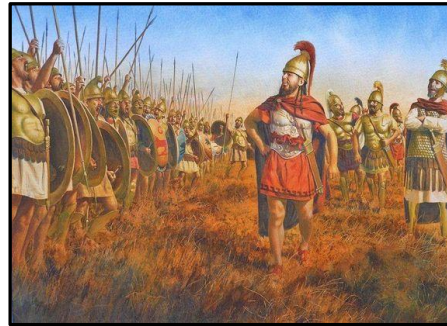


# Warriors of the **Left Hand**

Israel Abramov

Applied Vision Institute & Visual Research Laboratory,  
Department of Psychology, Brooklyn College/CUNY

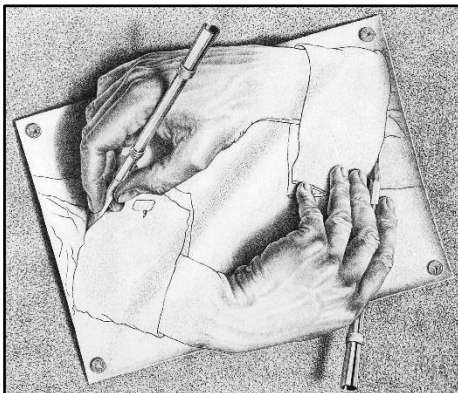


**How do artists and illustrators depict armed warriors?  
Is a single-handed weapon held in the correct hand?**

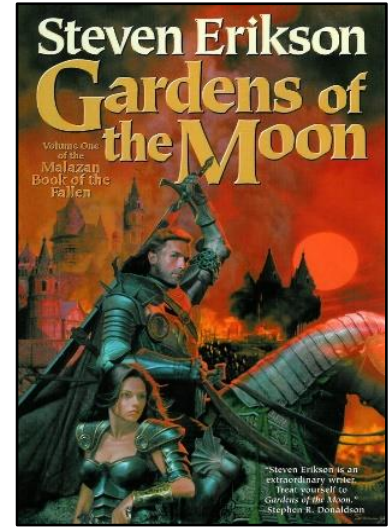
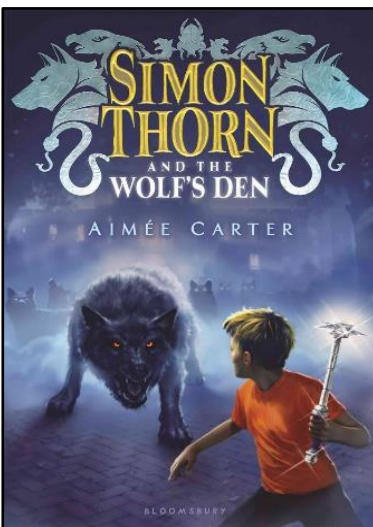
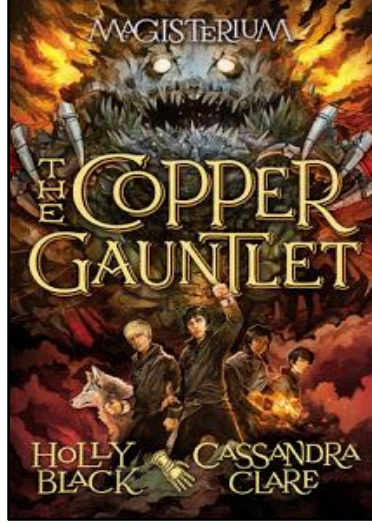
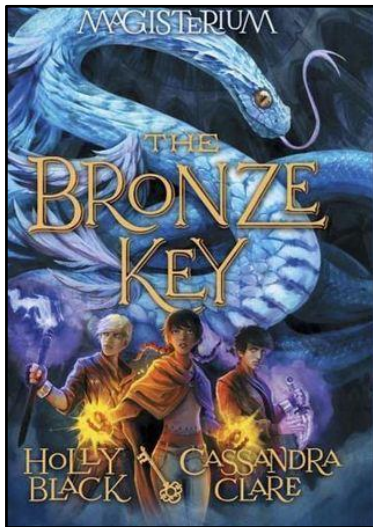
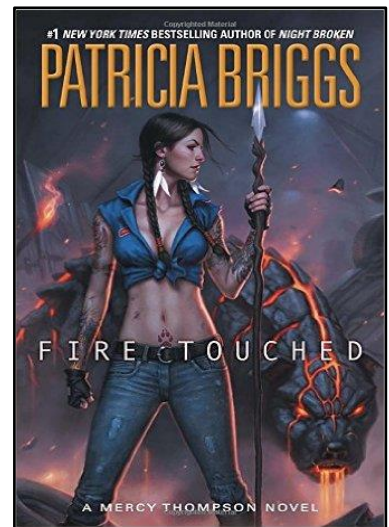
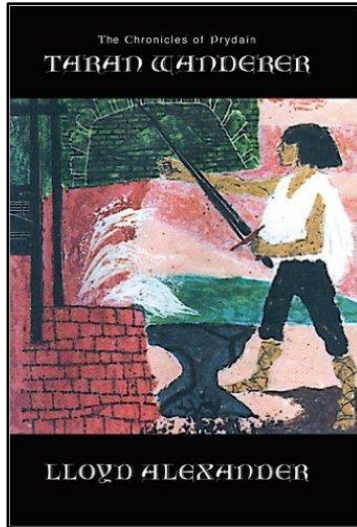
***What is the “correct hand?”*** Strong cultural, linguistic, even legal biases against left-handedness: in many languages “left” associated with weakness, evil, immorality, clumsiness; children often forced to use right hand for single-handed tasks.

In a phalanx every warrior holds the weapon in the right hand and shield in left hand – shields must align with each other.

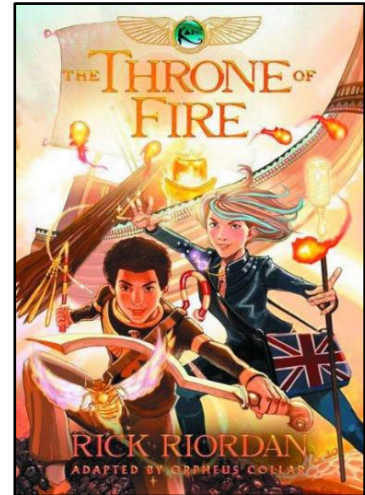
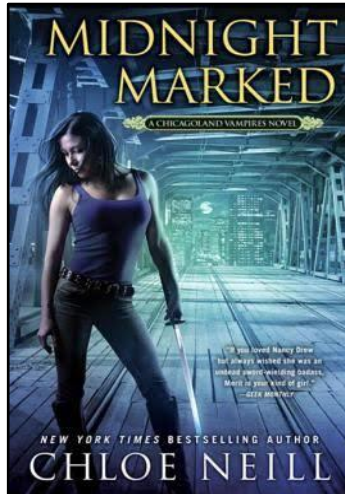
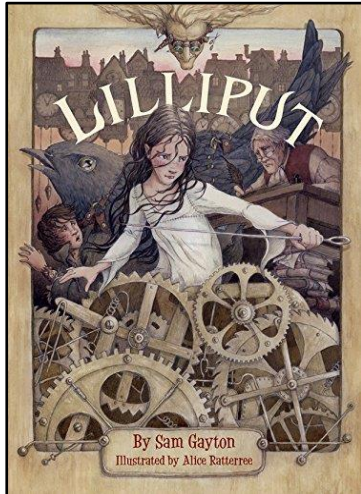
***Depictions of individual warriors:*** Not uncommon for weapon to be shown in left hand. True for many genres.



**Book Covers, Comic Books (teens, fantasy, adventure)**  
 No specific sinister genre, author, or cover artist. An alphabet-soup of authors. No rhyme-or-reason for handedness; often switch from moment to moment.



# Book Covers, Comic Books



## Snarked (Roger Langridge)



## Olympians – Ares Bringer of War (George O'Connor)



## DC Comics – Assorted Heroes



Aquaman, lefty-righty



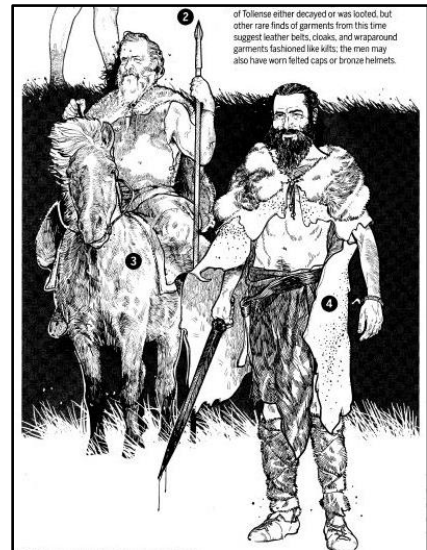
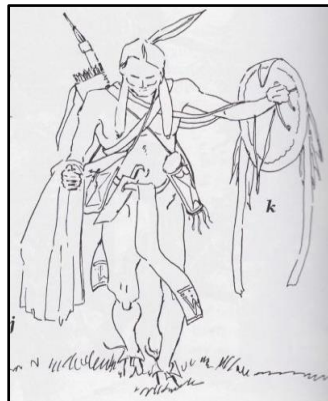
Thor

# Non-Fiction

## The Mystic Warriors of the Plains. (Thomas E. Mails)



Typical warrior gear.

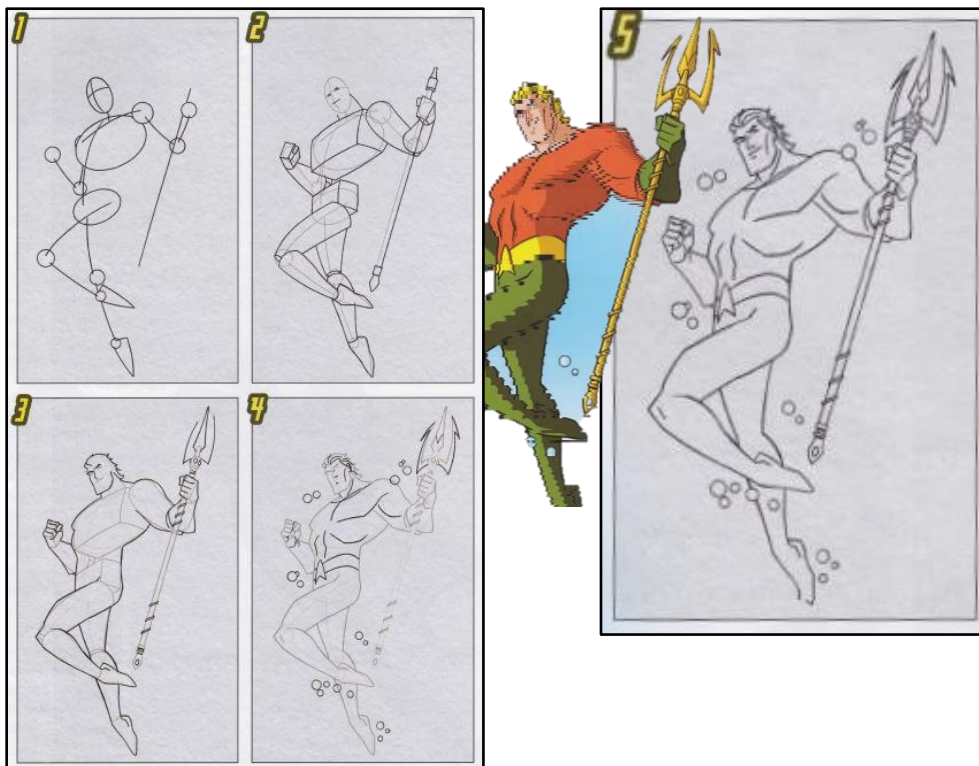


Science, 2016  
"Bronze Age battle gear."

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## Teaching How To

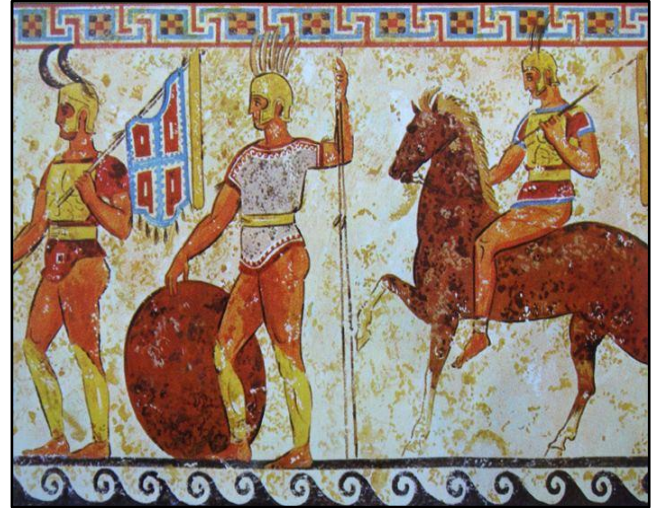
### DC Comics Super Heroes: How to Draw Wonder Woman, Green Lantern, and Other DC Super Heroes. (Illustrator: *Tim Levins*)



## Artists -- Ancient



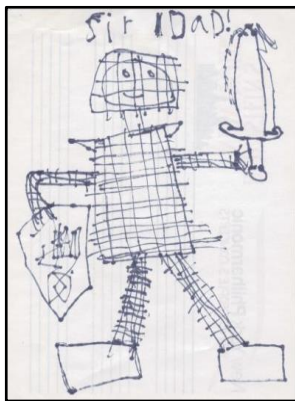
*Paleolithic artist*, Bhimbetka rock shelter, India



*Samnite warriors*, tomb fresco, 4<sup>th</sup> century BCE

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## Artists -- Modern



**Jesse**, kindergarten



**Salvador Dali**

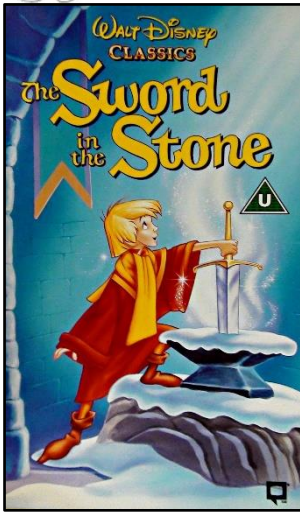


**Matthew Klaas de Witte**

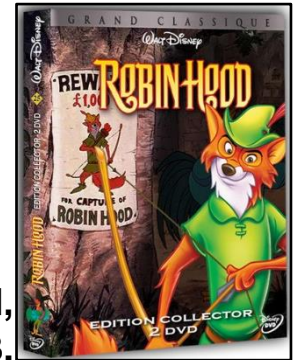


**Winston Young**

# Animated Cartoons



**The Sword in the Stone, 1963.** ~ 40 animators & other artists

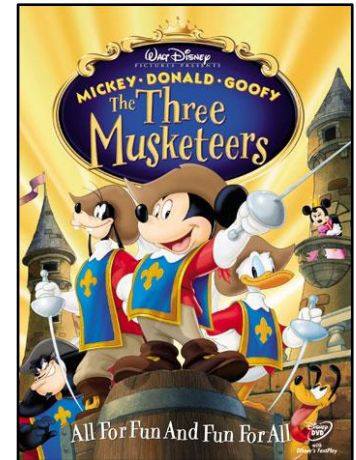


**Robin Hood, 1973.**



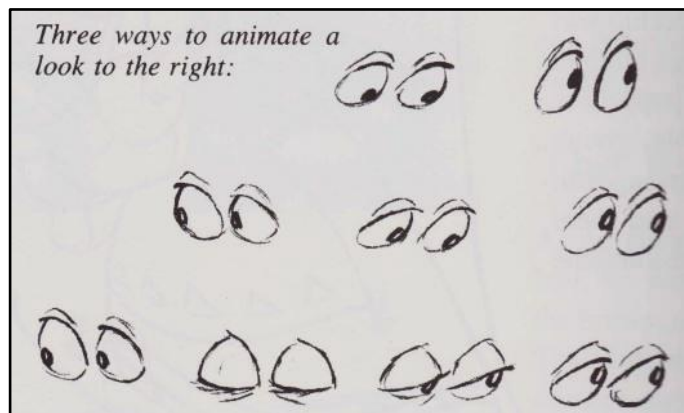
**The Black Cauldron, 1985.**

**The Three Musketeers, 2004.**



**Surprising:**

**Disney animators meticulously trained down to smallest details of each character – e.g., eyes. Why the cavalier treatment of handedness?**



# Playing Cards (traditional & unusual)



Microsoft Solitaire



"Mozart" playing cards



Jacob's Bible Cards



Latin suit

# Action Figures, Figurines



Toyhollywood, Build-a-Figure Series, Captain America



Hasbro, Star Wars – The Force Awakens

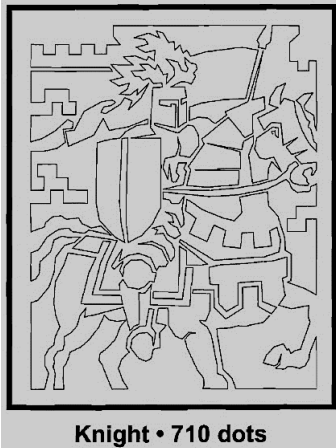


Mattel, Wonder Woman

Guan Gong:  
Chinese general,  
~ 200 CE



# Children's Activities



Knight • 710 dots  
Connect dot-to-dot



Puzzle



Craft project

# Old World, New World

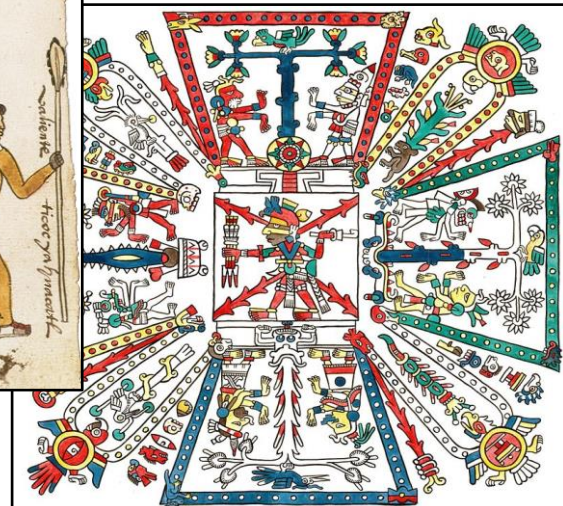


**Erotokritos**  
(illustrations of Byzantine warriors)  
**Author:**  
Vitsenzo Kornaro, 1645.  
**Artist:**  
Petraiki, 1787



Codex Borbonicus

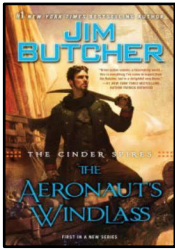
**Aztec codices, ~ 1500 CE**  
**Artists:** Aztec priests



**Codex Féjervary-Mayer** 8



# Explanations and Guesses



Looking at children's books in the Jefferson Market public library (NYC), I noticed that the cover showed the protagonist holding his cutlass in the left hand. Immediately I noticed other books with the same "unusual" illustrations. Since then I have been plagued by inability to look at pictures or objects of any sort without deciding if weapons are in the "wrong" hand. Why so many left-handers?



Perhaps, it is the "flatness" of a two-dimensional representation that is the problem. But this should not be the case when looking at, holding, or manipulating a real three-dimensional representation of a person. The problem still occurs— even when adding a weapon to a figure or toy.



Several book illustrators, who incidentally had never noticed the phenomenon, suggested that these "errors" are the work of left-handed artists. But this cannot be the entire story – there are too many artists who show this sinistrality, sometimes in the same image.



I have also been told that it may be due to English being written from left to right. (I am still puzzled why this should matter.) However, the left-handed story exists also for languages written from right to left: e.g., Hebrew.

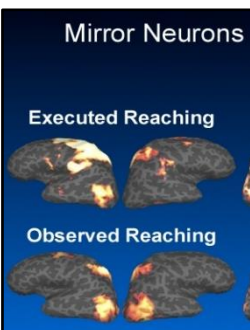


Culture cannot be the answer: same indifference to handedness in cultures from Jewish to Aztec.

""



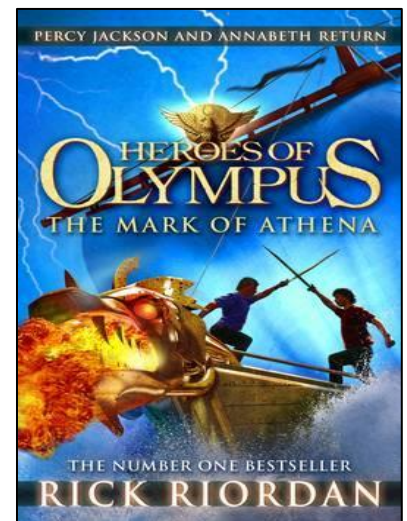
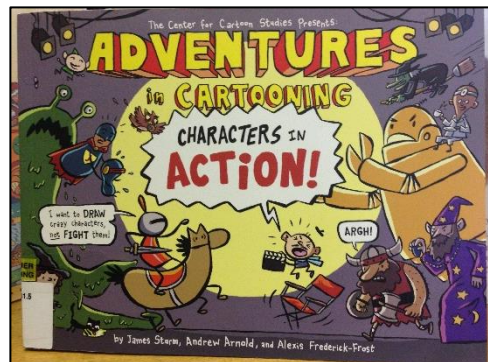
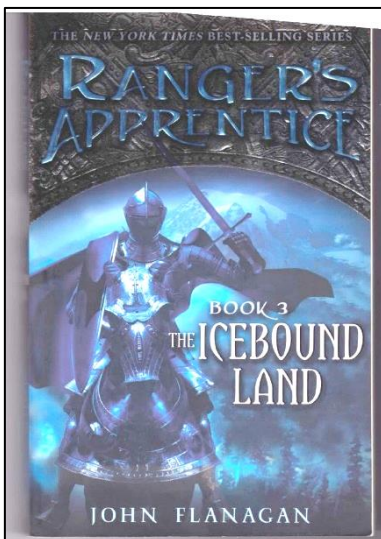
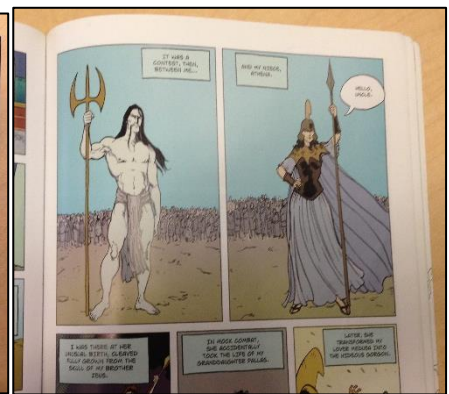
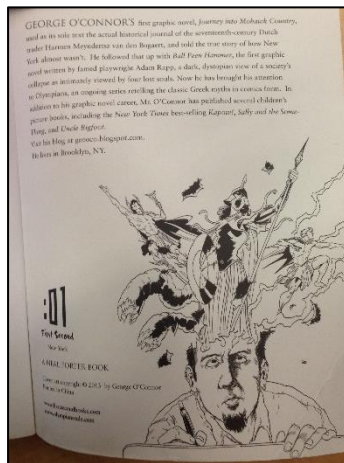
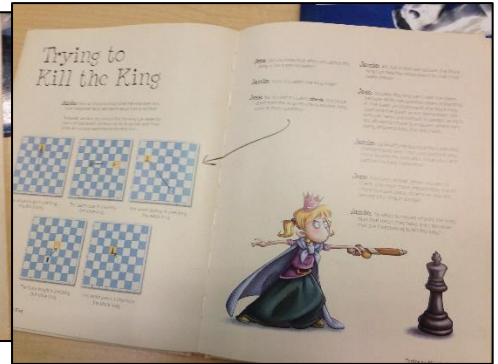
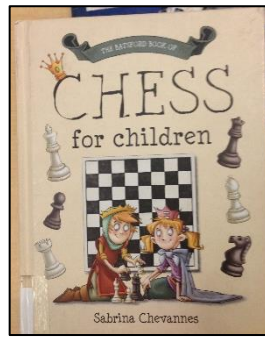
**Guess #1:**  
Change blindness in visual perception: very large changes in a scene may be unnoticed, especially if they occur during a brief break in the view (e.g., during simulated eye-blink). Overall percept of object may be more important than the details.

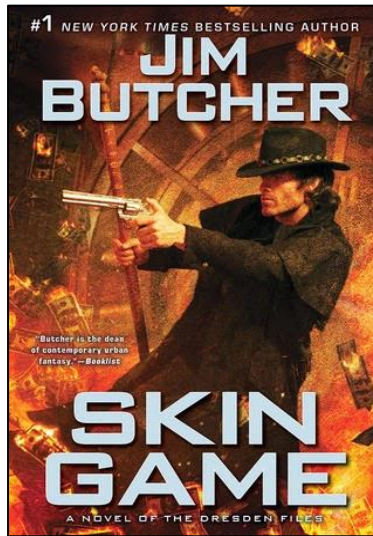
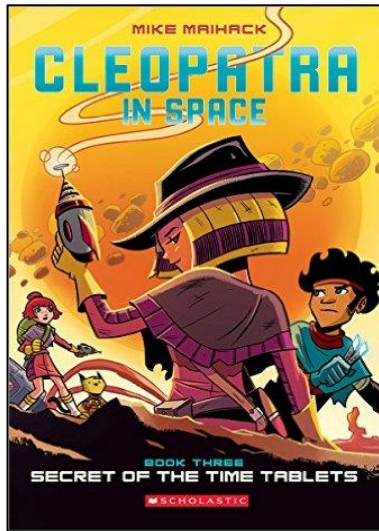
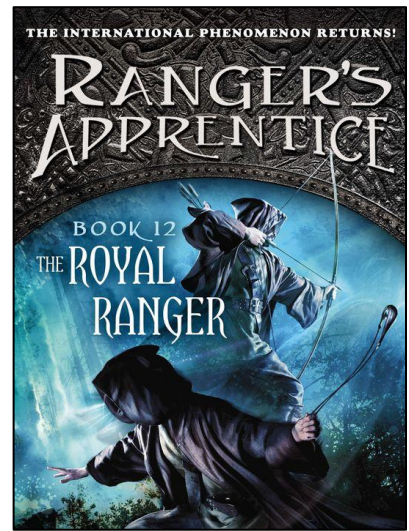
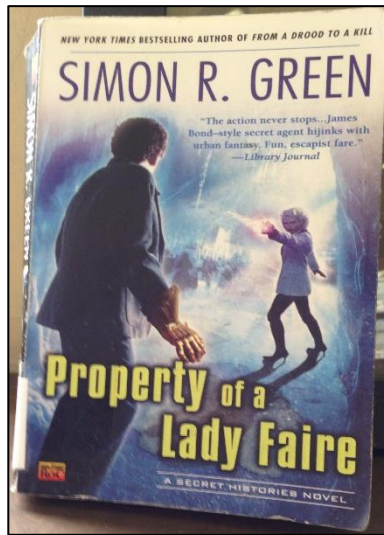
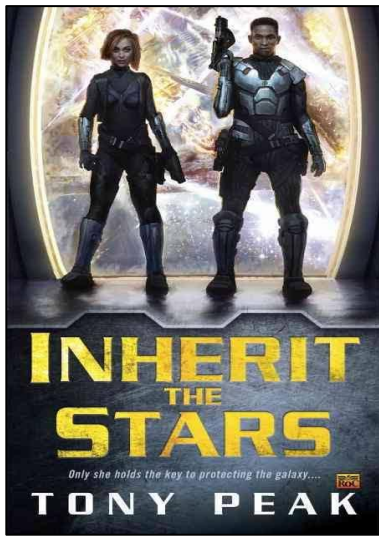
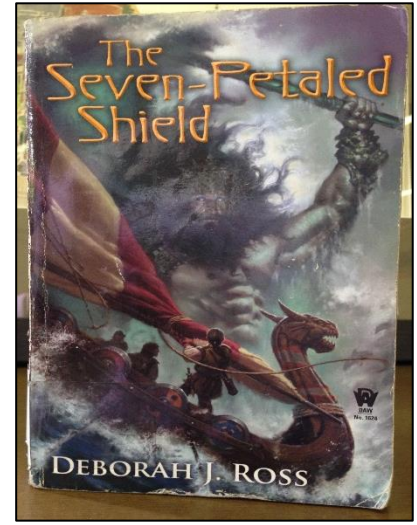
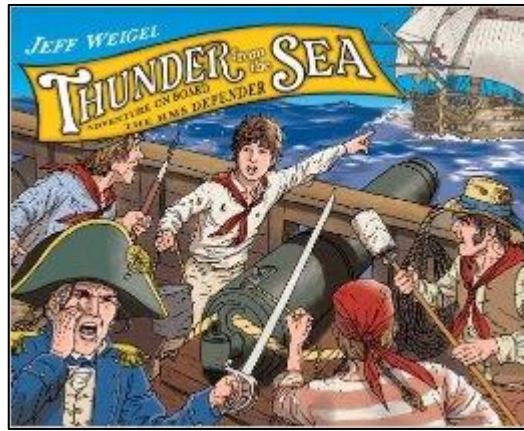
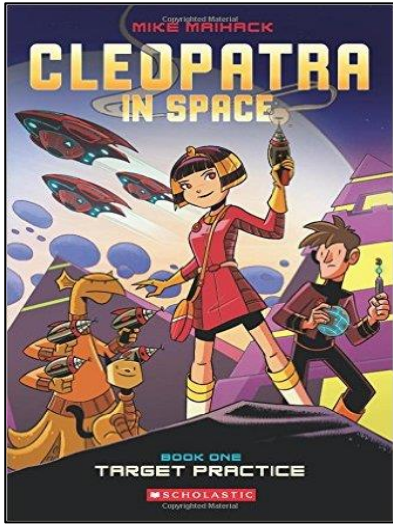


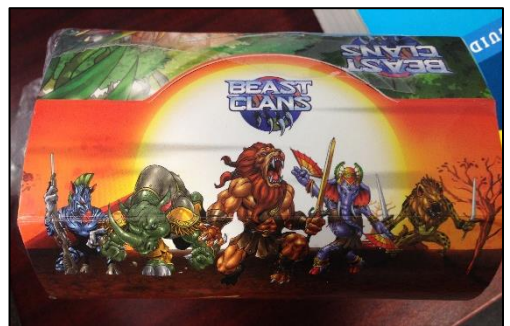
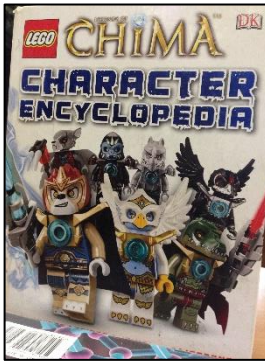
**Guess #2:**  
Mirror neurons: cortical neurons that respond when executing an action or when observing self/others executing same action. Is this part of "externalizing" oneself onto the outside world? Is this confusing when deciding on left vs. right when "viewing" self or viewing others?

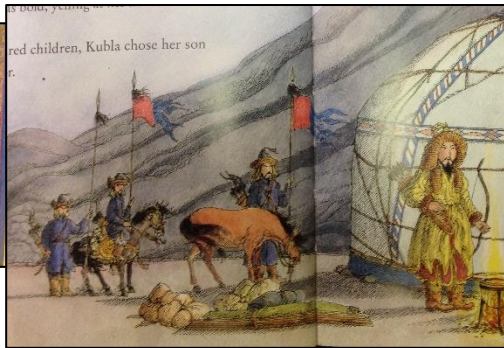
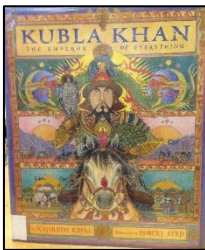
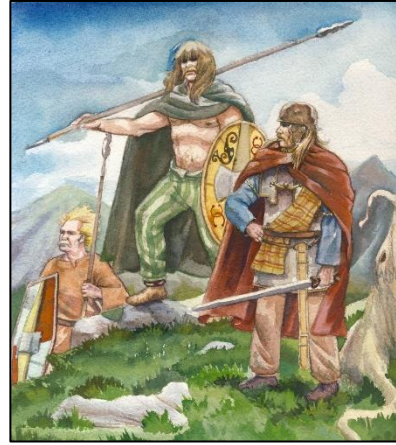
# Addenda ad Infinitum

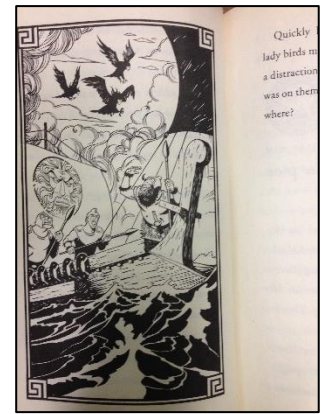
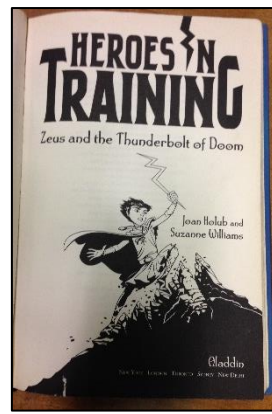
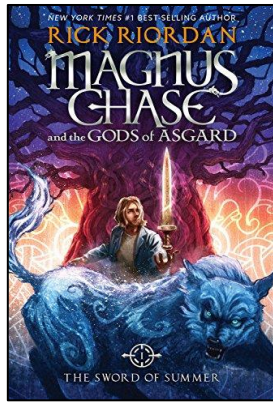
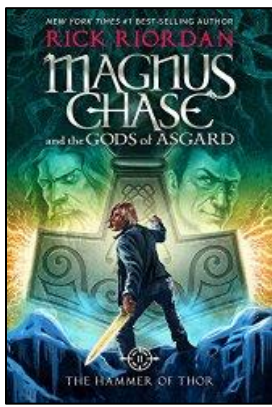
Every time I enter the Children's Section of a Library, I scan the books – covers and illustrations. I never fail to find at least one sinister example. I append a small sample – book covers, toys, illustrations (together with the books' covers to identify the source):



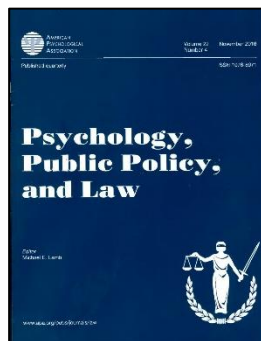
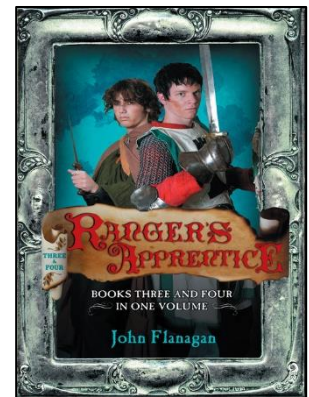
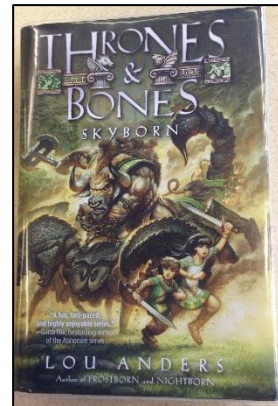
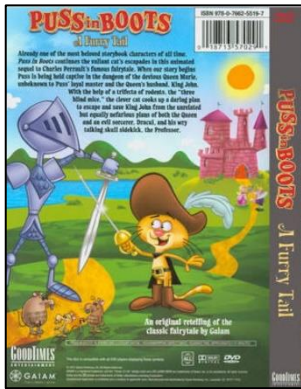
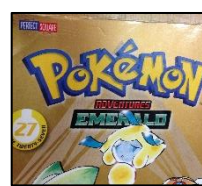
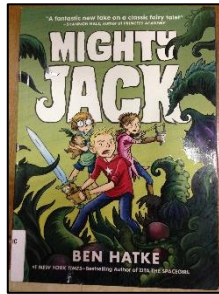








Quickly lady birds in a distraction was on them where?



**Swashbuckling Sam and the Tale of Blackbeard's Revenge**  
 Wide Eyed Productions  
 Writer: Lauren Blomquist  
 Director: Kristin Skye Hoffmann and Stephanie C. Cunningham

What would you do if a pirate appeared in your kitchen?  
 Seventeen-year-old Sam is having a tough time at school when Captain Silver whiskers tear off to his magical world. Can Sam find Silver's pirate treasure - and discover courage, too?

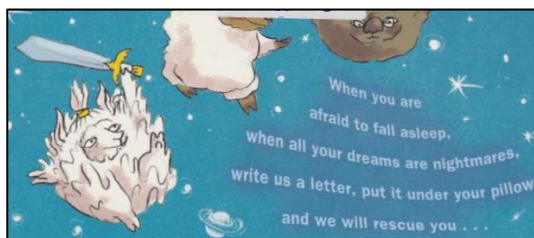
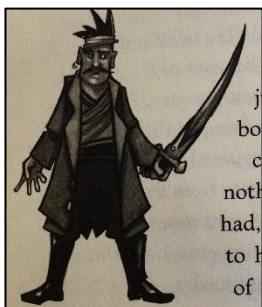
<http://www.wideeyedproductions.com/>

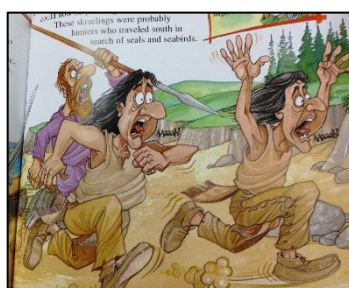
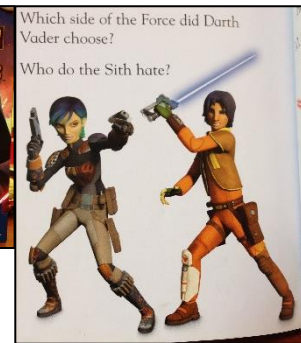
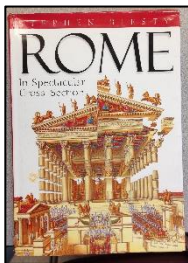
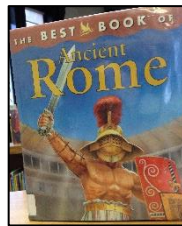
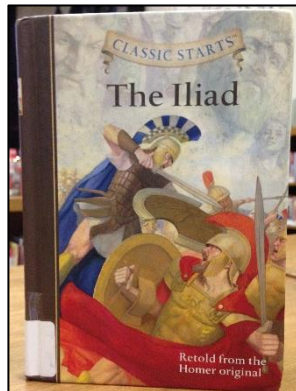
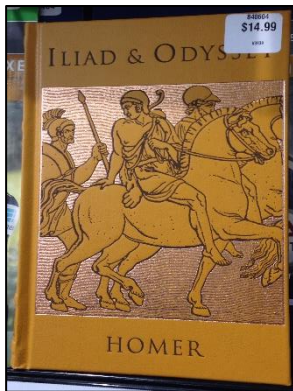
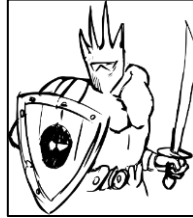
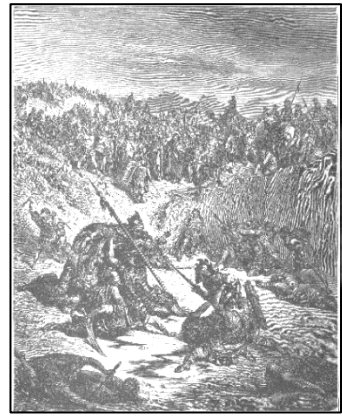
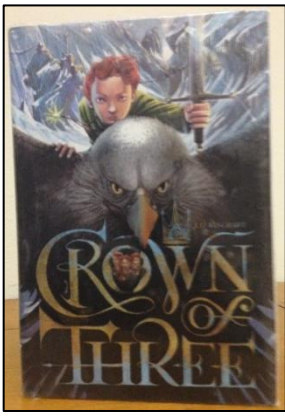
**SAM, OUR MAIN CHARACTER HAS A SPECIAL TALENT FOR READING MAPS. IF YOU WERE GOING TO HIDE TREASURE, WHAT WOULD YOUR MAP LOOK LIKE? DRAW YOUR TREASURE MAP INTO THIS BLANK MAP!**

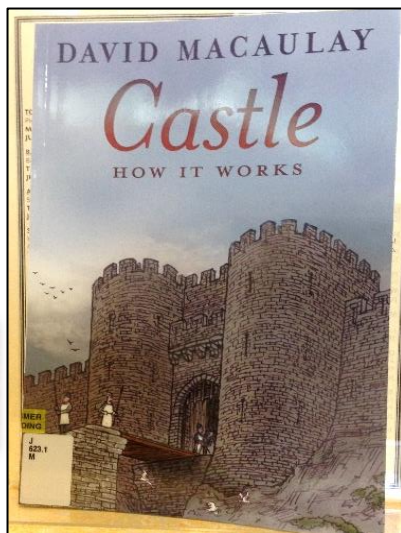
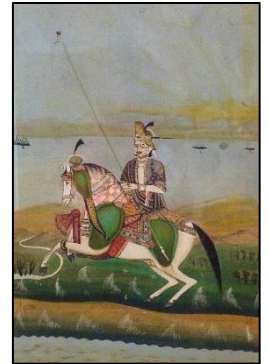
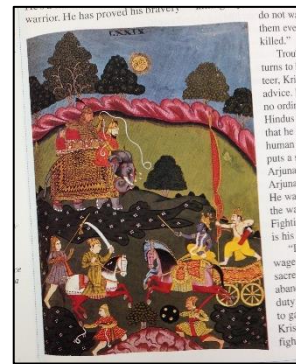
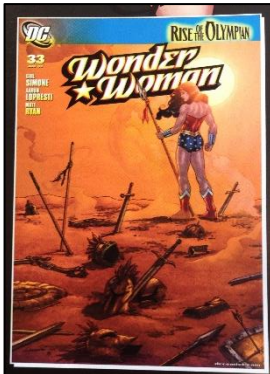
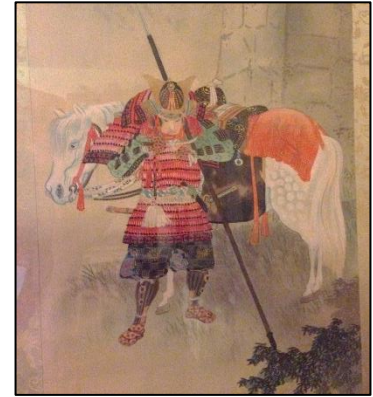
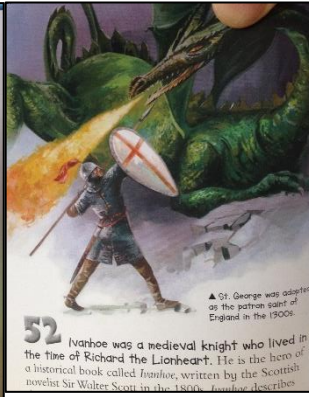
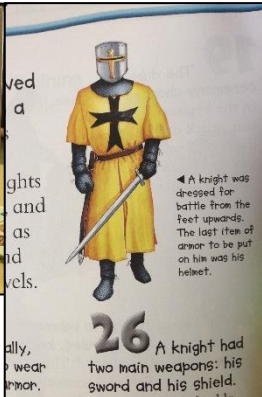
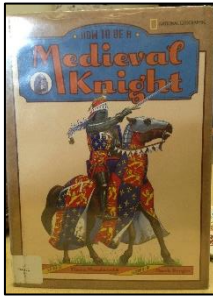
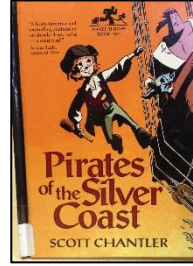
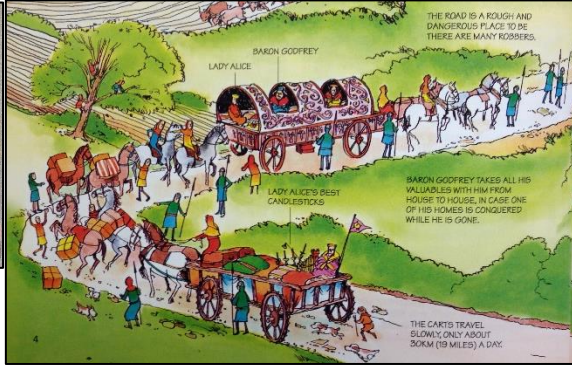
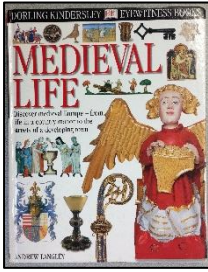
When Sam first joined his pirate crew the first two years were terrible. I mean these pirate crews and then they find them in the next month later.  
 Pirate: A person who attacks and robs ships at sea.  
 Treasure: A sum of valuable objects and valuables stored together.  
 Landfill: A person who works with the sea or seafaring.  
 Ship: The crew of a ship.  
 Ship: The crew of a ship.  
 Age: Ten.  
 Book: Treasure.  
 Pirates of Right: A sea-cruiser Spanish silver color sometimes literally cut into right pieces.  
 Captain: A chief, being general with a special title used by pirates and sailors.

WIDE EYED PRODUCTIONS

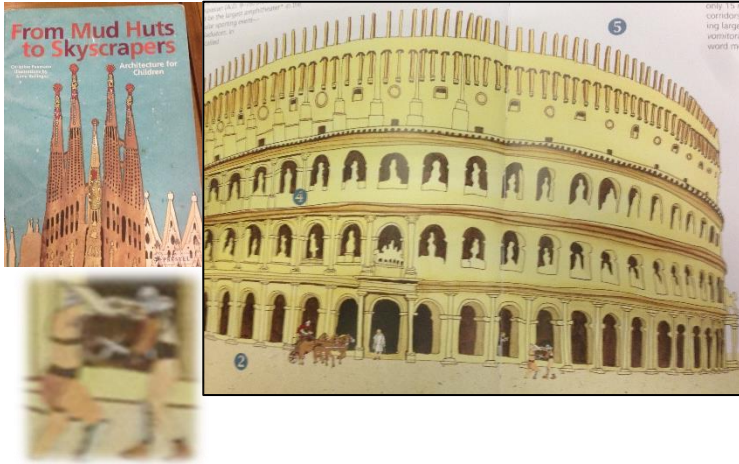
**\*Also - don't miss: Fairy Tale Christmas: The Musical**











**Enough already!**

**To quote the King, "Etcetera, etcetera, etcetera..."**



## Addenda<sup>2</sup>

Tomorrow, and tomorrow, and tomorrow,  
Creeps in this petty pace from day to day,  
To the last syllable of recorded time:-

