

# IMAGE DIVERSITY ANALYSIS: CONTEXT, OPINION AND BIAS

P. Zontone, G. Boato, F. G. B. De Natale  
A. De Rosa, M. Barni, A. Piva  
**J. S. Hare**, D. Dupplaw, P. H. Lewis

# IMAGES CAN...

*The main roles of images in the  
communications process*

Attract attention and  
make documents more  
appealing



## News Front Page

World

UK

England

Northern Ireland

Scotland

Wales

Wales politics

Business

Politics

Health

Education

Science &amp; Environment

Technology

Entertainment

Also in the news

Video and Audio

Have Your Say

Magazine

In Pictures

Country Profiles

Special Reports

Related BBC sites

Sport

Weather

Radio 1 Newsbeat

CBBC Newsround

On This Day

Editors' Blog

Languages

Page last updated at 10:13 GMT, Saturday, 17 October 2009 11:13 UK

E-mail this to a friend

Printable version

## Tourism signs system baffles AM

**We've all seen them dotted on roads across the country. Brown signs directing you to a visitor attraction.**

But when one Welsh politician spotted one pointing to a fast food restaurant, she became a little puzzled.

Now Angela Burns AM wants to know why McDonalds qualifies for a brown sign but other businesses don't.

She said there was "no rhyme or reason" as to who is allowed signs by the South Wales Trunk Road Agency.

And she added that a number of tourism operators in Pembrokeshire had been refused signs including the owner of Slebech Park.

But as Ms Burns raised her concerns, the Welsh Assembly Government said it was carrying out a review of the tourism signs.

Ms Burns, the AM for Carmarthen West and South Pembrokeshire, said the brown road signs were supposed to point visitors in the direction of tourist attractions.

"I have heard from a number of



Angela Burns said she had raised the issue several times at the Senedd



### South West Wales

Find out more about what is going on across the region

### SEE ALSO

- ▶ What makes a good road sign?  
25 Sep 08 | Magazine
- ▶ Visitors 'miss' Snowdon village  
12 Jan 08 | North West Wales
- ▶ New curbs 'could cut road deaths'  
23 Sep 09 | Wales

### RELATED INTERNET LINKS

- ▶ South Wales Trunk Road Agency
- ▶ Angela Burns AM
- ▶ Slebech Park

The BBC is not responsible for the content of external internet sites

### TOP SOUTH WEST WALES STORIES

- ▶ Escaped prisoner back in custody
- ▶ Rugby star's drink-driving ban
- ▶ Total eclipse of the chart

News feeds



# Convey opinions and emotional messages







# Convey information for documenting a claim



2003



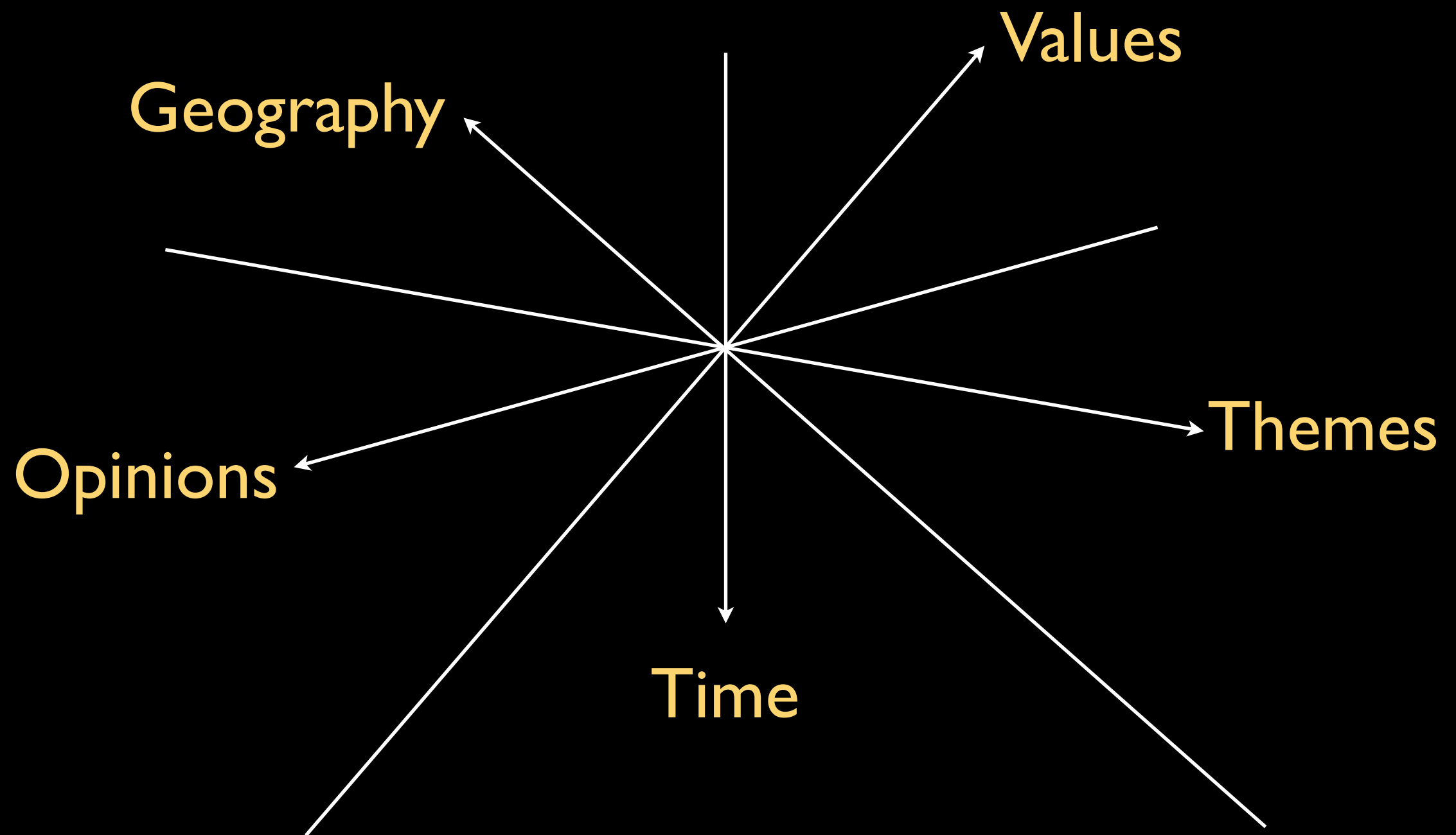
2007

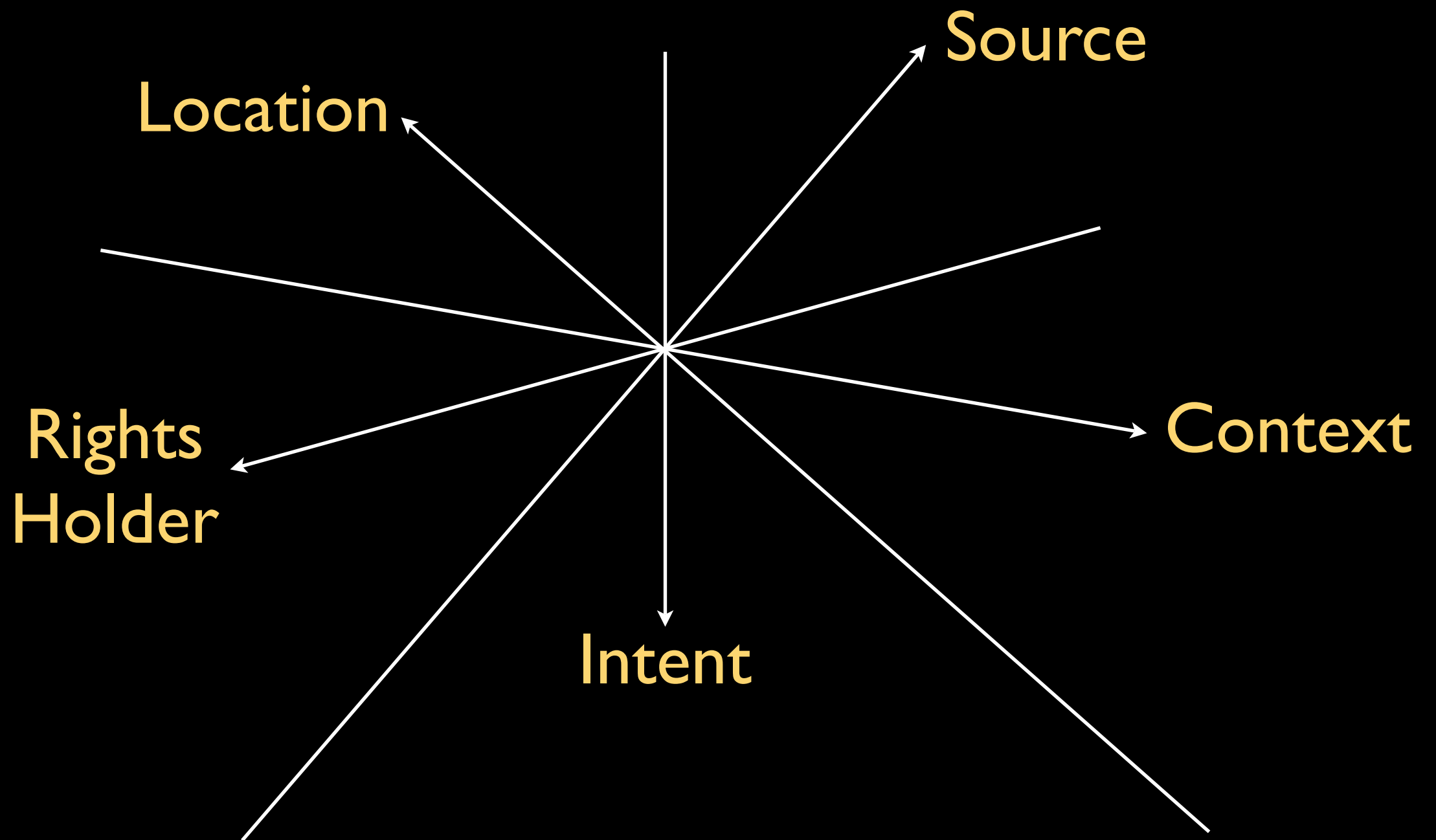


“Global warming is happening now!”



# DIVERSITY









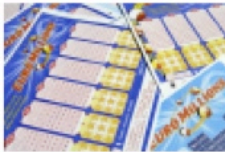





# Diversity in image search results





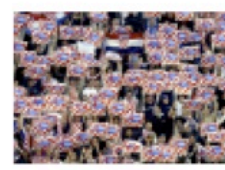


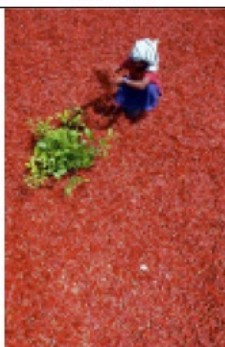
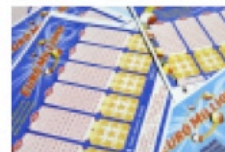

# Pure Visual Diversification

*IAM@ImageCLEFphoto 2009 - results of a search for 'euro'*

without visual features

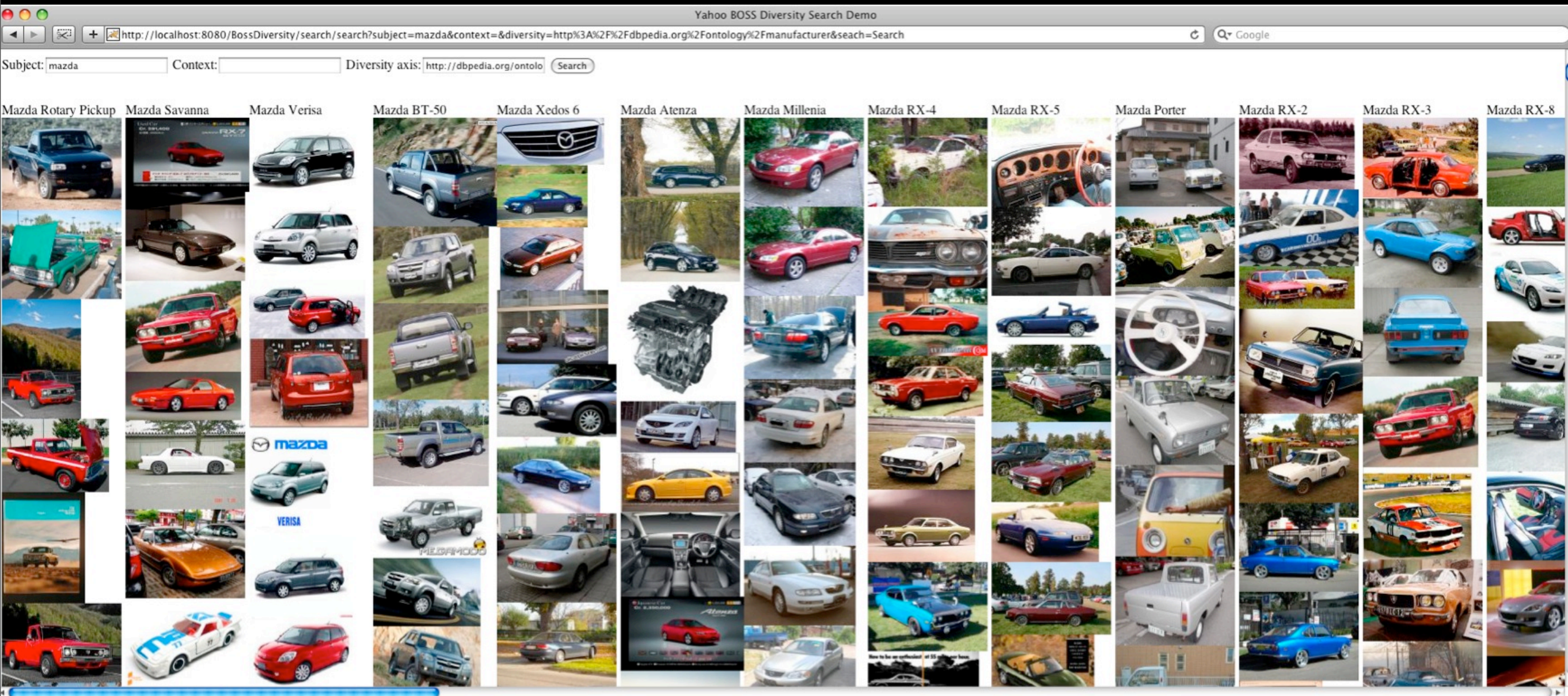
Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
				
Rank 6	Rank 7	Rank 8	Rank 9	Rank 10
				

with visual features

Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
				
Rank 6	Rank 7	Rank 8	Rank 9	Rank 10
				



# Diversified Image Search





# Emotions

# IAPS: International Affective Picture System

Anger

Amusement

Awe

Contentment

Disgust

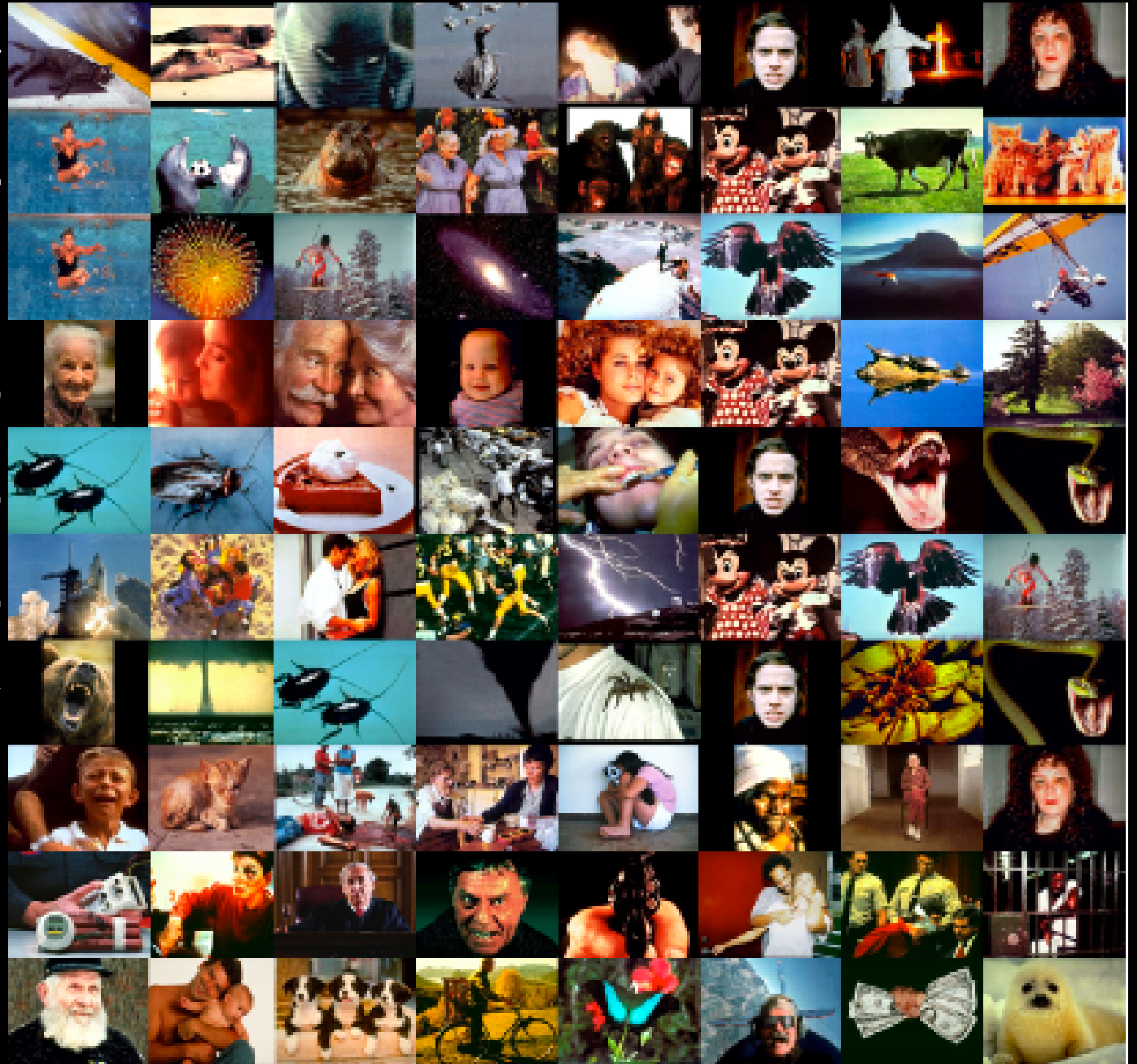
Excitement

Fear

Sadness

Undifferentiated -ve

Undifferentiated +ve





# Bias Detection

# Contextual Analysis

## Sink immigrants' boats - Griffin

The EU should sink boats carrying illegal immigrants to prevent them entering Europe, British National Party leader Nick Griffin has told the BBC.

The MEP for the North-West of England said the EU had to get "very tough" with migrants from sub-Saharan Africa.

Pressed on what should happen to those on board, he said: "Throw them a life raft and they can go back to Libya".

Libya has long been a staging post for migrants from Egypt and sub-Saharan Africa wanting to reach Europe.

Nearly 37,000 immigrants landed on Italian shores last year, an increase of about 75% on the year before.

But with the prospect of a new immigration and asylum policy being voted on this autumn by MEPs, Mr Griffin is advocating measures to destroy boats used by illegal immigrants to reach the EU's southern coastline.

### 'Combating the flow'

In an interview with this week's edition of BBC Parliament's The Record Europe, he said: "If there's measures to set up some kind of force or to help, say the Italians, set up a force which actually blocks the Mediterranean then we'd support that.

"But the only measure, sooner or later, which is going to stop immigration and stop large numbers of sub-Saharan Africans dying on the way to get over here is to get very tough with those coming over.

“ Europe has sooner or later to close its borders or its simply going to be swamped by the Third World ”

Nick Griffin MEP

"Frankly, they need to sink several of those boats.

"Anyone coming up with measures like that we'll support but anything which is there as a 'oh, we need to do something about it' but in the end doing something about it means bringing them into Europe' we will oppose."

The interviewer, BBC Correspondent Shirin Wheeler, said: "I don't think the EU is in the business of murdering people at sea."



Nick Griffin: "Frankly they need to sink several of those boats"

sameas



Nick  
Griffin

name

leader

British  
National Party

ideology

position

White  
Nationalism

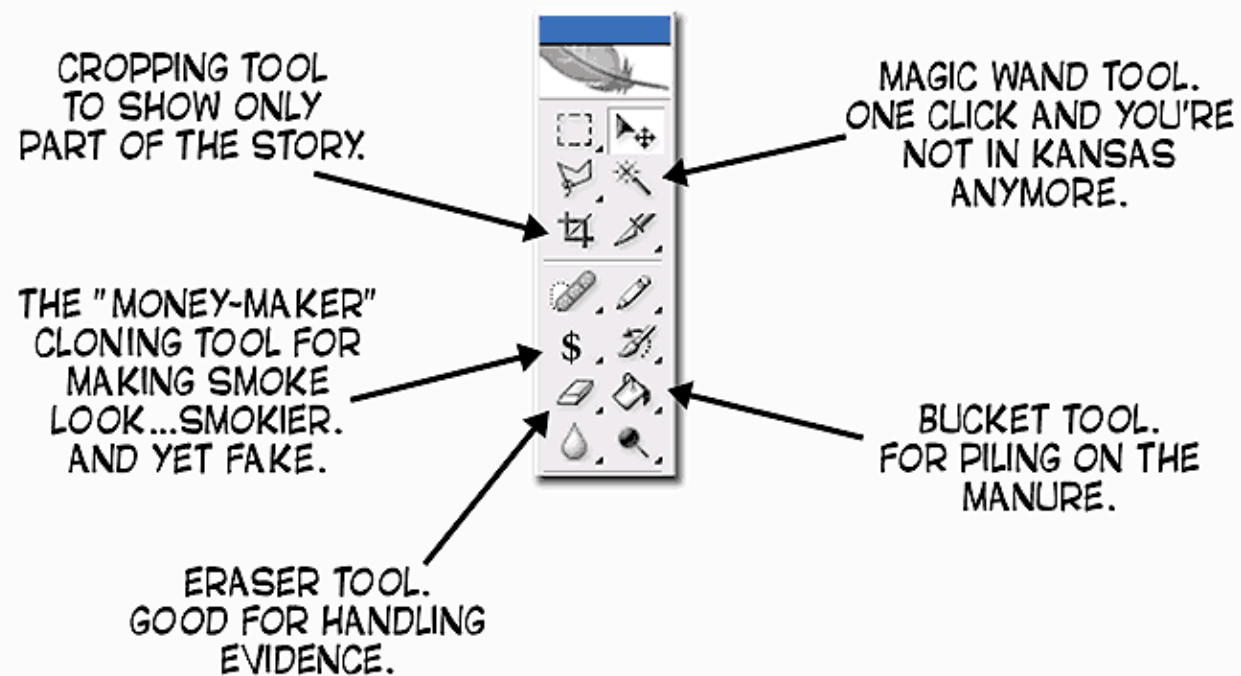
Fascism

Far-right

# Image Tampering



# PRESENTING THE "LET'S SEE IF REUTERS IS PAYING ATTENTION" PHOTOSHOP TOOL PALETTE FOR "CREATIVE" FREELANCERS:



COPYRIGHT © 2006 J.D. "Hillad" Fraser HTTP://WWW.USERFRIENDLY.ORG/





GRANT - CIVIL WAR WITH GENERALS

LC-USZ62-21992

PRESIDENT FILE



COPYRIGHT 1974  
BY  
LE MANDY

GENERAL GRANT - N. C. P. 1914

Composite photo -



Major General A. M. D. M. Crook





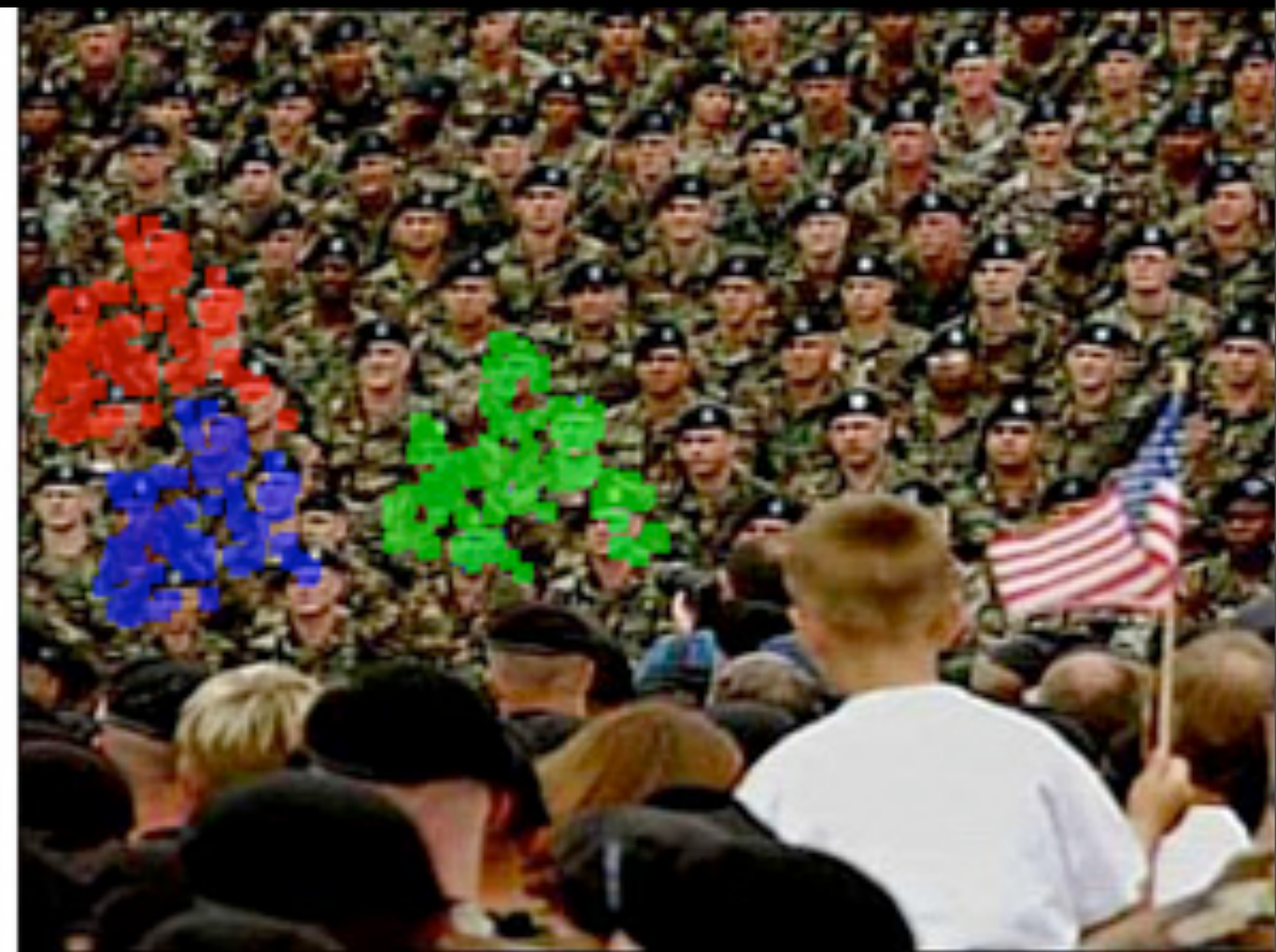


# Forensic Techniques



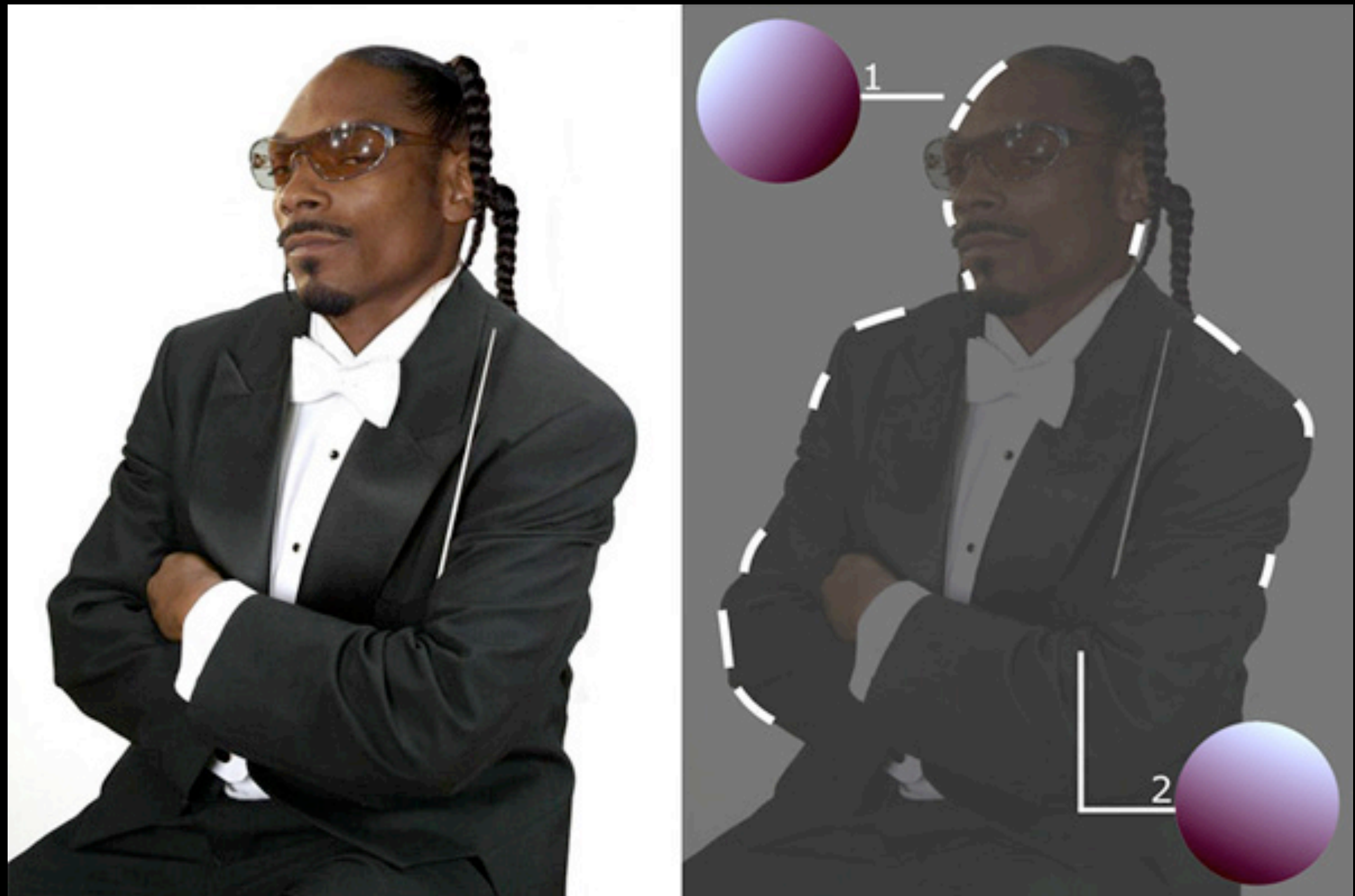
# A Political Advertisement for George W. Bush

*Automatic cloning detection (copy-move forgery)*





# The Rapper Snoop Dogg, or is it?





# Summary

Images play an important role in the communication process.

There are many forms of diversity; it is possible to automatically extract, analyse & harness some of these in the context of images.