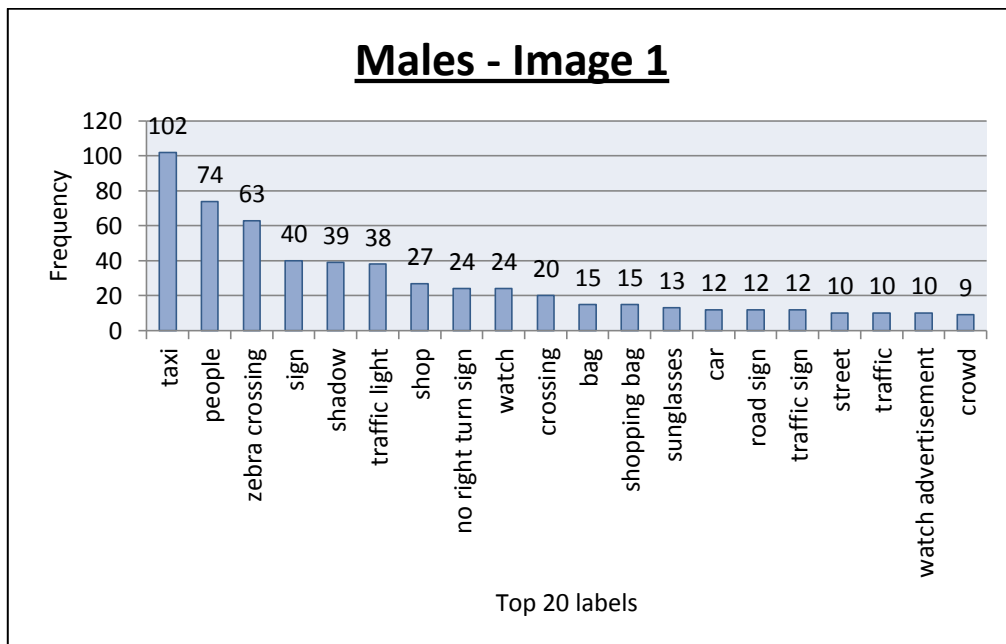
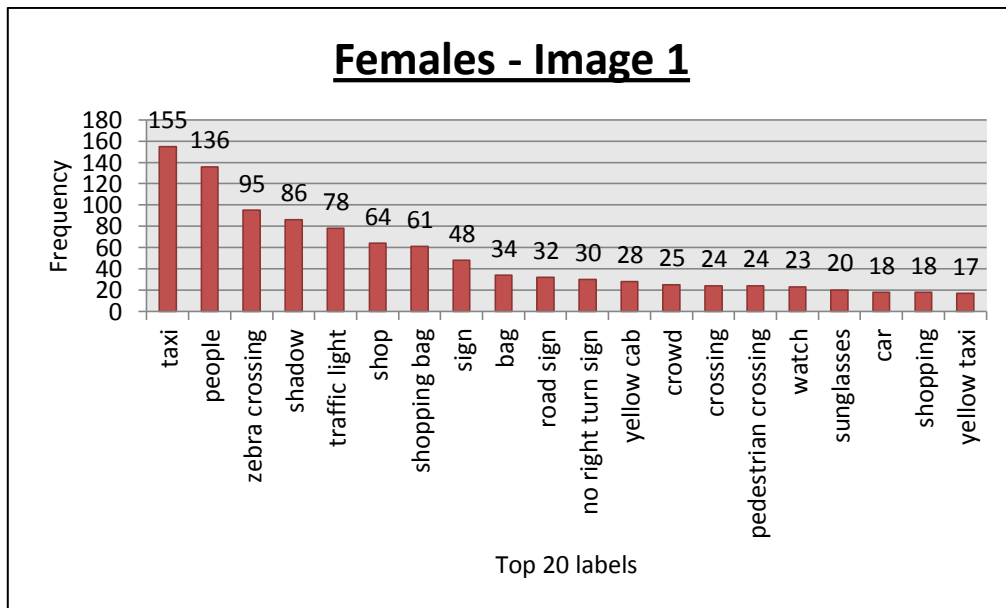


## Image 1

### Top 20 most frequent annotations



## Collocation

Females		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
zebra crossing	2	95
traffic light	2	78
shopping bag	2	61
road sign	2	32
no right turn sign	4	30
yellow cab	2	28
pedestrian crossing	2	24
yellow taxi	2	17
new york	2	13
traffic sign	2	13
watch advertisement	2	12
street sign	2	10
white scarf	2	8
green jumper	2	7
man wearing sunglasses	3	6
cross walk	2	6
sign post	2	6
new york city	3	4
paper bag	2	4
advertisement for watch	3	3

Males		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
zebra crossing	2	63
traffic light	2	38
no right turn sign	4	24
shopping bag	2	15
road sign	2	12
traffic sign	2	12
watch advertisement	2	10
new york	2	9
pedestrian crossing	2	7
street sign	2	7
yellow cab	2	7
man wearing sunglasses	3	6
yellow taxi	2	5
busy street	2	4
no turn sign	3	3
cross walk	2	3
many people	2	3
paper bag	2	3
sign post	2	3
taxi cab	2	3

## Co-occurrence

Females		
<i>Count</i>	<i>Stem1</i>	<i>Stem2</i>
88	people	taxi
50	taxi	zebra crossing
49	people	zebra crossing
46	taxi	traffic light
44	people	shop
36	people	shadow
35	shop	taxi
34	people	traffic light
31	shadow	taxi
31	shopping bag	taxi
30	traffic light	zebra crossing
28	people	sign
25	sign	taxi
23	people	shopping bag
23	shopping bag	zebra crossing
22	bag	taxi
22	road sign	taxi
21	people	road sign
21	shopping bag	traffic light
20	shadow	sign
18	shop	traffic light

Males		
<i>Count</i>	<i>Stem1</i>	<i>Stem2</i>
47	people	taxi
41	taxi	zebra crossing
25	sign	taxi
25	taxi	traffic light
24	people	zebra crossing
24	shadow	taxi
23	people	sign
18	crossing	taxi
18	taxi	watch
17	people	traffic light
17	traffic light	zebra crossing
16	people	shop
15	no right turn sign	taxi
15	people	shadow
14	shadow	zebra crossing
12	crossing	people
10	people	watch
10	road sign	zebra crossing
10	sign	traffic light
9	car	people
9	shop	taxi

## Co-occurrence PMI

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency

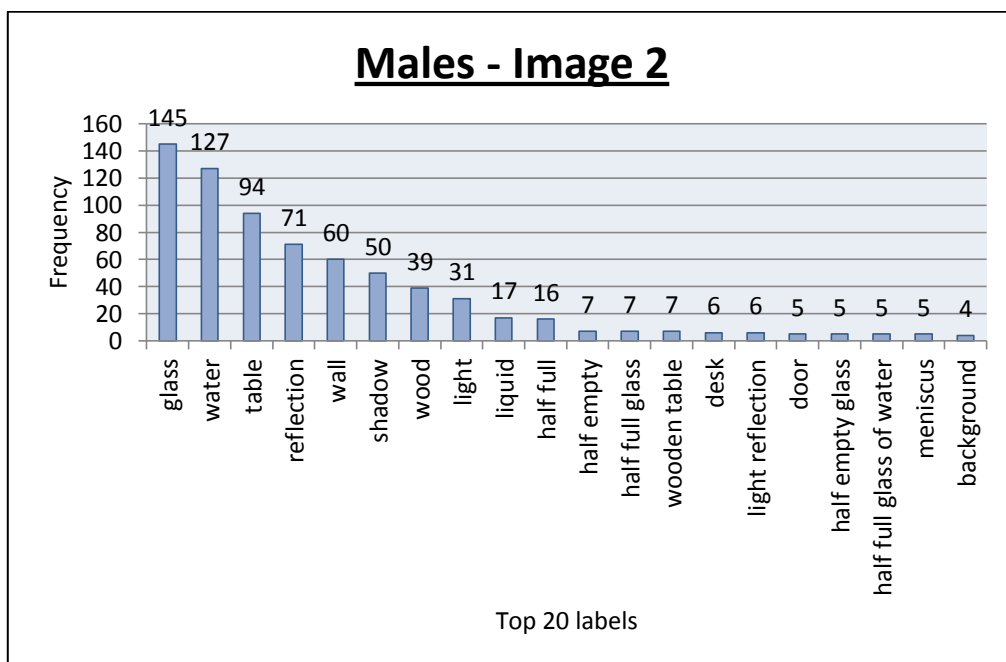
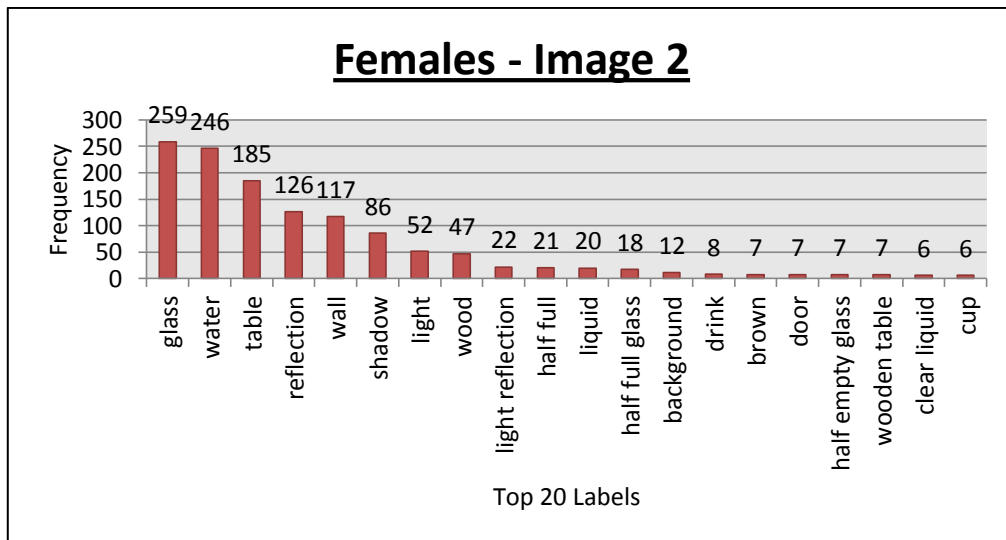
Females						Males					
<i>Stem1</i>	<i>Stem2</i>	<i>S1</i>	<i>S2</i>	<i>C</i>	<i>PMI</i>	<i>Stem1</i>	<i>Stem2</i>	<i>S1</i>	<i>S2</i>	<i>C</i>	<i>PMI</i>
light	movement	6	2	2	2.42	men	women	2	3	2	2.47
men	women	4	6	4	2.42	busy street	nice day	4	2	2	2.35
advertisement for watch	store	3	5	2	2.32	flag	human	6	2	2	2.17
city	movement	9	2	2	2.24	pedestrian	vehicle	4	3	2	2.17
cross walk	new york city	6	3	2	2.24	man	woman	5	6	5	2.17
life	traffic	2	10	2	2.20	cab	human	7	2	2	2.10
green jumper	paper bag	7	4	2	2.05	nice day	pedestrian crossing	2	7	2	2.10
flag	shop awning	15	2	2	2.02	scarf	silhouette	7	2	2	2.10
road crossing	yellow taxi	2	17	2	1.97	busy street	pedestrian	4	4	2	2.04
traffic crossing	yellow taxi	2	17	2	1.97	human	traffic	2	10	2	1.95

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency

Females						Males					
<i>Stem1</i>	<i>Stem2</i>	<i>S1</i>	<i>S2</i>	<i>C</i>	<i>PMI</i>	<i>Stem1</i>	<i>Stem2</i>	<i>S1</i>	<i>S2</i>	<i>C</i>	<i>PMI</i>
pedestrian crossing	traffic light	24	78	3	0.40	crossing	traffic light	20	38	3	0.54
new york	taxi	13	155	3	0.37	bag	people	15	74	4	0.50
people	sunglasses	136	20	4	0.36	road	zebra crossing	9	63	2	0.49
taxi	traffic	155	10	2	0.31	taxi	traffic	10	10	2	0.24

## Image 2

### Top 20 most frequent annotations



## Collocation

Females		
Stem	Collocation	Frequency
light reflection	2	22
half full	2	21
half full glass	3	18
half empty glass	3	7
wooden table	2	7
clear liquid	2	6
wooden surface	2	6
door reflection in glass	4	5
reflection on table	3	5
glass reflection	2	5
half empty	2	5
table top	2	5
shadow of glass	3	4
glass reflection on table	4	3
light reflected from glass	4	3
door reflection	2	3
white wall	2	3
half full glass of water	5	2
glass of water	3	2
halo around glass	3	2

Males		
Stem	Collocation	Frequency
half full	2	16
half full glass	3	7
half empty	2	7
wooden table	2	7
light reflection	2	6
half full glass of water	5	5
half empty glass	3	5
glass reflection on table	4	4
wooden surface	2	4
glass reflection	2	3
white wall	2	3
wood grain	2	3
door reflection in glass	4	2
half full half empty	4	2
glass of water	3	2
light from above	3	2
clean table	2	2
clear liquid	2	2
door reflection	2	2
white background	2	2

Females			Males		
Stem	Collocation	Frequency	Stem	Collocation	Frequency
reflection	1	126	reflection	1	71
light reflection	2	22	light reflection	2	6
door reflection in glass	4	5	glass reflection on table	4	4
reflection on table	3	5	glass reflection	2	3
glass reflection	2	5	door reflection in glass	4	2
glass reflection on table	4	3	door reflection	2	2
door reflection	2	3	dark object reflection in glass	5	1
vertical light reflection in water	5	1	glass reflection on wooden surface	5	1
cup reflection on table	4	1	battery reflection in water	4	1
light reflection from glass	4	1	face reflection in glass	4	1
light reflection in glass	4	1	glass reflection on wood	4	1
light reflection on table	4	1	light reflection from glass	4	1
person reflection in glass	4	1	light reflection in water	4	1
wood reflection in glass	4	1	light reflection on glass	4	1
books in reflection	3	1	reflection on table	3	1
reflection of glass	3	1	water reflection	3	1
black reflection	2	1	cup reflection	2	1
brown reflection	2	1	table reflection	2	1
cup reflection	2	1	wood reflection	2	1

## Co-occurrence

Females		
Count	Stem1	Stem2
232	glass	water
177	glass	table
174	table	water
112	glass	wall
108	wall	water
104	glass	reflection
91	reflection	water
90	table	wall
72	glass	shadow
62	reflection	table
62	shadow	water
48	shadow	table
41	reflection	wall
40	glass	wood
40	light	water
39	glass	light
37	shadow	wall
35	water	wood
26	reflection	wood
25	light	reflection
24	light	table

Males		
Count	Stem1	Stem2
115	glass	water
86	glass	table
74	table	water
61	glass	reflection
54	glass	wall
54	reflection	water
50	wall	water
46	table	wall
43	reflection	table
41	glass	shadow
36	glass	wood
36	shadow	water
31	shadow	table
27	water	wood
26	glass	light
22	light	water
20	reflection	wall
18	shadow	wall
17	reflection	shadow
14	glass	half full
14	reflection	wood

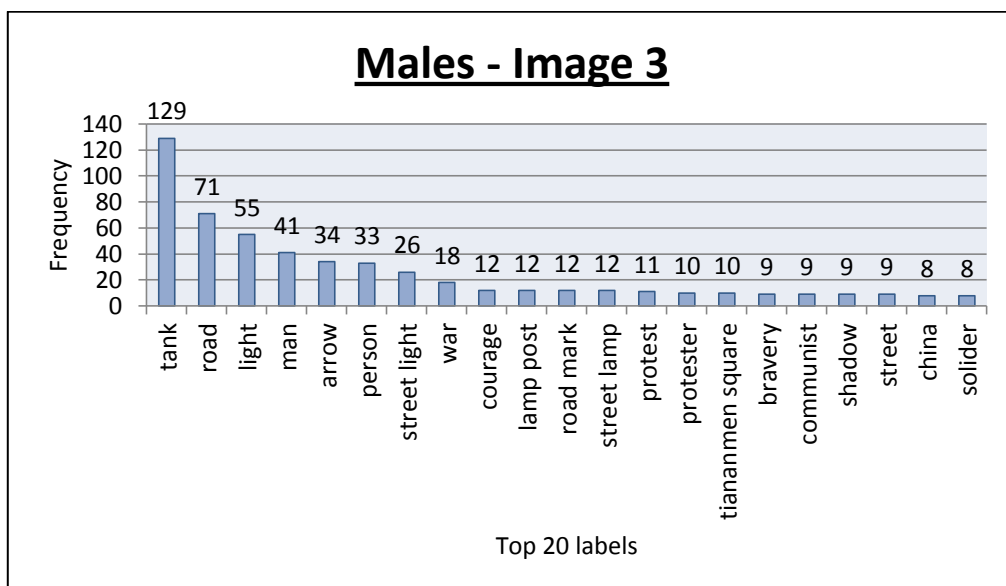
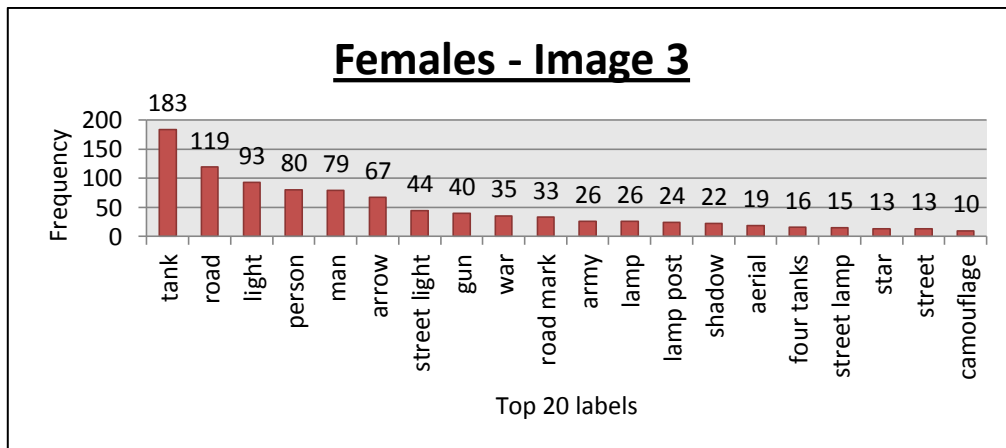
## Co-occurrence – PMI

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency

Females						Males					
Stem1	Stem2	S1	S2	C	PMI	Stem1	Stem2	S1	S2	C	PMI
half full container	light reflected from glass	1	3	2	3.02	glass reflection on table	half full glass of water	4	5	2	2.20
brown color	half air	2	2	2	2.90	half empty	half full	7	16	6	1.93
brown color	half water	2	2	2	2.90	half full glass	liquid	7	17	3	1.60
half air	half water	2	2	2	2.90	light	surface	31	3	2	1.53
clear	half empty	1	5	2	2.80	circle	wood	4	39	3	1.48
clear	transparent	1	6	2	2.72	cup	wall	3	60	3	1.42
glass reflection on table	light reflected from glass	3	3	2	2.54	rim	wall	2	60	2	1.42
glass of water	reflection on table	2	5	2	2.50	beige	light	4	31	2	1.40
door reflection in glass	shadow of glass	5	4	2	2.20	reflection	white background	71	2	2	1.35
colour	shine	5	6	2	2.02	brown	shadow	3	50	2	1.32

## Image 3

### Top 20 most frequent annotations



## Collocation

Females		
Stem	Collocation	Frequency
street light	2	44
road mark	2	33
lamp post	2	24
four tanks	2	16
street lamp	2	15
tiananmen square	2	8
arrow on road	3	7
army tank	2	7
light bulb	2	7
road sign	2	5
white line	2	5
piece of wood	3	4
shadow of tree	3	4
star on tank	3	4
red star	2	4
white arrow	2	4
person in front of tanks	5	3
person standing in front of tanks	6	2
man wearing black hat	4	2
person standing in way	4	2

Males		
Stem	Collocation	Frequency
street light	2	26
lamp post	2	12
road mark	2	12
street lamp	2	12
tiananmen square	2	10
four tanks	2	5
red star	2	4
light bulb	2	3
road arrow	2	3
white line	2	3
man in front of tank	5	2
china man	2	2
man in tank	3	2
armoured vehicle	2	2
brave man	2	2
brave person	2	2
chinese tank	2	2
north korea	2	2
single protester	2	2
street marking	2	2

Females		
Stem	Collocation	Frequency
light	1	93
street light	2	45
light bulb	2	7
light at bottom	3	2
lamp post with five lights	5	1
street light with five bulbs	5	1
five large light bulbs	4	1
five rounded white lights	4	1
white light bulb	3	1
five lights	2	1
square light	2	1

Males		
Stem	Collocation	Frequency
light	1	55
street light	2	26
light bulb	2	3
top of street light	4	1
five lights	2	1
lamp light	2	1
road light	2	1



## Co-occurrence

Females		
Count	Stem1	Stem2
97	road	tank
70	light	tank
59	man	tank
57	person	tank
49	light	road
45	person	road
41	arrow	tank
39	man	road
34	light	person
33	arrow	light
32	gun	tank
32	light	man
29	street light	tank
27	arrow	road
25	arrow	person
23	road mark	tank
22	arrow	man
21	road	street light
20	army	tank
17	lamp	tank
16	tank	war

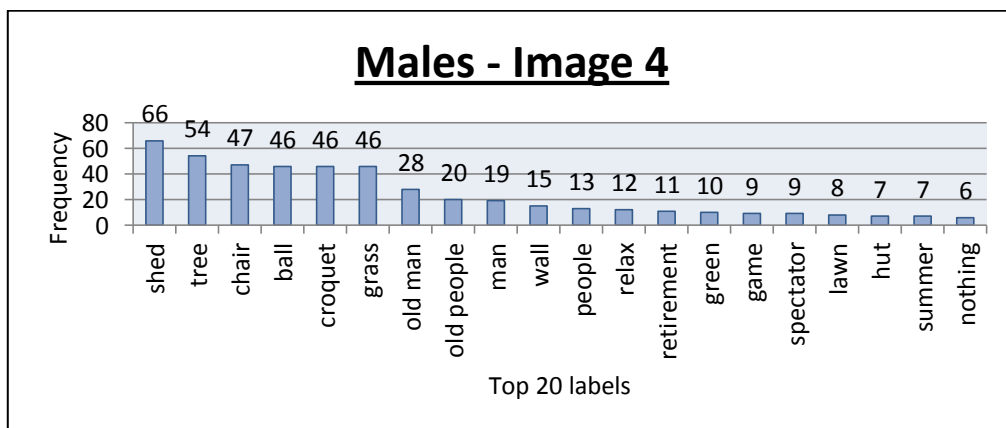
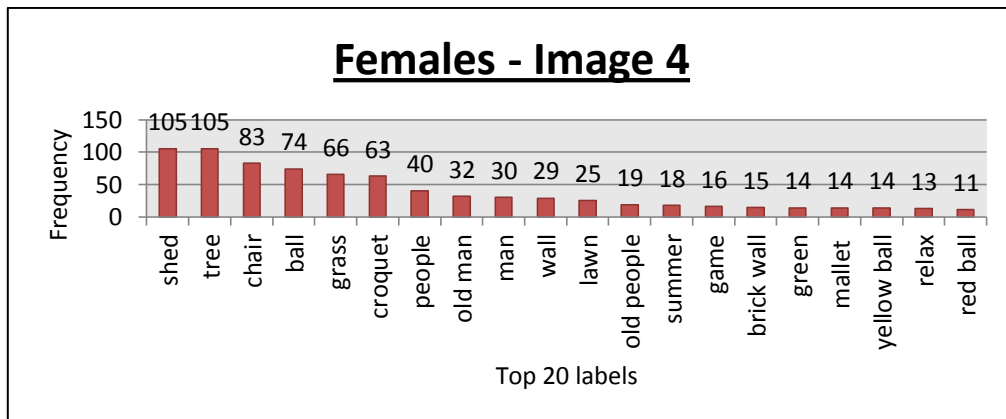
Males		
Count	Stem1	Stem2
66	road	tank
49	light	tank
38	man	tank
35	light	road
27	person	tank
26	arrow	tank
25	person	road
22	man	road
20	light	person
17	light	man
15	street light	tank
12	road	street light
11	arrow	light
11	arrow	road
10	arrow	person
10	lamp post	tank
9	road mark	tank
9	street lamp	tank
9	tank	war
8	arrow	man
7	china	tank

## Co-occurrence PMI

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency											
Females						Males					
Stem1	Stem2	S1	S2	C	PMI	Stem1	Stem2	S1	S2	C	PMI
arrow on road	lamp post	1	24	3	2.27	armoured vehicle	road arrow	2	3	2	2.70
arrow on road	lamp	1	26	2	2.06	armoured vehicle	red star	2	4	2	2.57
street	war tank	13	2	2	2.06	four tanks	wide road	5	2	2	2.47
red star	solider	4	10	3	2.05	red star	road arrow	4	3	2	2.39
camouflage	direction	10	3	2	2.00	protest	tyranny	11	2	2	2.13
five lamps	four tanks	2	16	2	1.97	arrow	little	34	1	2	1.94
bravery	oppression	5	7	2	1.93	courage	oppression	12	6	4	1.92
history	oppression	5	7	2	1.93	brave person	war	2	18	2	1.92
army tank	road sign	7	5	2	1.93	death	war	2	18	2	1.92
death	terror	9	4	2	1.92	man in tank	war	2	18	2	1.92

## Image 4

### Top 20 most frequent annotations



## Collocation

Females		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
old man	2	32
old people	2	19
brick wall	2	15
mallet	2	14
yellow ball	2	14
red ball	2	11
plastic chair	2	9
summer house	3	8
croquet ball	2	6
croquet mallet	2	6
croquet stick	2	6
elderly people	2	6
garden shed	2	6
lawn chair	2	6
question mark	2	6
wooden house	2	6
man playing croquet	3	5
croquet hoop	2	5
garden chair	2	5
five chairs	2	4

Males		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
old man	2	28
old people	2	20
summer house	3	5
elderly people	2	5
garden shed	2	5
brick wall	2	4
croquet bat	2	4
yellow ball	2	4
three old people	3	3
croquet ball	2	3
croquet mallet	2	3
mallet	2	3
jumper over deck rail	4	2
game of croquet	3	2
man playing croquet	3	2
old aged pensioner	3	2
croquet hoop	2	2
croquet set	2	2
garden chair	2	2
green grass	2	2

## Co-occurrence

Females		
<i>Count</i>	<i>Stem1</i>	<i>Stem2</i>
48	shed	tree
42	ball	shed
39	chair	shed
36	chair	tree
36	croquet	shed
33	ball	chair
33	ball	tree
33	grass	shed
32	grass	tree
31	chair	grass
27	people	tree
25	chair	people
22	man	shed
21	croquet	tree
20	ball	grass
19	tree	wall
17	croquet	grass
17	shed	wall
16	chair	croquet
15	ball	man
15	croquet	lawn

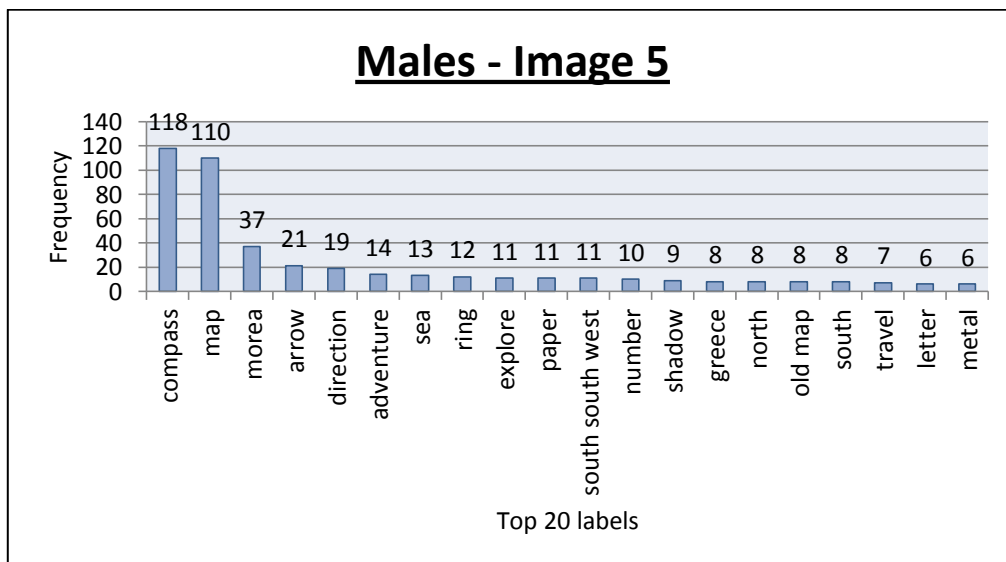
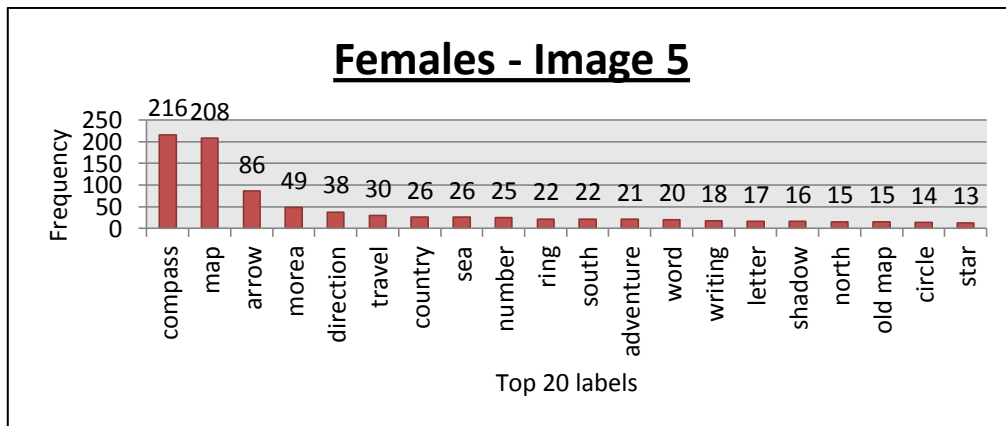
Males		
<i>Count</i>	<i>Stem1</i>	<i>Stem2</i>
27	shed	tree
25	grass	shed
21	ball	shed
21	chair	shed
20	croquet	shed
19	chair	tree
18	ball	chair
16	ball	grass
16	chair	grass
16	croquet	grass
15	grass	tree
15	old man	shed
14	ball	tree
14	croquet	tree
11	ball	man
11	grass	old man
10	chair	man
10	croquet	old man
10	old people	tree
9	ball	old man
9	old man	tree

# Co-occurrence PMI

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency											
Females						Males					
Stem1	Stem2	S1	S2	C	PMI	Stem1	Stem2	S1	S2	C	PMI
blank	empty	6	2	15	3.25	jumper over deck rail	nice grass	2	2	5	2.99
bush	five chairs	3	4	15	3.25	shoe	spaghetti	3	1	2	2.72
croquet ball	croquet mallet	6	6	27	3.03	jumper over deck rail	three old people	2	2	2	2.60
croquet ball	croquet stick	6	6	20	2.90	nice grass	three old people	2	2	2	2.60
croquet ball	garden chair	6	5	14	2.82	blank	white	2	2	2	2.60
grey frame	nothing	1	9	4	2.80	enjoy	peaceful	4	2	3	2.47
croquet game	two people watching	3	2	2	2.68	brick wall	sky	4	2	2	2.30
retirement	sunny day	7	1	2	2.61	red ball	yellow ball	2	4	2	2.30
blank	potential	6	2	3	2.55	lawn	mallet	8	4	6	2.17
empty	nothing	2	9	4	2.50	cabin	chair	3	47	21	2.07

## Image 5

### Top 20 most frequent annotations



## Collocation

Females			Males		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>	<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
old map	2	15	south south west	3	11
compass pointing between south and south west	7	6	old map	2	8
golfo di coron	3	6	golfo di coron	3	5
place name	2	6	capital letter a	3	4
south west	2	6	coast line	2	4
compass pointing south	3	5	red arrow	2	4
compass point	2	4	lord of the rings	4	3
red arrow	2	4	compass pointing south	3	3
drawing of a man	4	3	compass key ring	2	3
arrow inside compass	3	3	place name	2	3
capital letter a	3	3	south west	2	3
map of morea	3	3	compass pointing between south and south west	7	2
south south west	3	3	map of morea	3	2
antique map	2	3	compass point	2	2
compass key ring	2	3	foreign language	2	2
south east	2	3	key ring	2	2
arrow pointing between south and south west	7	2	letter a	2	2
morea written on map	4	2	north west	2	2
name of place	3	2	arrow pointing between south and south west	7	1
red arrow tip	3	2	compass bearing hundred and ninety degrees	6	1

Females			Males		
<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>	<i>Stem</i>	<i>Collocation</i>	<i>Frequency</i>
map	1	208	map	1	110
old map	2	15	old map	2	8
ancient map	2	1	italian map	2	1
crease in map	3	1	old styled map	3	1
sepia map	2	1			
vintage map	2	1			
wrinkled map	2	1			

## Co-occurrence

Females		
Count	Stem1	Stem2
189	compass	map
71	arrow	compass
71	arrow	map
41	compass	morea
39	map	morea
25	country	map
24	compass	country
21	direction	map
20	compass	sea
20	map	ring
20	map	sea
20	map	travel
19	compass	direction
19	compass	ring
19	map	number
18	compass	number
18	compass	travel
17	arrow	number
16	compass	writing
16	map	word
15	compass	shadow

Males		
Count	Stem1	Stem2
106	compass	map
29	compass	morea
29	map	morea
19	arrow	compass
18	arrow	map
12	compass	direction
11	direction	map
11	map	sea
10	compass	number
10	compass	paper
10	compass	sea
10	map	number
9	compass	shadow
9	map	paper
8	compass	ring
8	compass	south south west
8	map	shadow
7	arrow	number
7	map	ring
7	map	south south west
6	compass	letter

## Co-occurrence PMI

S1 = Stem1 frequency, S2 = S2 frequency, C = co-occurrence frequency											
Females						Males					
Stem1	Stem2	S1	S2	C	PMI	Stem1	Stem2	S1	S2	C	PMI
old map	shadow of compass	15	2	39	3.26	adventure	cartography	14	4	106	3.43
arrow inside compass	shadow of compass	3	2	2	2.67	arrow	circle	21	4	29	2.69
north west	west	2	9	3	2.37	art	direction	2	19	7	2.41
pointer	ring	2	22	7	2.35	cartography	greece	4	8	5	2.34
city	country	3	26	11	2.30	explore	knowledge	11	3	5	2.33
direction	place	38	4	21	2.29	journey	travel	2	7	2	2.30
border	old	2	12	3	2.25	east	west	4	4	2	2.25
navigation	world	4	4	2	2.25	antique	direction	3	19	7	2.24
east	south	7	22	16	2.17	ink	metal	5	6	3	2.15
a	south	10	22	20	2.11	a	red arrow	5	4	2	2.15