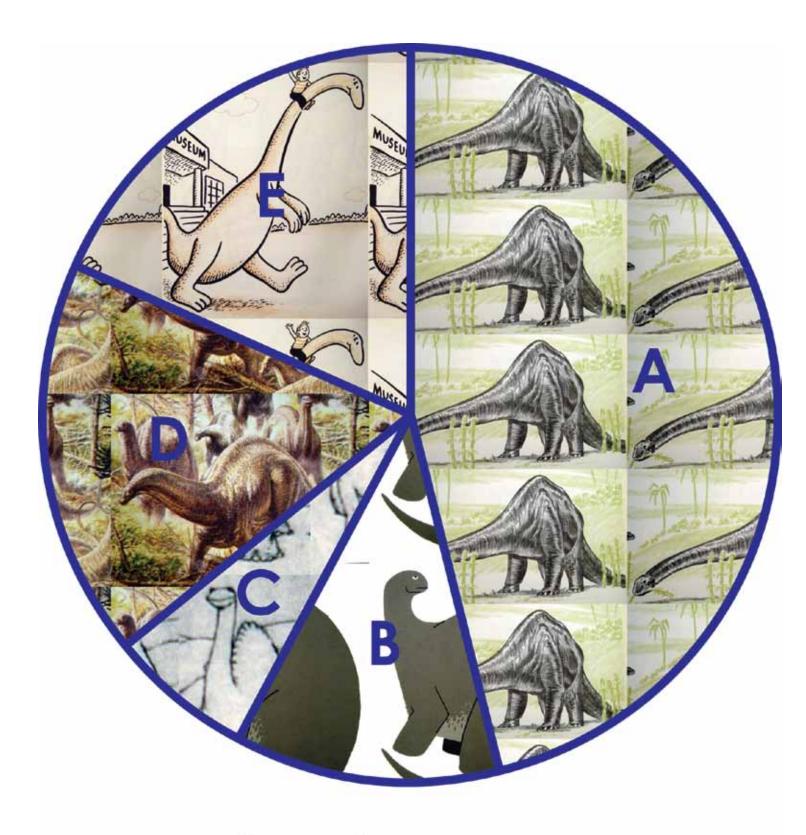
It should be noted that all images got at least some votes.

The graphs on the following pages show the same information, just visually. The pie slices are filled with the actual images themselves, so it is easy to see which images did well and which did poorly.

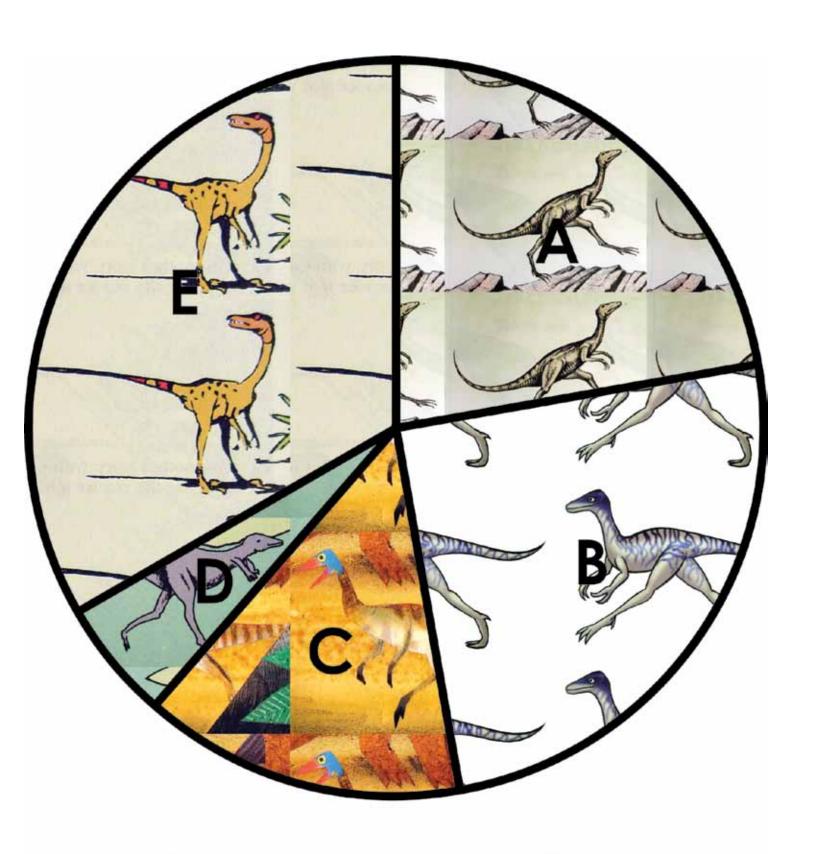
	A	В	C	D	E
Ankylosaurus	30%	12%	11%	7%	40%
Apatosaurus	46%	12%	6%	18%	18%
Compsognathus	22%	25%	14%	5%	33%
Dimetrodon	9%	30%	14%	10%	37%
Ichthyosaurus	27%	9%	19%	38%	6%
Parasaurolophus	27%	11%	20%	30%	14%
Plesiosaurus	39%	10%	16%	22%	14%
Pteranodon	22%	33%	22%	8%	15%
Stegosaurus	33%	12%	10%	26%	18%
Triceratops	14%	17%	40%	8%	20%
Tyrannosaurus	7%	22%	11%	35%	25%
Velociraptor	39%	12%	9%	20%	19%



Ankylosaurus



Apatosaurus



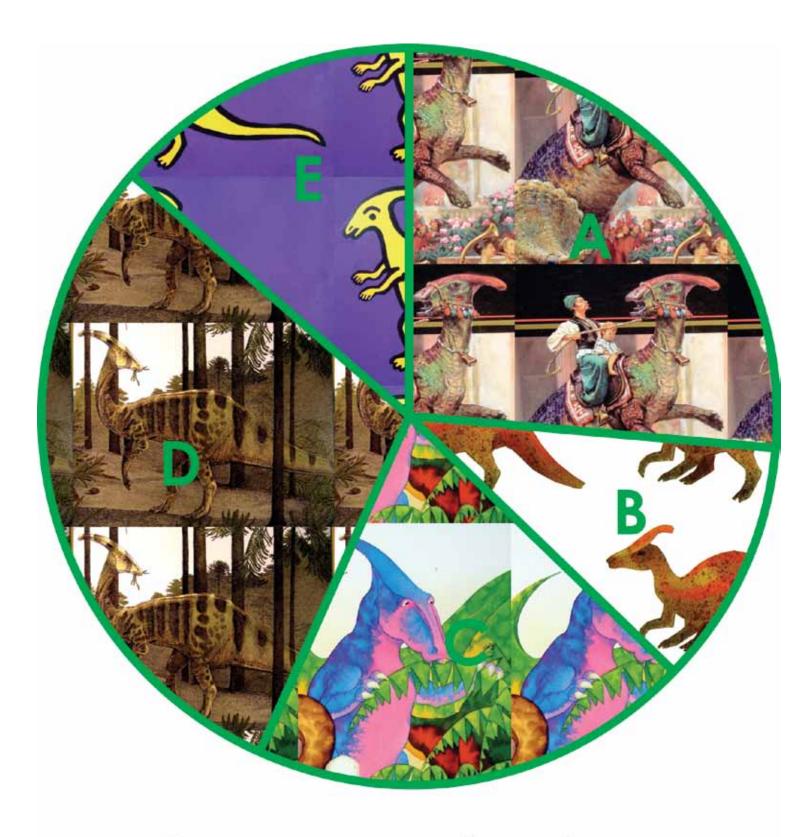
Compsognathus



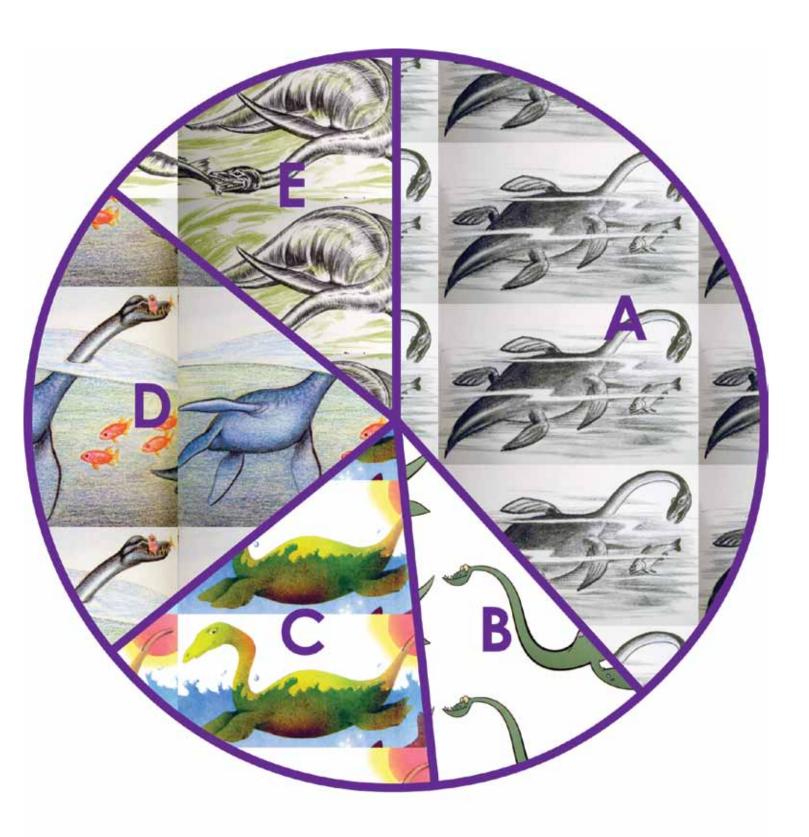
Dimetrodon



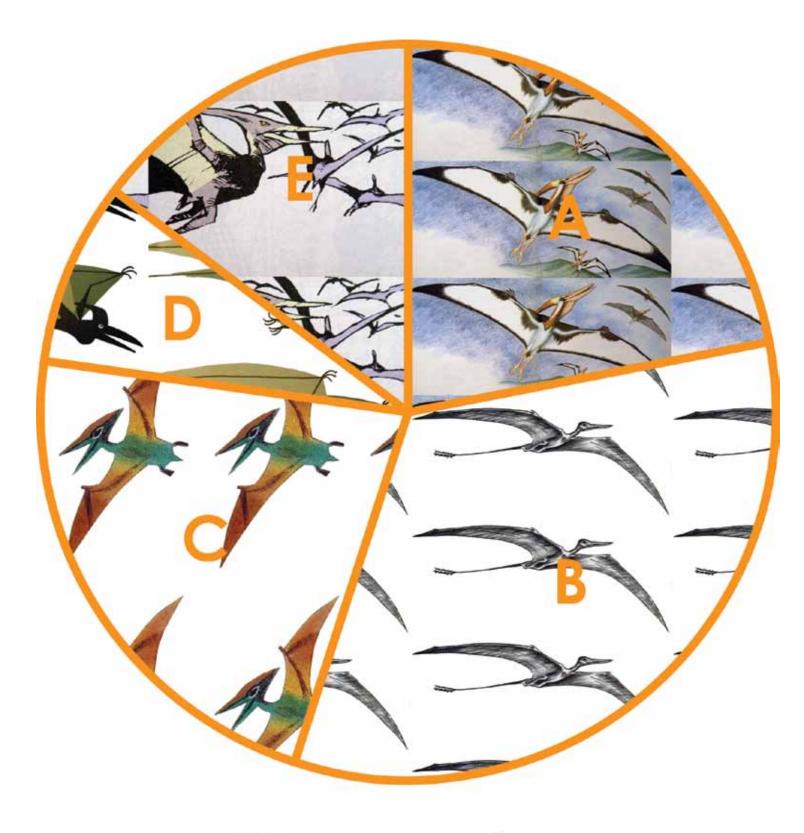
Ichthyosaurus



Parasaurolophus



Plesiosaurus



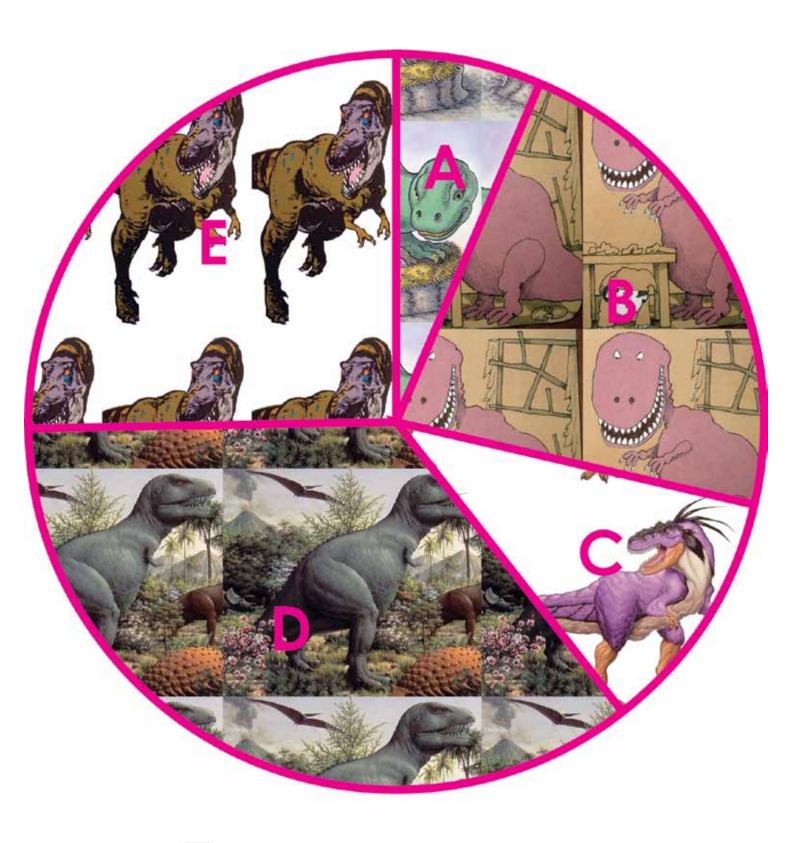
Pteranodon



Stegosaurus



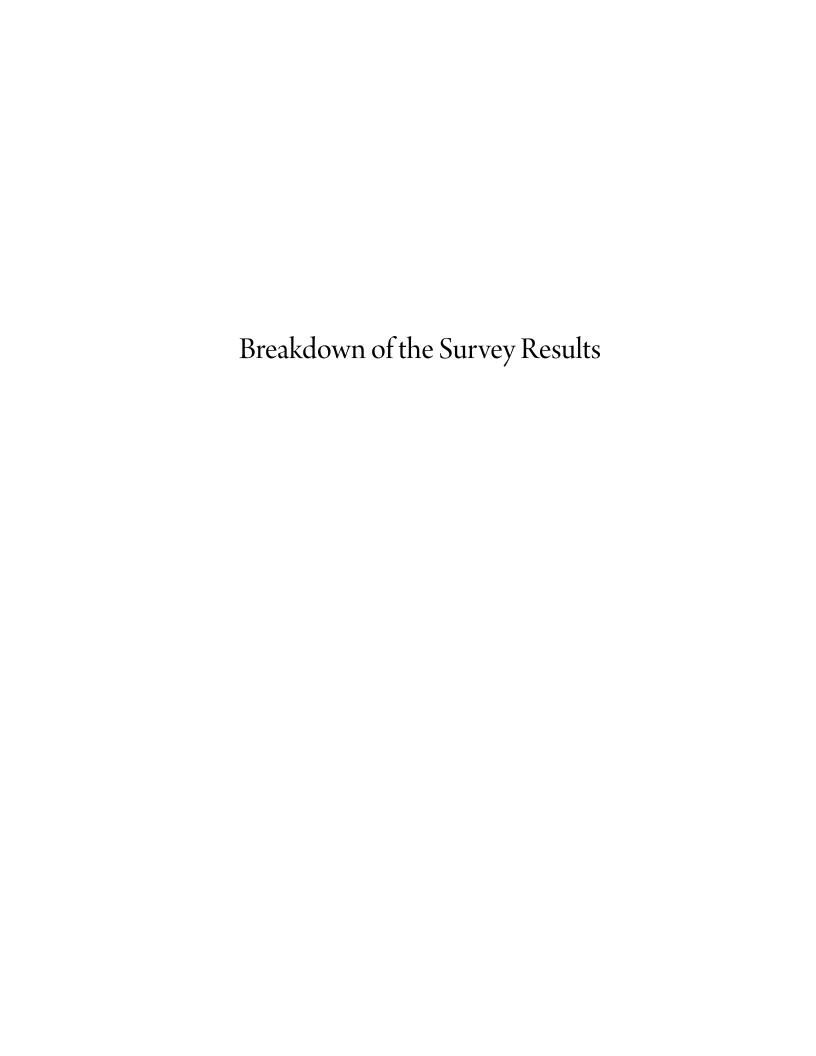
Triceratops



Tyrannosaurus



Velociraptor



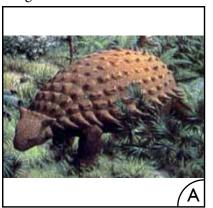
The following pages take the images and break them down by category--what artistic style they are painted in, what kind of colors they have, etc.

The images in each category are then divided into strata depending on how many votes they received. For instance, one category is "Images with a Very Illusionistic Visual Style"--in other words, images that have more of a "photographic" look than a painterly or graphic look. The highly illusionistic images with the greatest number of votes are in a group at the top, then the images with slightly fewer votes below them, etc.

The point is to clarify what kinds of images were included in this survey, and to see if these groups had any possible effect on the voting. For example, one group that clearly did better than others, as can be seen in the relatively large number of images it has in the upper echelon of voting percentages, was the Very Illusionistic set of pictures. This calls into question what qualities the viewers were judging the images on--and, perhaps, what they judge all images on.

Images with a Very Illusionistic Visual Style

Image received 40-49% of the votes for its species



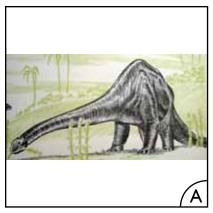
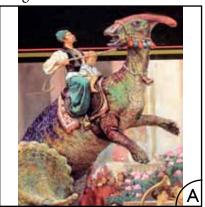




Image received 30-39% of the votes for its species



Image received 20-29% of the votes for its species



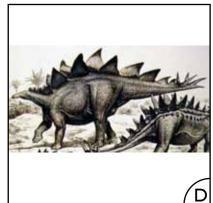
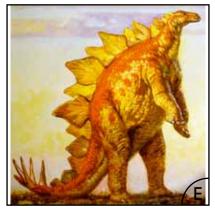
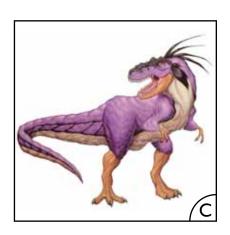


Image received 10-19% of the votes for its species







None.

Images with a Fairly Illusionistic Visual Style

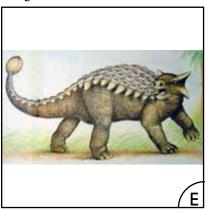
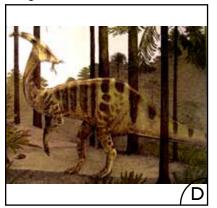
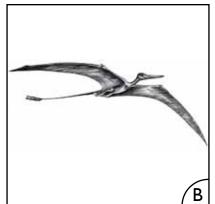
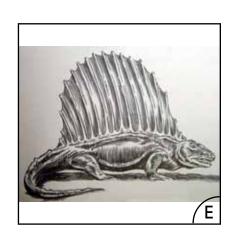


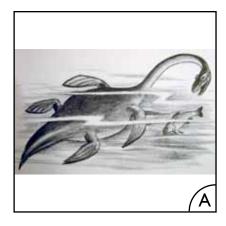
Image received 30-39% of the votes for its species











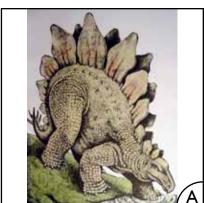
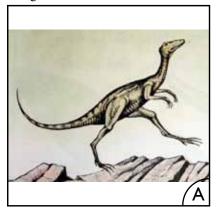
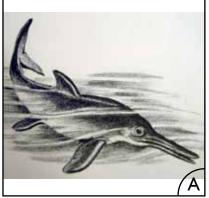
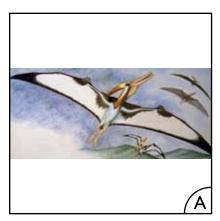


Image received 20-29% of the votes for its species









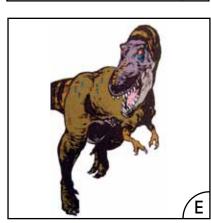
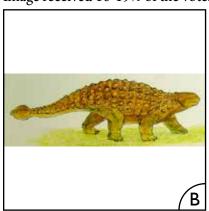
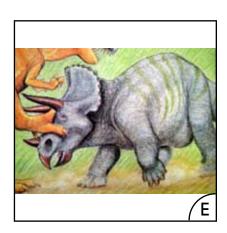
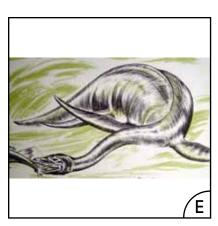


Image received 10-19% of the votes for its species









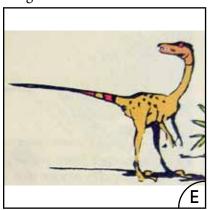
Images with a Fairly Illusionistic Visual Style, continued

Image received 0-9% of the votes for its species

Images with a Somewhat Cartoony Visual Style

Image received 40-49% of the votes for its species

Image received 30-39% of the votes for its species





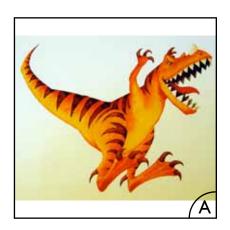


Image received 20-29% of the votes for its species

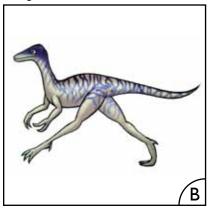
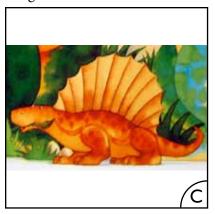
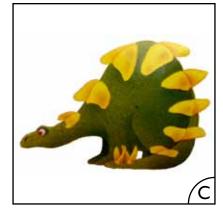


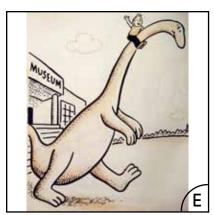


Image received 10-19% of the votes for its species











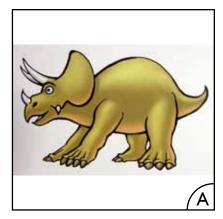
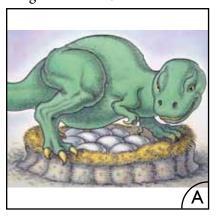
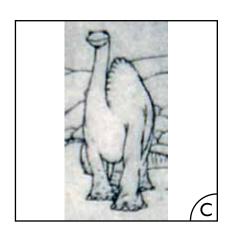
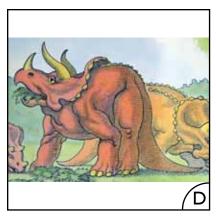


Image received 0-9% of the votes for its species $\,$









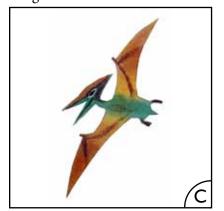
Images with a Fairly Abstract Visual Style

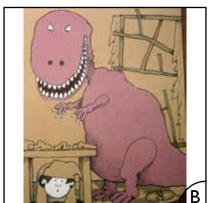
Image	received	40-49%	of the	votes	for i	ts st	ecies
	10001104	10 17/0	OI CIIC		1011	CO OP	CCICO

None.

Image received 30-39% of the votes for its species $\,$

None.





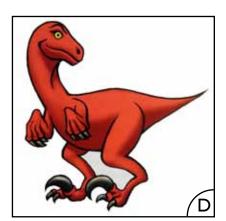
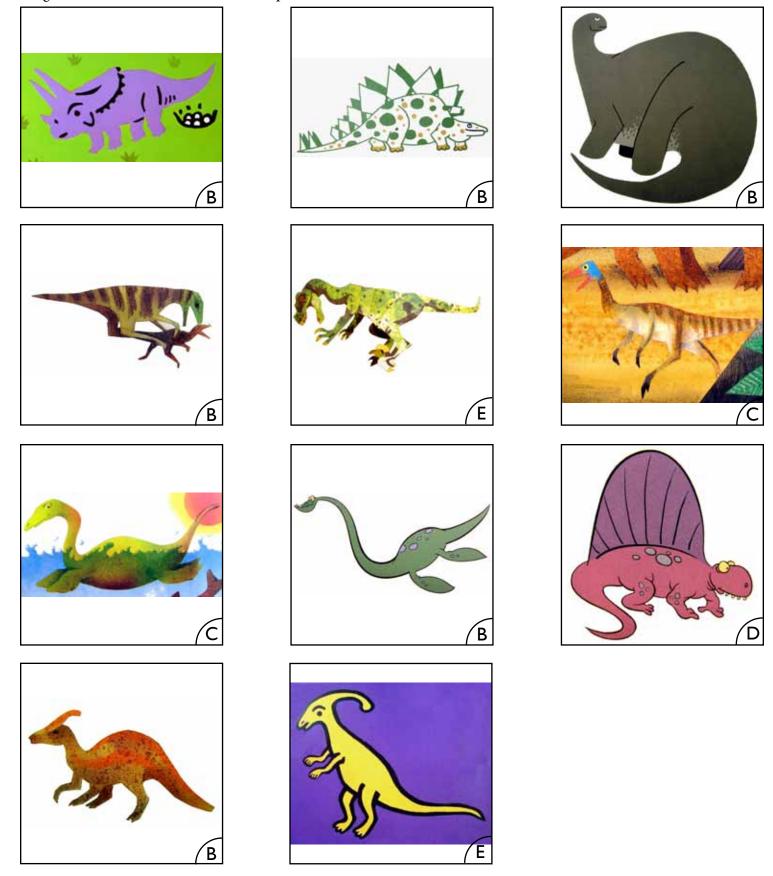
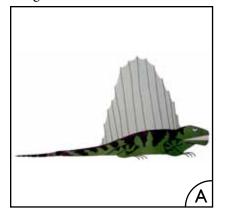
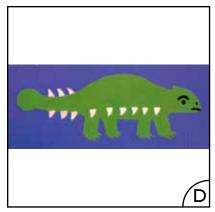


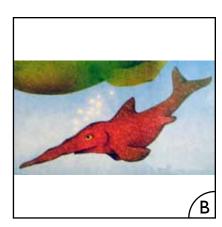
Image received 10-19% of the votes for its species

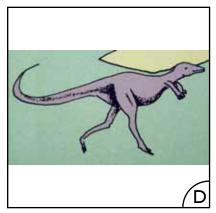


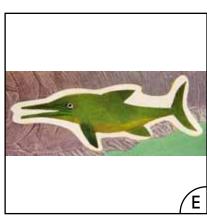
Images with a Fairly Abstract Visual Style, continued

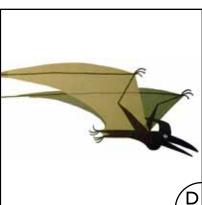












Contains Anthropomorphic or Human Elements

Image received 40-49% of the votes for its species

Image received 30-39% of the votes for its species

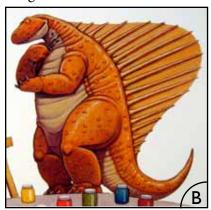
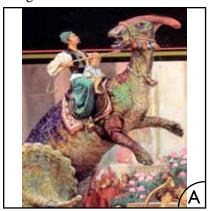


Image received 20-29% of the votes for its species



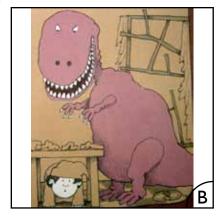
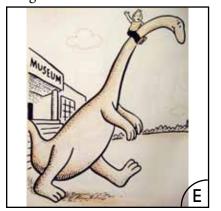
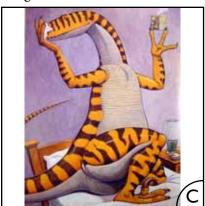


Image received 10-19% of the votes for its species

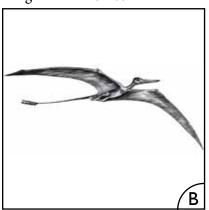




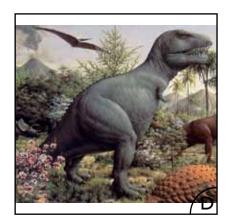
Contains Obvious Inaccuracies (Other Than from Stylistic Abstraction)

Image received 40-49% of the votes for its species

Image received 30-39% of the votes for its species







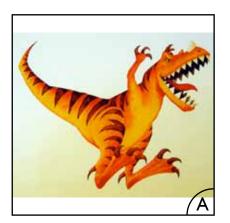




Image received 20-29% of the votes for its species

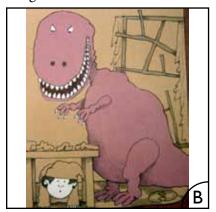
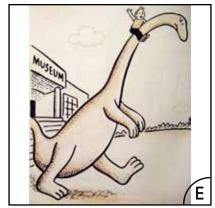


Image received 10-19% of the votes for its species





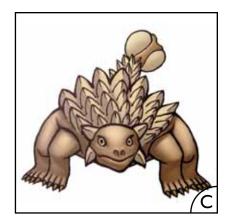
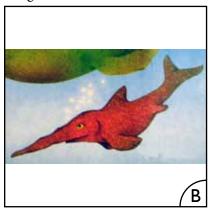
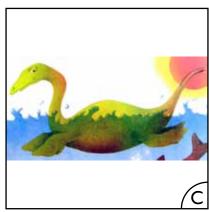


Image received 0-9% of the votes for its species $\,$



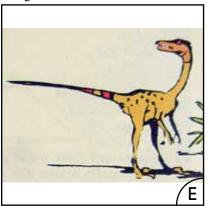


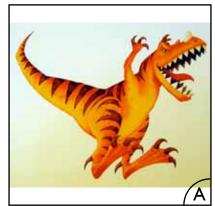


Rendered in Bright Colors

Image received 40-49% of the votes for its species

Image received 30-39% of the votes for its species $\,$





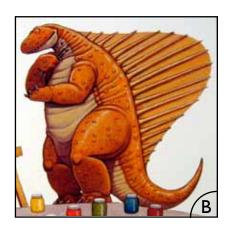
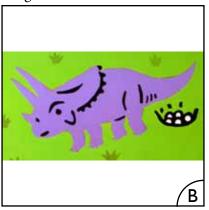


Image received 20-29% of the votes for its species



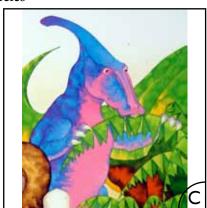
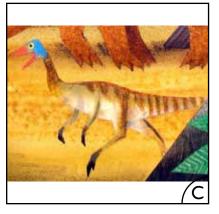
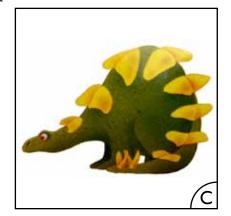
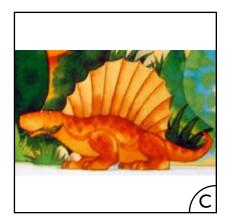
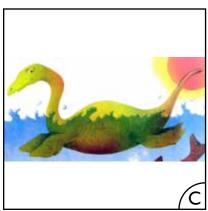


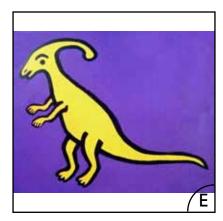
Image received 10-19% of the votes for its species

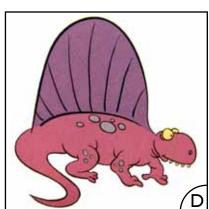


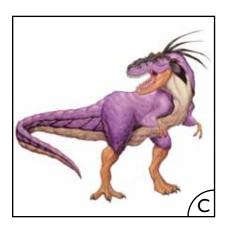




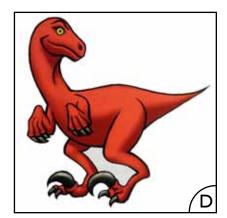




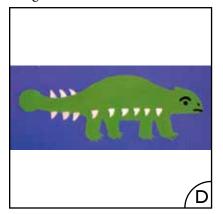


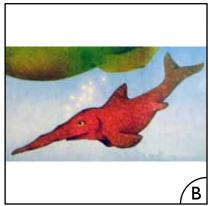


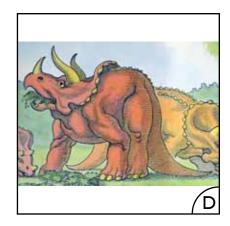


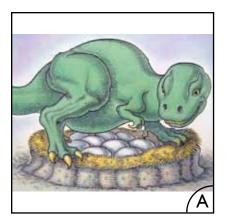


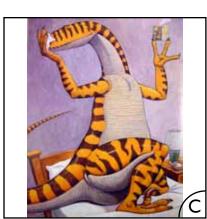
Rendered in Bright Colors, continued





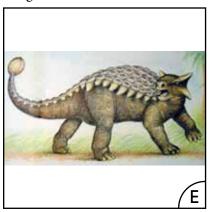


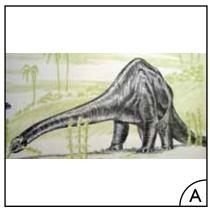




Rendered in Dull Colors

Image received 40-49% of the votes for its species





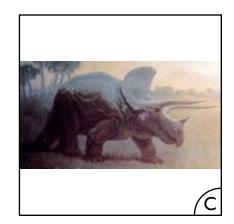
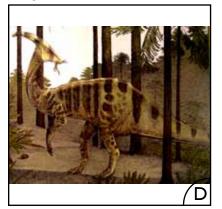
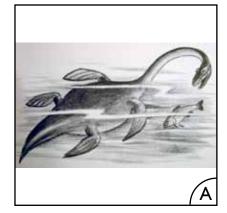
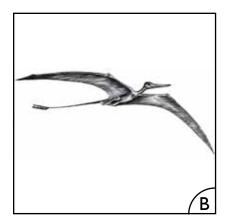


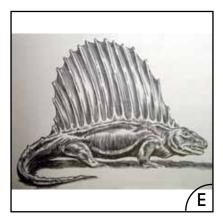
Image received 30-39% of the votes for its species

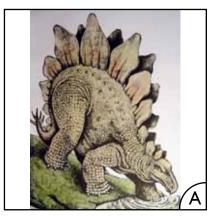












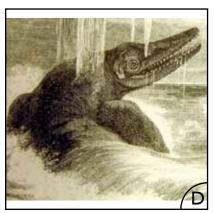
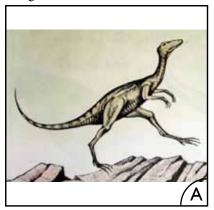
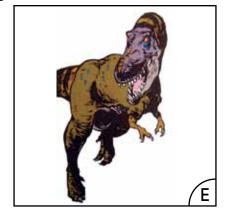
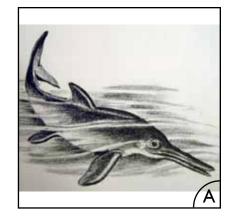
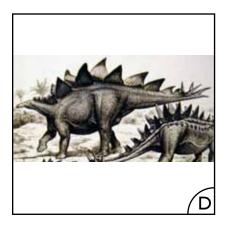


Image received 20-29% of the votes for its species











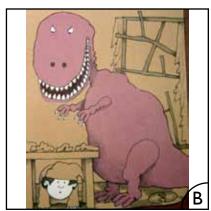
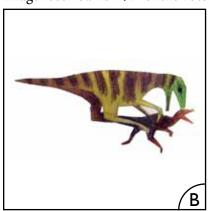
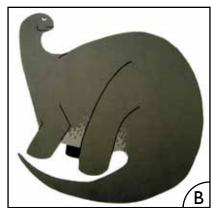
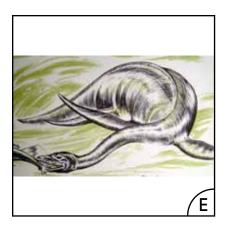


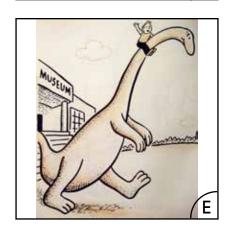
Image received 10-19% of the votes for its species





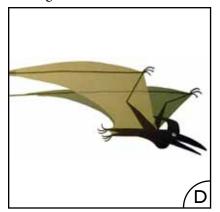


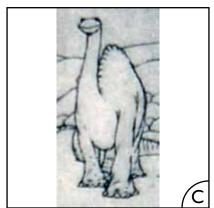


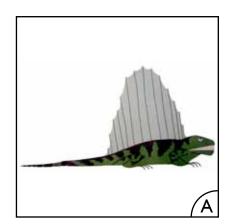


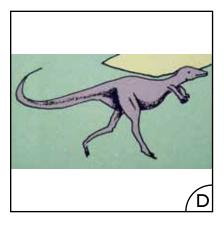


Rendered in Dull Colors, continued









Dinosaur Is Actively Doing Something

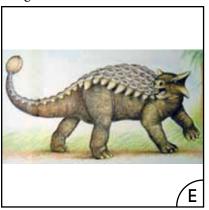
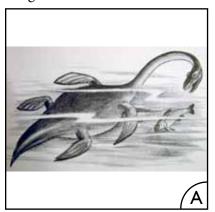
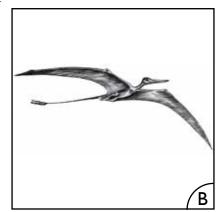
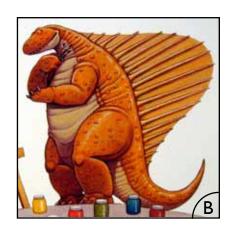
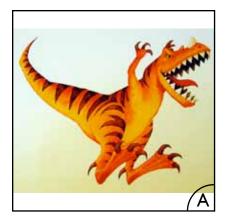


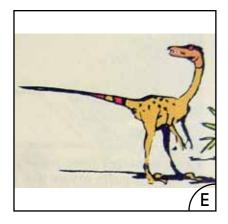
Image received 30-39% of the votes for its species











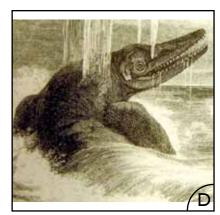
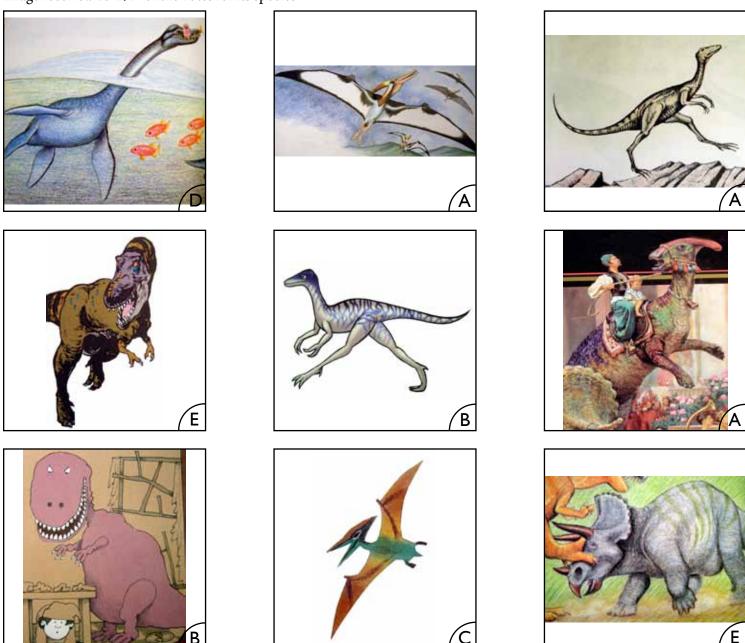
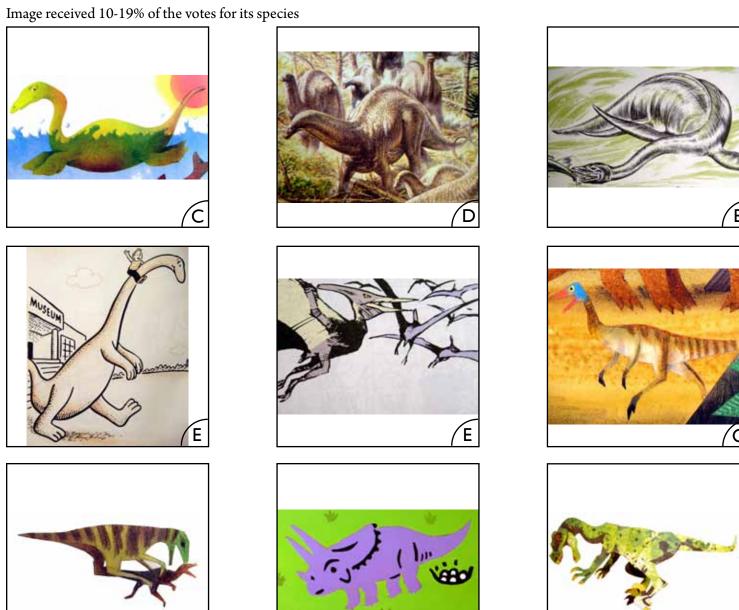
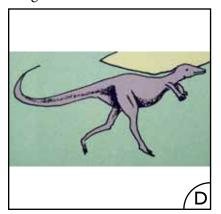


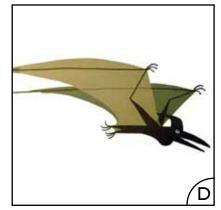
Image received 20-29% of the votes for its species

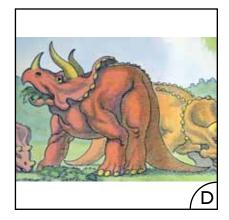


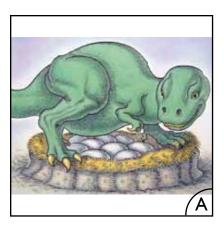
Dinosaur Is Actively Doing Something, continued

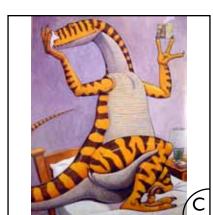












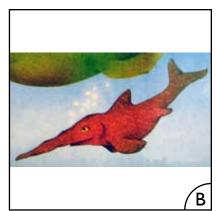


Image Is at Least 20 Years Old

Image received 40-49% of the votes for its species

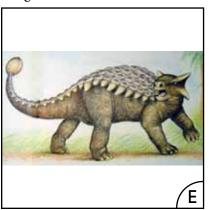
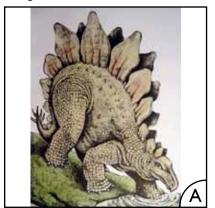


Image received 30-39% of the votes for its species



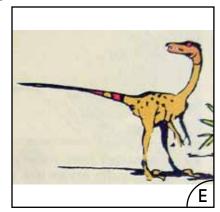
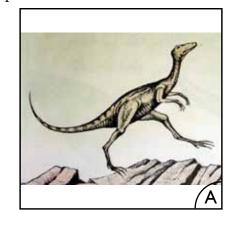
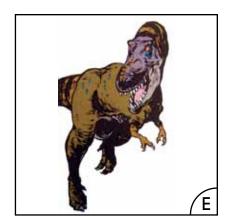


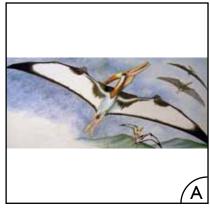
Image received 20-29% of the votes for its species











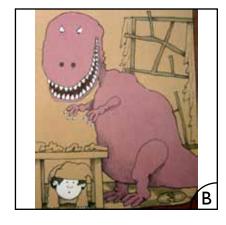
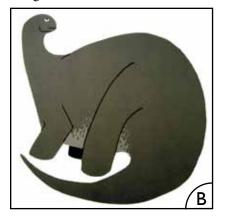
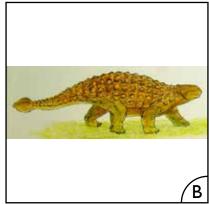
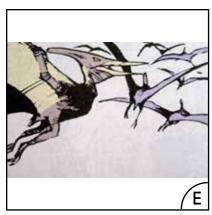


Image received 10-19% of the votes for its species









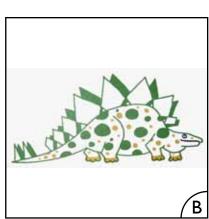
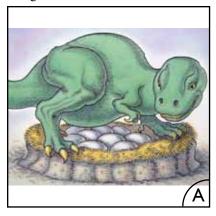
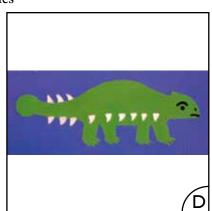
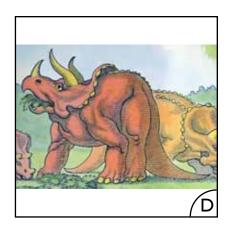
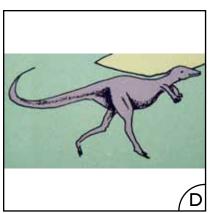


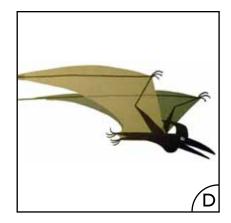
Image received 0-9% of the votes for its species











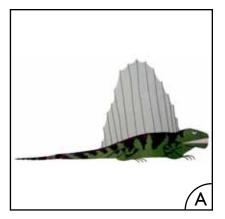


Image Is at Least 40 Years Old

Image received 40-49% of the votes for its species

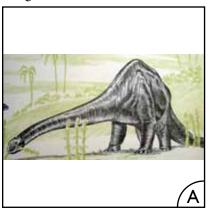
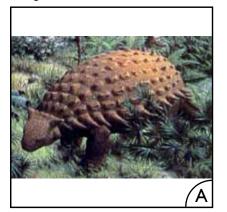
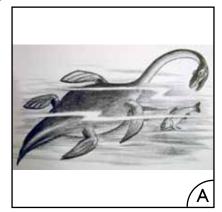
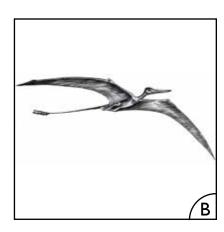


Image received 30-39% of the votes for its species







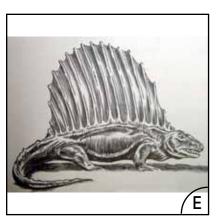


Image received 20-29% of the votes for its species

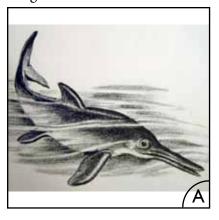
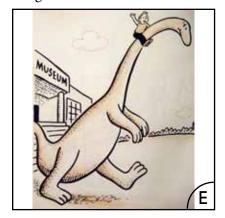


Image received 10-19% of the votes for its species



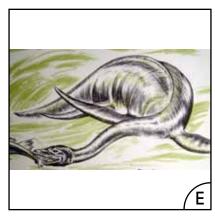


Image received 0-9% of the votes for its species $\,$

Image Is at Least 60 Years Old

Image received 40-49% of the votes for its species



Image received 30-39% of the votes for its species

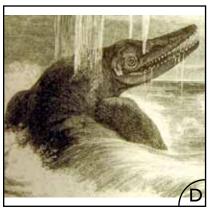
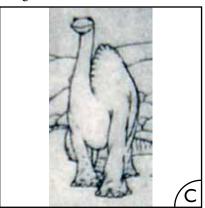


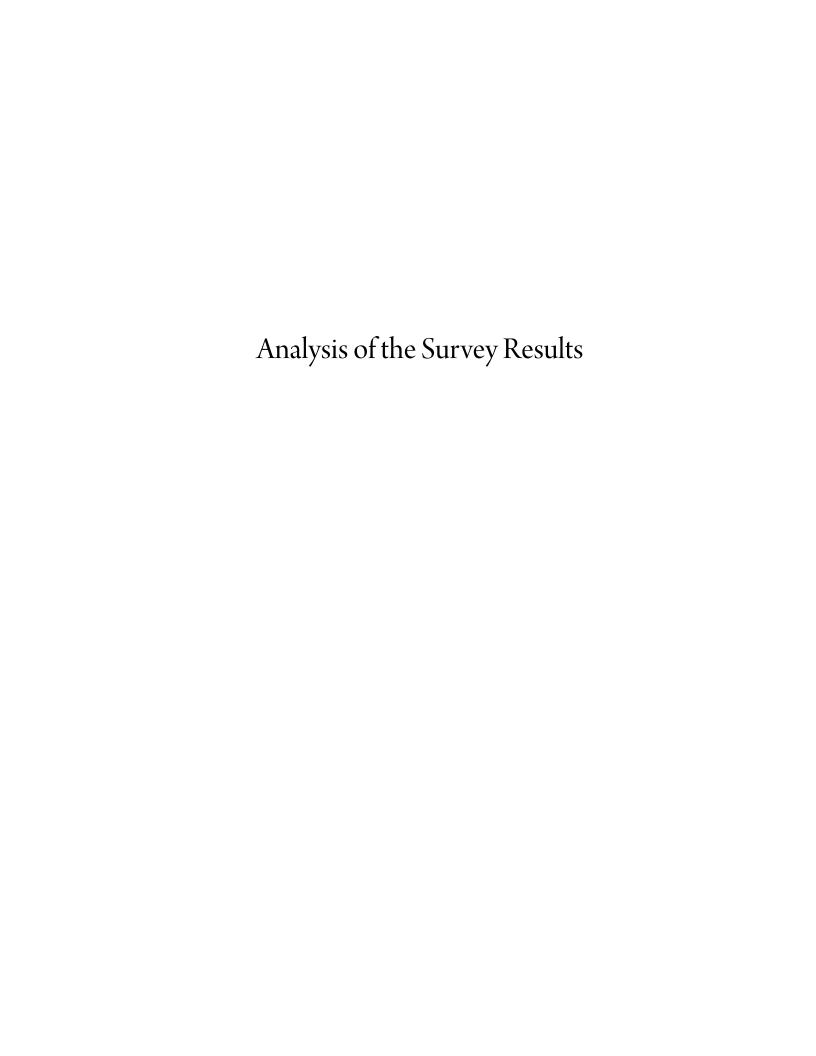


Image received 20-29% of the votes for its species

None.

Image received 10-19% of the votes for its species





The overwhelming product from this project, more significant than learning about any one dinosaur's dominant image, was hearing about why people chose their images: they almost always said they made their choice based on which image was the most illusionistic and representationally-illustrated. Scientific evidence, coloring, posture--none of this was as important as the image's artistic style. This, like the results from *The Dinosaur Mating Game*, seems to indicate that people look at the surface level of imagery over all else-and consequently that any new dinosaur concept could be made persuasive merely by being illustrated in an illusionistic manner. If people can see it, they can believe it.

There are, however, other interesting results. It is unclear why Ankylosaurus E dominated so strongly, considering that A and B are actually very similar. D did the most poorly, probably due to its very abstract nature.

The most popular Apatosaurus was also the most popular image of all the images in the whole project. It is a little unclear why that is. It is realistic, but not shockingly well-rendered, or particularly interesting for any other reason. It must just "look real." It is surprising how much better it did than D, which is also very illusionistic, and arguably better made. C, or Gertie the dinosaur, from one of the very first animations ever made at the beginning of the 20th century, did the worst. Perhaps its older style of cartooning was held against it.

The most popular Compsognathus is not the most illusionistic, but does have a very modern posture, with tail up and alert. A and B are also reasonably contemporary-looking in style and substance, but didn't do as well. D did poorly, probably because it is a poor drawing.

The most popular Dimetrodon is a standard, well-drawn image. The worst one, A, is cartoonish, but so are C and D.

The most popular Ichthyosaur image is very old, one of the few that is not from a children's book, and is much less scientifically accurate than the others; its dramatic context may be the factor that drew people to it. B and E, the lowest, are more cartoonish.

The Parasaurolophus vote is more equally split than most, with two very illusionistic and dully-colored images battling it out. The one with the person on it lost, possibly due to its anachronism. The most abstract ones did the worst.

The most popular Pteranodon has an inaccurate tail (although this is not something the general audience would be expected to know) but is rendered in a realistic fashion-but no more so than A or E, which didn't do nearly as well. Multiple images from this artist did well. It may be because they are in black and white, and thus look "old," or at least not unusual in their coloration. The most abstract one did the most poorly.

The bright orange, bipedal Stegosaurus has a surprisingly strong showing, but again it is illusionistically illustrated. The two highest vote-getters, however, were even more realistic. D, which came in second, perhaps looks a little more odd to a modern audience with the way its tail is held, even if it is more accurate. The one with the flat plates, a one-time scientific possibility which surely looks even more unusual to the audience, did the worst--surprisingly even worse than the one with polka dots, which is done by an artist whose drawings came in near-last almost every time.

The most popular Triceratops and Tyrannosaurus are very

old and less accurate images in terms of posture, although a highly cartoonish and honestly not very well-drawn Tyrannosaurus got a lot of votes as well. Both of the winners are by famous early paleo-artists, with a lot of cultural momentum behind them, as well as excellent painting skills. The same artist drew the lowest-vote-getting Triceratops and Tyrannosaurus, which is surprising, because Triceratops B and Tyrannosaurus B seem placed to do much worse.

The Velociraptor is fairly cartoonish as well; it was remarked several times that the Velociraptor was the hardest one to decide on because none of its images were very "realistic." It is surprising that it did better than D or E. C did the worst, probably because of it is ill-proportioned and anthropomorphic.

Looking at the thematic rankings, the reasoning behind all these winners and losers becomes clear.

Out of the Very Illusionistic category, there are some very strong rankings. Of the top 4 images in this group, 3 are #1s (winners for their species). There are no pictures that got 0-9% of the vote.

The Fairly Illusionistic group also did very well. All 7 of the top two rankings were #1s, and again there were no images that got 0-9%.

The Somewhat Cartoony group, however, had none in the top percentages, and instead was very bottom-heavy. It did contain two #1s however.

The Abstract category had no images in the top two rankings, and was again very bottom-heavy.

Anthropomorphism seemed to have no effect--its images are distributed equally among the rankings.

Some of the Inaccurate images did very well, with four #1s. It seems unlikely that people voted intentionally for inaccurate images, it's just that they either didn't know they were inaccurate or felt a nostalgia for them since many of them were older. Or, they were just artistically persuasive.

It was Chris's assumption that brightly colored dinosaurs would do better than dull ones, purely because people tend to be attracted to bright colors, but the exact opposite was true. Possibly, as described in relation to the Pteranodon, people feel safer not having to guess about color if an image is black and white. However, not all of the dull images are black and white, they are just low saturation. The most likely reason is that people simply still associate alligator-like coloration to dinosaurs.

The Bright group has quite a few images in the bottom two rankings, while the Dull group's top 10 images are all #1s. It does, however, have quite a few low-ranked ones as well. A good interpretation is that people felt that a good dinosaur is dully-colored, but a dully-colored dinosaur is not necessarily good.

The level of Activity seemed to have no real effect.

The age of images seemed to have a positive effect. Among the 20-year-old images, the top 3 are #1s, although it does not have many high ones other than that. 40-year-old images did better, with 4 of the top 5 being #1s, and 3 of the 4 60-year-old images were all #1s.

In summation, the characteristics with the greatest positive effect were illusionistic drawing styles, being inaccurate (!),

having dull colors, and being older.

The characteristics with the strongest negative effects were being abstract and brightly colored.

Some of the assumptions Chris had at the start of the project ended up being proven incorrect--such as color. Others, however, like a preference for nostalgic images--or at least images from a nostalgic era--and well-drawn images, were shown to be true.

Ultimately, the clearest effect is what the participants said on their own--they chose images based on what was painted the most realistically, even if they knew it was not the most accurate. It is often said that humans are a visually-oriented species, and this seems to be true. This has serious implications for how we choose other things based on visual cues, such as friends and romantic partners, and for how we can be manipulated by those who know how to take advantage of this reality, such as advertisers.

Within the world of dinosaurs, however, the implication is clear--if you are a scientist and you want your new theory about a dinosaur to become popular, all you need to do is get a good artist to paint it well using dull colors!