

The Art and Science of Depiction

Limitations of the Medium, compensation or accentuation: The Image is Static

*Fredo Durand
MIT- Lab for Computer Science*

Icons

- Role of pictures/artists
- Iconoclasts



Limitations: static

2

Icons: canon

- Millet-Van Gogh



Limitations: static

3

Icons: canon

- Millet-Van Gogh

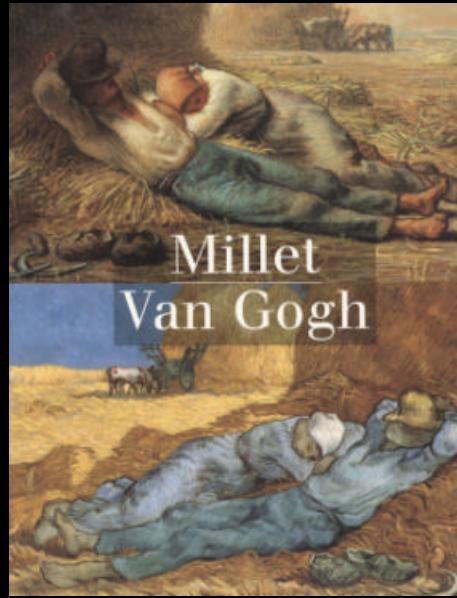


Limitations: static

4

Icons: canon

- Millet-Van Gogh



Limitations: static

5

Icons: canon

- Hokusai – Jeff Wall



Limitations: static

6

Icon: canon

- Scorsese
- La femme Nikita/Point of No Return
- White House

Limitations: static

7

Movie anyone?

- A Personal Journey through American Cinema with Martin Scorsese
- Le Mystère Picasso
- Making of Toy Story

Limitations: static

8

Talk

- Who will talk after Spring Break?

Limitations: static

9

Assignments

- Readings
 - Different choices
 - Summarize to others the next week
(send me the summary)
 - Prepare questions for the text you have not read
- Solso *Cognition and the Visual Arts*
- Essay
 - Exploratory or Picture comment

Limitations: static

10

Personal Meeting II

- Class
- Essay
- Project

Limitations: static

11

Plan

- The picture is flat
- The viewpoint is unique
- The image is finite, it has a frame
- The picture is static
- The contrast is limited
- The gamut (palette) is limited

Limitations: static

12

The picture is static

- Single snapshot
 - Content
 - Time & Pose (not at rest)
 - Viewpoint
 - Blur, Action lines, path
- Multiple snapshot
- Metaphor
- Pictorial
- Op' Art

Limitations: static

13

Content



Limitations: static

14

Content

- *Constable,
View on Stour*



Limitations: static

15

Content

- George
de la Tour
Penitent



Limitations: static

16

Content

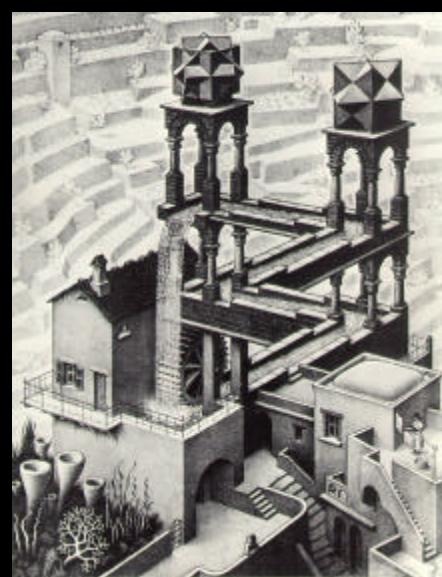


Limitations: static

17

Content

- M.C. Escher, *Waterfall*



Limitations: static

18

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Limitations: static

19

Pose



Limitations: static

20

Deviation from the resting position

- Andrew Wyeth, *Wind from the Sea*, 1968



Limitations: static

21

Pose

- Guericault



Limitations: static

22

Pose accentuated

- Lartigue (effect of curtain shutter)

Figure 6-6. Jacques Henri Lartigue, Grand Prix of the Automobile Club of France, 1912. This classic photograph provides an exaggerated example of the distortion that can be caused by a focal-plane shutter. The oval shape of the automobile tire is caused by the motion of the car between the time the bottom of the tire was exposed and the top. (Remember—the image is upside-down on the negative.) The same principle caused the leaning appearance of the spectators. Lartigue turned the camera to follow the automobile (panning), and thus the image of the spectators moved at the film plane during the exposure. [Courtesy International Museum of Photography at George Eastman House.]



Limitations: static

23

Egyptian vs. Greek

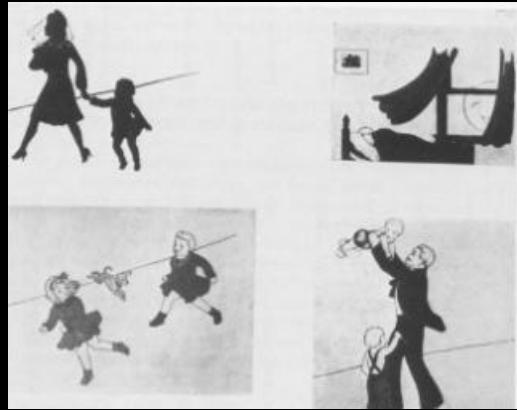


Limitations: static

24

Pose Effectiveness

- Effective for 3 year old, no for 2 year old
[Amen 1941]



Limitations: static

25

Pose Effectiveness

- Effective for 3 year old, no for 2 year old
- Then decline with age

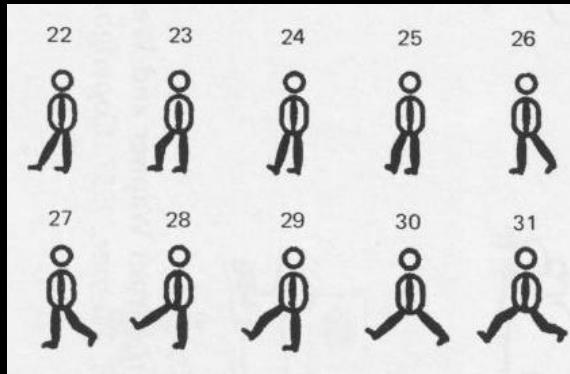


Limitations: static

26

Pose Effectiveness

- Effective for 3 year old, no for 2 year old
- Then decline with age
- The more dramatic, the better



Limitations: static

27

Pose Effectiveness

- The more dramatic,
the better



Limitations: static

28

Pose Effectiveness

- Philippe Halsman, *Dali Anatomicus*, 1977

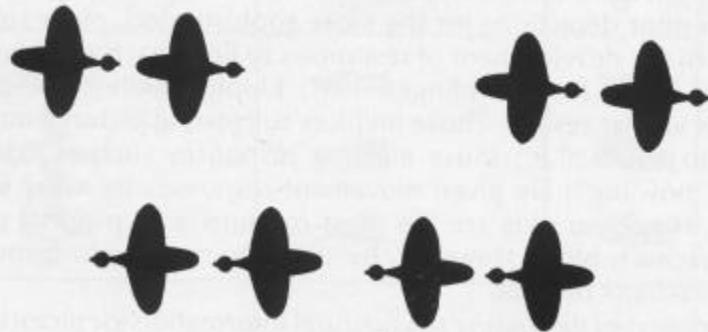


Limitations: static

29

Orientation

- Left to right in Western culture
- Chinese calligraphy...



Limitations: static

30

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- Pictorial
- Op' Art

Limitations: static

31

Viewpoint

- + lines +pose



Limitations: static

32

Viewpoint

- +pose



Limitations: static

33

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Limitations: static

34

Path of Movement – Motion Blur



Limitations: static

35

Path of Movement



Limitations: static

36

Trails



Limitations: static

37

Trails

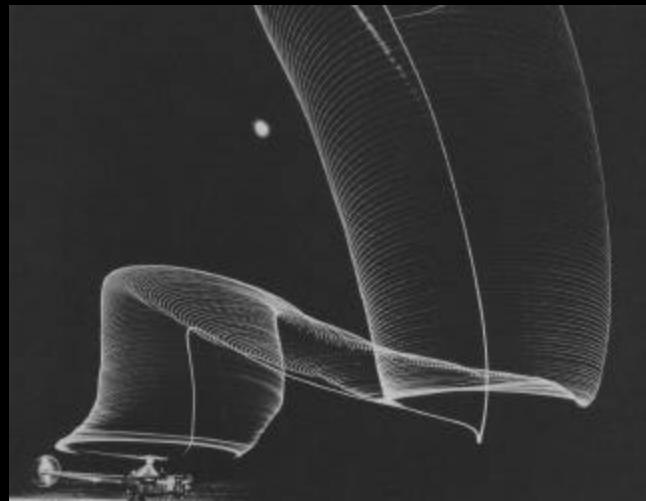


Limitations: static

38

Trails

- Feininger, *US Navy Helicopter Taking Off At Night*, 1949



Limitations: static

39

Motion Blur

- Star Wars, Lucas Film



Limitations: static

40

Motion Blur

- Luxo Jr., Pixar



Limitations: static

41

Motion Blur

- Velasquez



Limitations: static

42

Motion Blur, Trail

- *Child Attendant Flying down from Heaven on a Cloud*, 1952



Limitations: static

43

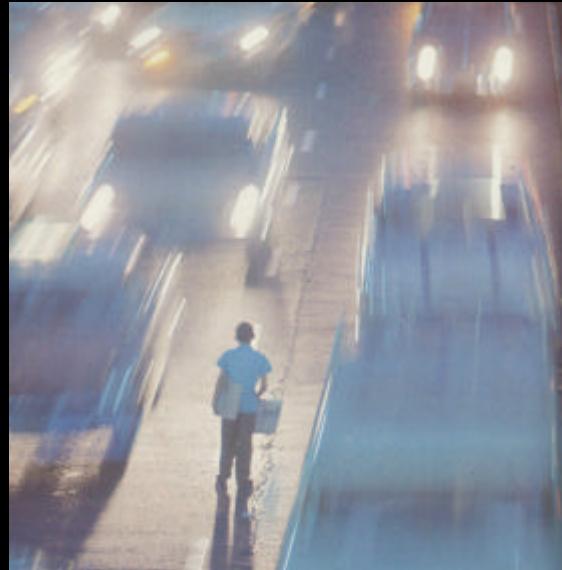
Motion blur – Figure



Limitations: static

44

Motion Blur – Ground



Limitations: static

45

Motion Blur - Both

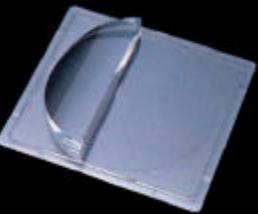
- +Viewpoint, content



Limitations: static

46

Motion Blur



Limitations: static

47

Cartoon – lines of movement

- Keith Haring
Untitled, 1982

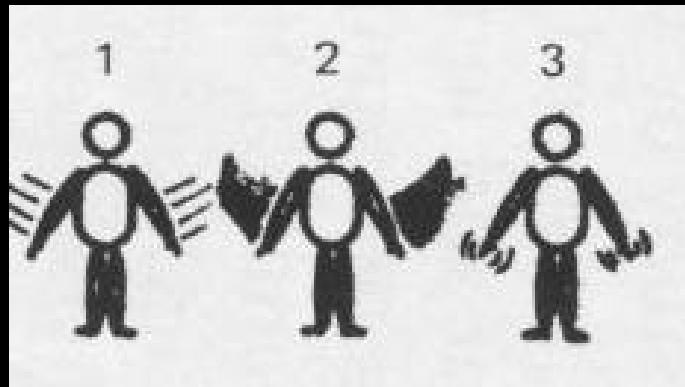


Limitations: static

48

Path of movements

- More effective for older groups (>8 year old)

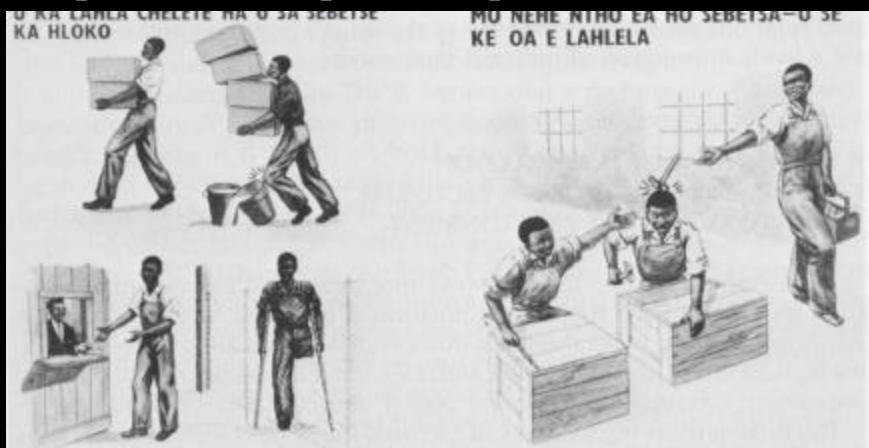


Limitations: static

49

Path of movements

- More effective for older groups (>8 year old)
- Importance of exposure to pictures



Limitations: static

50

Sculpture

- Umberto Boccioni,
*Unique Form
Of Continuity In Space*,
1913



Limitations: static



51

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- Op' Art

Limitations: static

52

Multiple snapshots



Limitations: static

53

Multiple snapshots

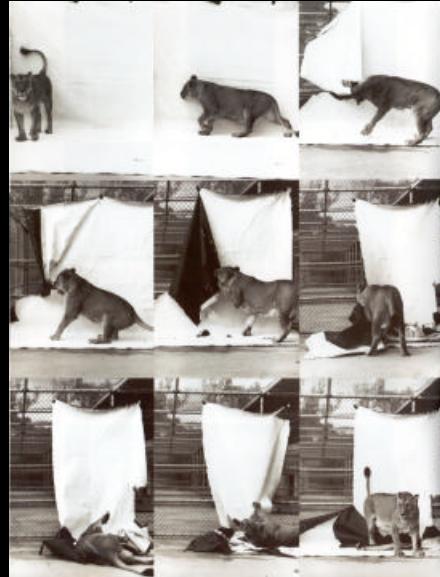


Limitations: static

54

Multiple snapshots – multiple images

- Gary Heery
Lion, Panthera Persica X Leo
(From Zoo)



Limitations: static

55

Multiple Snapshots – one image

- *The Dance of Salome*, Benozzo Gozzoli



Limitations: static

56

Multiple snapshots – superimposed



Limitations: static

57

Multiple snapshot – multiple gaze

- David Hockney



Limitations: static

58

Multiple snapshot: nature vs. nurture

- Head motion perception:
 - 3% rural Zulu, 86% White South African
- Cultural nurture



Limitations: static

59

Multiple snapshots

- Masaccio and Masolino



Limitations: static

60

Multiple snapshots

- Sassetta,
*The Meeting of
St Anthony and
Saint Paul,*
1440



Limitations: static

61

Multiple Snapshots

- *Murder at the Pentagon*, TobiIndyke, 1993

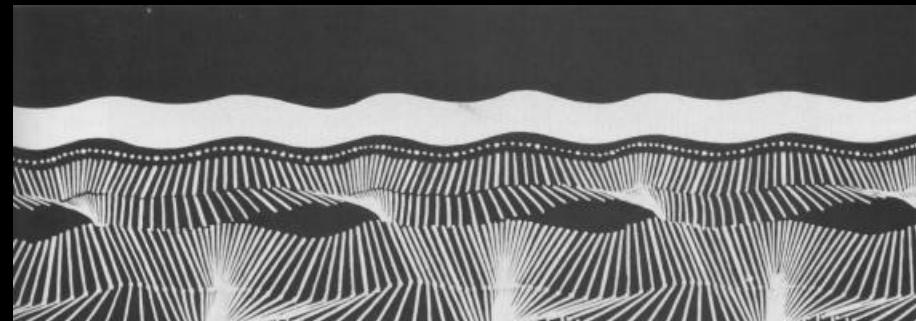


Limitations: static

62

Multiple snapshots

- Etienne-Jules Marey,
Chronophotograph



Multiple Snapshots

- Marcel Duchamp
Nude Descending a Staircase
1912



Limitations: static

64

Multiple Snapshots

- Giacomo Balla, *Dynamism Of A Dog On A Leash*
1912



Limitations: static

65

Hockney



Limitations: static

66

Multiple Snapshots

- Magritte, *Le Sorcier*



Limitations: static

67

Multiple Snapshots

- *A Dancer*,
Pavel Tchelitchew

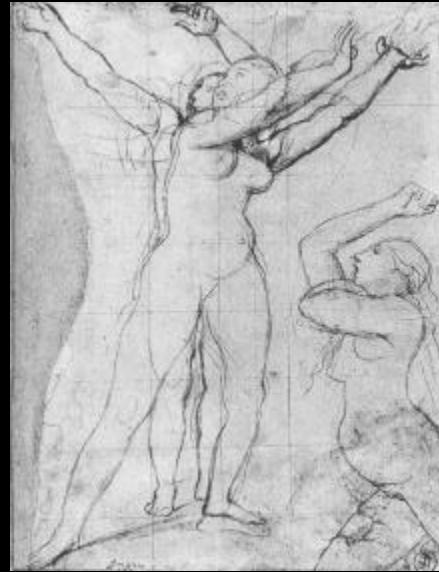


Limitations: static

68

Multiple Snapshots

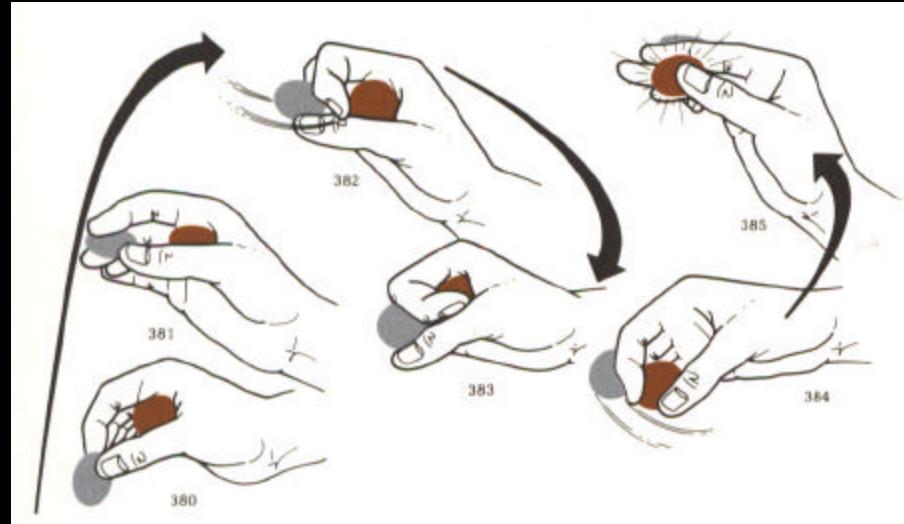
- Ingres,
Female Nude,
1826-1834



Limitations: static

69

Multiple Snapshots



Limitations: static

70

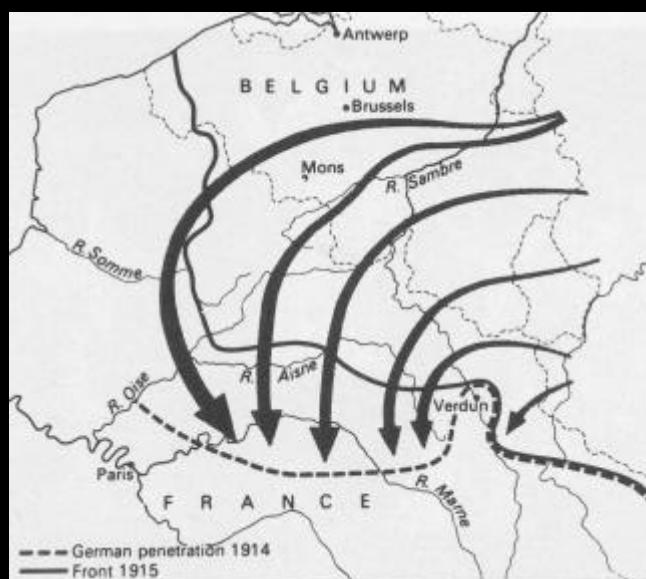
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- Pictorial
- Op' Art

Limitations: static

71

Metaphor



Limitations: static

72

Metaphor

- *Racing Automobiles*, Balla



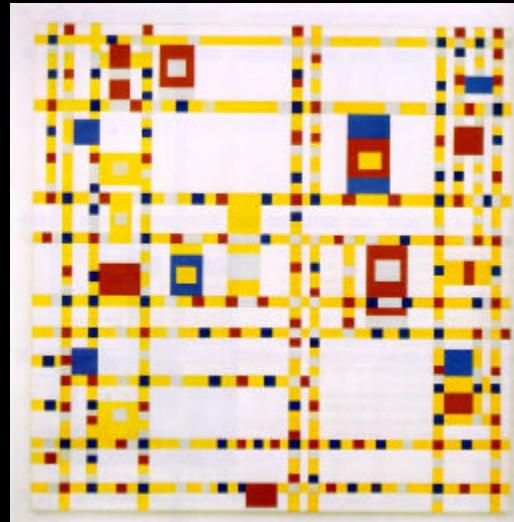
Limitations: static

73

Metaphor

- Mondrian

*Broadway
Boogie-Woogie*,
1942-43



Limitations: static

74

Metaphor

- Morris Louis, *Saraband*, 1959

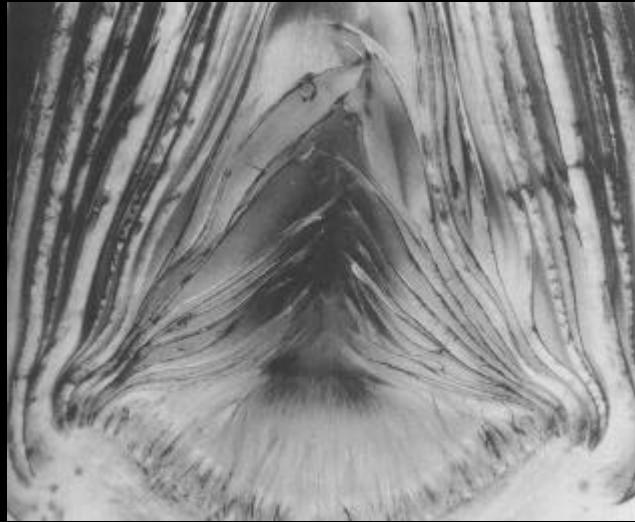


Limitations: static

75

Metaphor – dynamic form

- Weston, *Artichoke Halved*, 1930



Limitations: static

76

Metaphor – dynamic form

- Sidney Opera



Limitations: static

77

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Limitations: static

78

Composition - balance

- Degas, *L'Etoile*
- Off-center, tension

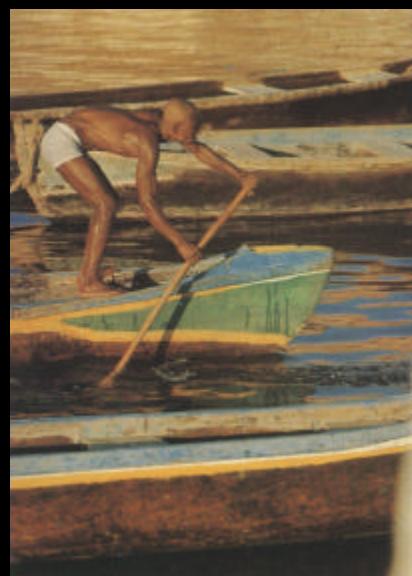


Limitations: static

79

Composition - lines

- + Balance



Limitations: static

80

Composition - gaze

- Turner



Limitations: static

81

Composition - lines

- Van Gogh, Starry Night, 1889



Limitations: static

82

Composition - lines

- Barbieri,
Sybil Holding a Scroll,
1590-1666



Limitations: static

83

Composition - lines

- Tak Kwong Chan
The Horse –
Away He Goes 1980



Limitations: static

84

Composition - grouping

- Arthus Bertrand



Limitations: static

85

Abstract

- Claude Melin,
Chanson De Geste,
1990



Limitations: static

86

Calligraphy

- Hassan Massoudy



Limitations: static

87

The picture is static

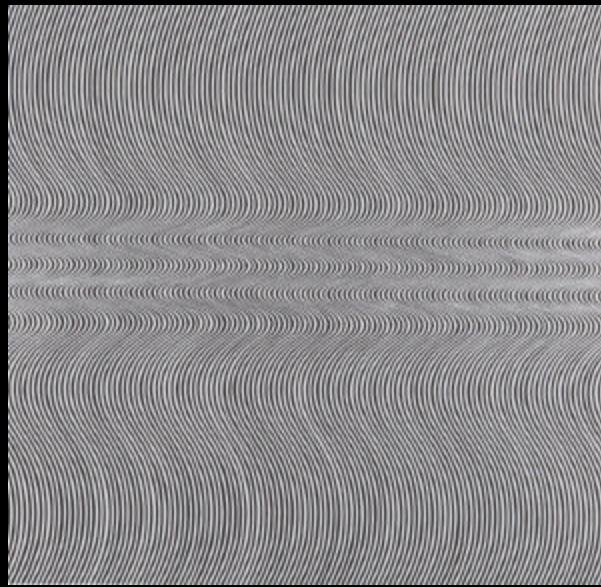
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Limitations: static

88

Op' Art

- Bridget Riley,
Current,
1964

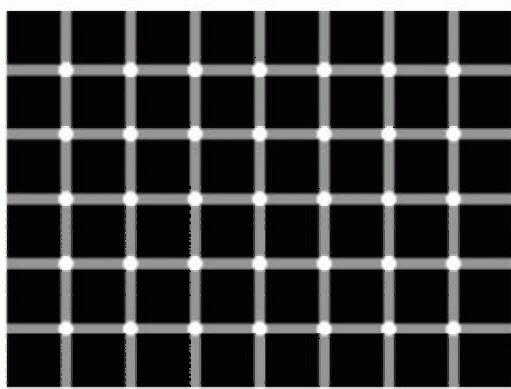


Limitations: static

89

Illusion

Florida Election Recount



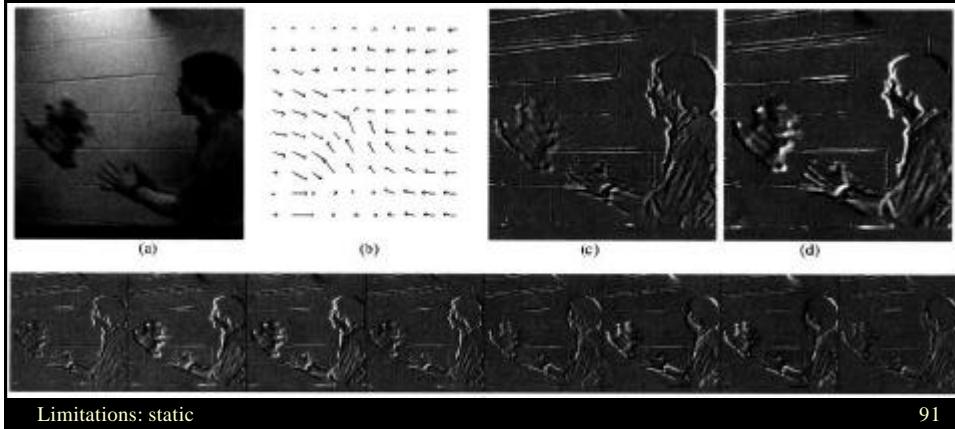
Count and total black dots for Al Gore and
white dots for George Bush. Recount to confirm

Limitations: static

90

Motion without Movement

- [Freeman, Adelson and Heeger, 1991]
- Time sequence of images
- No movement but Sensation of motion



91

La Gioconda

- Sfumato

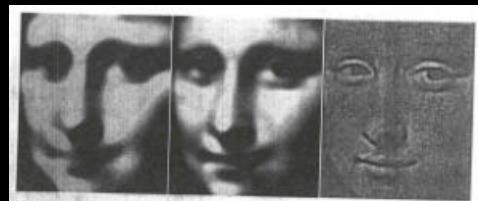


Limitations: static

92

La Gioconda

- Sfumato
- [Dr. Livingstone]
- Multiresolution vision



Limitations: static

93

A Paradigm...



Limitations: static

94

After Spring Break...

- Representation system
 - Drawing & perspective
 - Denotation
 - Tone & color

Limitations: static

95

The picture is static

TABLE 7.1
Results of a Cross-Cultural Survey of Pictures Showing Movement

Cultural period	Number of pictures viewed to find 25 pictures of movement	Pictorial movement indicators		
		Posture	Content	Necessitating
Ancient cave paintings	70	25	9	—
Egyptian tomb paintings	66	24	17	1
Greek vase paintings	34	25	19	1
Mediaeval (Giotto; Martini)	80	25	15	7
Renaissance (da Vinci; Michelangelo)	58	25	18	4
Baroque (Rubens; Fragonard)	104	25	13	9
Realism (Goya; Delacroix)	89	25	17	4
Oriental (Kokusai)	50	25	20	9
American (Marin)	63	25	12	17
French Fauvism (Matisse; Marquet; Derain)	181	24	21	10
German Blaue Reiter (Macke; Kandinsky)	117	25	11	5
Contemporary children's books	34	25	18	6
Contemporary newspaper comics	41	25	5	7

NOTE: The sources for the pictures are in Appendix 2.

Limitations: static

96

The contrast is limited

Limitations: static

97

The gamut (palette) is limited

Limitations: static

98