

1. Details of Stimuli

Table S1: Numbers and descriptions of IAPS pictures used in this experiment

Block one					
Slide No.	Description	Emotion Category	Slide No.	Description	Emotion Category
2480	Elderly man	Neutral	2160	Father	Pleasant
2170	Mother	Pleasant	2850	Tourist	Neutral
6260	Aimed gun	Unpleasant	6510	Attack	Unpleasant
3102	Burn victim	Unpleasant	4658	Erotic couple	Pleasant
7235	Chair	Neutral	1050	Snake	Unpleasant
2311	Mother	Pleasant	7020	Fan	Neutral
2570	Man	Neutral	6540	Attack	Unpleasant
4670	Erotic couple	Pleasant	7080	Fork	Neutral
3130	Mutilation	Unpleasant	2080	Babies	Pleasant
3060	Mutilation	Unpleasant	1930	Shark	Unpleasant
9070	Boy	Neutral	2340	Family	Pleasant
2360	Family	Pleasant	2210	Neutral face	Neutral
3051	Mutilation	Unpleasant	3530	Attack	Unpleasant
4652	Erotic couple	Pleasant	4650	Erotic couple	Pleasant
7010	Basket	Neutral	2440	Neutral girl	Neutral
3110	Burn victim	Unpleasant	4660	Erotic couple	Pleasant
2050	Baby	Pleasant	6350	Attack	Unpleasant
7040	Dust pan	Neutral	2381	Girl	Neutral
2165	Father	Pleasant	4659	Erotic couple	Pleasant
1201	Spider	Unpleasant	1120	Snake	Unpleasant
7009	Mug	Neutral	7175	Lamp	Neutral
7233	Plate	Neutral	9405	Sliced hand	Unpleasant
4651	Erotic couple	Pleasant	2200	Neutral face	Neutral
3071	Mutilation	Unpleasant	4664	Erotic couple	Pleasant
2230	Neutral face	Neutral	2190	Man	Neutral
2341	Children	Pleasant	3080	Mutilation	Unpleasant
1300	Pit bull	Unpleasant	4680	Erotic couple	Pleasant
3000	Mutilation	Unpleasant	7002	Towel	Neutral
7030	Iron	Neutral	2070	Baby	Pleasant
4690	Erotic couple	Pleasant	3010	Mutilation	Unpleasant
Block two					
Slide No.	Description	Emotion Category	Slide No.	Description	Emotion Category
7031	Shoes	Neutral	5300	Galaxy	Pleasant
3068	Mutilation	Unpleasant	2393	Factory Worker	Neutral
7470	Pancakes	Pleasant	3225	Mutilation	Unpleasant
3131	Mutilation	Unpleasant	7011	Gas can	Neutral
5130	Rocks	Neutral	7499	Concert	Pleasant
8205	Waterskiing	Pleasant	3064	Mutilation	Unpleasant
7224	File cabinets	Neutral	2446	Boots	Neutral
9183	Hurt dog	Unpleasant	8206	Surfers	Pleasant
2055	Man in pool	Pleasant	9412	Dead man	Unpleasant
9410	Soldier	Unpleasant	6520	Attack	Unpleasant
7006	Bowl	Neutral	8280	Diver	Pleasant

5994	Skyline	Pleasant	7287	Tomato	Neutral
2104	Neutral Woman	Neutral	3015	Accident	Unpleasant
4608	Erotic couple	Pleasant	7036	Ship yard	Neutral
9325	Vomit	Unpleasant	4612	Couple	Pleasant
3001	Headless Body	Unpleasant	6313	Attack	Unpleasant
8300	Pilot	Pleasant	2155	Pregnant	Pleasant
7186	Abstract art	Neutral	2830	Woman	Neutral
5535	Still life	Neutral	7110	Hammer	Neutral
3030	Mutilation	Unpleasant	8001	Basketball	Pleasant
7400	Candy	Pleasant	3069	Mutilation	Unpleasant
7184	Abstract art	Neutral	2362	Girl and dog	Pleasant
4810	Erotic couple	Pleasant	9800	Skin head	Unpleasant
3170	Baby tumor	Unpleasant	2383	Secretary	Neutral
2512	Man	Neutral	7491	Building	Neutral
9185	Dead dog	Unpleasant	4687	Erotic couple	Pleasant
8467	Runners	Pleasant	3059	Mutilation	Unpleasant
7018	Screw	Neutral	9413	Hanging	Unpleasant
8161	Hang glider	Pleasant	4607	Erotic couple	Pleasant
9921	Fire	Unpleasant	7038	Shoes	Neutral

Block three

Slide No.	Description	Emotion Category	Slide No.	Description	Emotion Category
3195	Stitches	Unpleasant	9910	Car accident	Unpleasant
7056	Tool	Neutral	2388	Kids	Pleasant
4610	Romance	Pleasant	2880	Shadow	Neutral
2102	Neuman	Neutral	9905	Car accident	Unpleasant
4622	Romance	Pleasant	7950	Tissue	Neutral
9006	HIV tattoo	Unpleasant	2598	Family	Pleasant
7185	Abstract art	Neutral	9908	Car accident	Unpleasant
2811	Gun	Unpleasant	7187	Abstract art	Neutral
5820	Mountains	Pleasant	5781	Lake	Pleasant
6821	Gang	Unpleasant	6570	Suicide	Unpleasant
1590	Horse	Pleasant	2224	Boys	Pleasant
2516	Elderly Woman	Neutral	5531	Mushroom	Neutral
2688	Hunters	Unpleasant	4623	Romance	Pleasant
8120	Athlete	Pleasant	2411	Girl	Neutral
2214	Neutral man	Neutral	6838	Police	Unpleasant
5270	Nature	Pleasant	7270	Ice cream	Pleasant
7059	Key ring	Neutral	7207	Beads	Neutral
3103	Injury	Unpleasant	2981	Deer head	Unpleasant
9322	Vomit	Unpleasant	7255	Cracker	Neutral
2890	Twins	Neutral	6250	Aimed gun	Unpleasant
1340	Women	Pleasant	2222	Boys reading	Pleasant
5831	Seagulls	Pleasant	7017	Video	Neutral
6550	Attack	Unpleasant	7230	Turkey	Pleasant
2396	Couple	Neutral	6312	Abduction	Unpleasant
6231	Aimed gun	Unpleasant	2345	Children	Pleasant
2595	Women	Neutral	9420	Soldier	Unpleasant
4640	Romance	Pleasant	7041	Baskets	Neutral
7179	Rug	Neutral	2377	Reading	Neutral
8080	Sailing	Pleasant	8180	Cliff divers	Pleasant
9428	Assault	Unpleasant	3500	Attack	Unpleasant

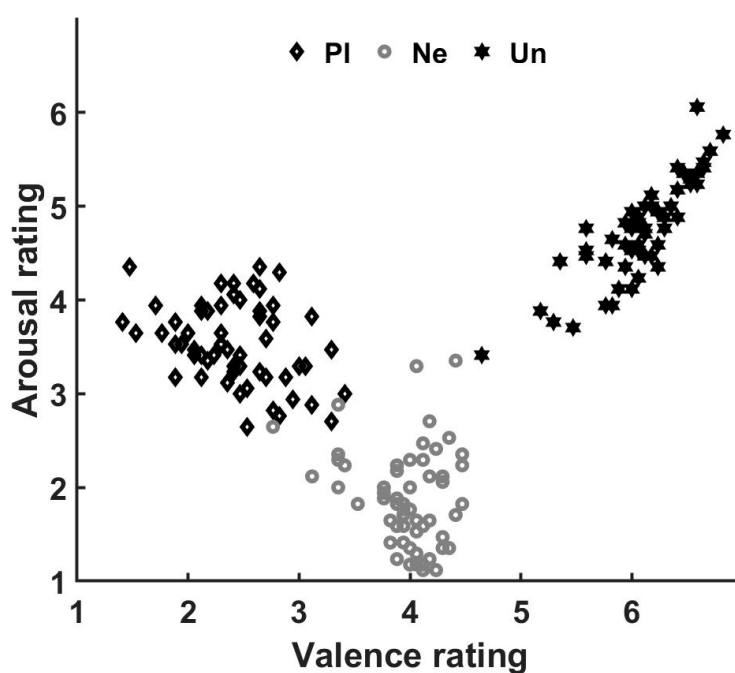


Figure S1. Assessing the stimuli [13]. Arousal and valence levels for each picture category. The plot shows the mean ratings of all participants for the arousal and valence levels of pictures shown in each category of pleasant (Pl, black diamond), unpleasant (Un, black hexagram), and neutral (Ne, gray circles). The X-axis denotes the valence levels (1 to 7, pleasant to unpleasant), and the Y-axis shows the arousal levels (1 to 7, relaxed to excited). Comparing mean ratings of subjects for each picture category using t-test, unpleasant pictures were rated as having the highest arousal level (compared to either pleasant or neutral, $p < 0.001$) and pleasant pictures had higher arousal levels than neutral pictures ($p < 0.001$). Pleasant pictures were rated as having the lowest valence level (compared to either unpleasant or neutral, $p < 0.001$).

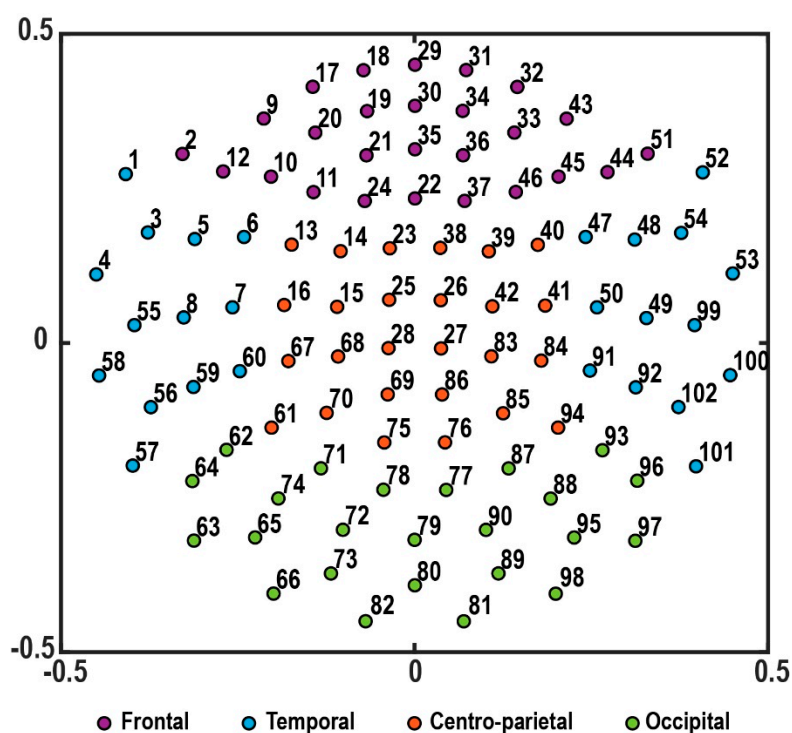


Figure S2. Distribution and numbering system of magnetometers across the scalp in Electa Neuromag Vectorview MEG system and associated brain regions.