

Supplementary Materials: An Ontological Framework to Facilitate Early Detection of 'Radicalization' (OFEDR) –A Three World Perspective

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¹ Results from Literature Search

Table S1: A non-exhaustive example of sources, which may be of relevance for development of an ontology about IBBB's for EA and radicalization.

Name	Description	Type
NBO [1]	Neuroscience	Ontology
Allen Brain Map [2]	Neuroscience	Ontology
Geneontology [3,4]	Genes	Ontology
Varoquaux, 2018 [5]	Cognitive	Ontology
	Brain Mapping	
Monarch Initiative [6,7]	Phenotype	Ontology
EMBL [8]	Human	Ontology
	Disease	
MFOEM [9]	Emotion	Ontology
MF [10]	Cognition Traits	Ontology
	Disease Disorders	
ONL-MSA [11]	Mental State	Ontology
	Assessment	
NIO [12]	Neuropsychology	Ontology
	Brain Area	
	Cognitive	
APAONTO [13]	Psychology	Ontology
Etudo, 2017 [?]]	Terrorism	Ontology
	system	
BrainMap [14,15]	Neuroscience	Database
GTD [16,17]	Terrorism	Database
Poldrack, 2016 [18]	Cognitive	Article
Haendel, 2018 [19]	Medicine	Article
Barhamgi, 2018 [20]	Radicalization	Article
	Social Networks	
Barhamgi, 2018 [21]	Radicalization	Article
	Social Networks	Article
Rodrigues, 2014 [22]	Behavior	Article
Masmoudi, 2018 [23]	Radicalization	Article
	Online messages	
Mannes, 2005 [24]	Terrorism	Article
Galjano, 2009 [25]	Terrorism	Article
ICCT[26]	Counter-Terrorism	Think and do tank
BOCV [27]	Research Guide	Library
Perspectives on Terrorism	Terrorism	Journal
JD	Radicalization	Journal
Terror Polit Violenc.	Terrorism	Journal
Stud. Confl. Terror.	Terrorism	Journal
Crit Stud Terror	Terrorism	Journal
Behav. Sci. Terror.	Terrorism	Journal
Political Aggress.		
IJCWT	Terrorism	Journal
J. Polic. Intell.	Terrorism	Journal
Count. Terror.		

2 SPARQL Query Examples & Information about Test Samples

Table S2: SPARQL Queries. Values that are not from real data sample are assumed based on peer reviewed publications. *value also given to control group to increase difficulty

Query	Real Data Yes/No	Statistical About	Scientific Evidence	Modification Abstraction	New Score
Model I		No individuals from control group was detected			
?individual onto:hasSmallerPupil ?PupilDiameter .	Yes		Small	less insula activation?[29]	Medium
?individual onto:hasShorterFixFetishStimuli ?fixationShort .	Yes		Small	different profiles for sex[28]	medium
?individual onto:hasLongFixAllStimuli ?fixationLong .	Yes		Small	depend on stimuli if familiarity	Moderate/ Large
?individual onto:hasAmbientChangeToPositive ?Ambient .	Yes		Small	few studies with evidence acting out but exist	small
?individual onto:hasFocalChangeToNegative ?Focal .	Yes		Small	can relate to sexual change=evidence-high	Large
?individual onto:hasRadicaleValuesBeliefs ?ValuesBeliefs*	No		Large	High evidence	Very / Large
Model II		No individuals from control group was detected			
?individual onto:hasRadicaleValuesBeliefs ?ValuesBeliefs .	No		Large	high evidence	Large Very Large
?individual onto:hasSmallerPupil ?PupilDiameter .	Yes		Small	less insula activation?[29]	Medium
?individual onto:hasAmbientChangeToPositive ?Ambient .	Yes		Small	few studies evidence-acting out but exist	small
?individual onto:hasFocalChangeToNegative ?Focal	Yes		Small	if use findings sexual change	Large
Model III		No individuals from control group was detected			
?individual onto:hasLowSelf_Esteem ?SelfEsteem.	Yes		Large	evidence high	Very Large
?individual onto:hasProlongAvrLatency ?Latency.	Yes		Medium	depend on stimuli type not use single variable	small
?individual onto:hasAge18-30 ?Age .	Yes		Medium	related to terrorism some evidence young higher sensitivity EA	Medium
?individual onto:hasSmallerPupil ?PupilDiameter .	Yes		Small	less insula activation?[29]	Medium
Model IV		No individuals from control group was detected			
?individual onto:hasSmallerPupil ?PupilDiameter .	Yes		Small	less insula activation?[29]	Medium Small
?individual onto:hasChangeSerotonin ?Serotonin .	No			few exact studies EA worsens psychiatric symptoms	Small
?individual onto:hasLowSelf_Esteem ?SelfEsteem .	Yes		Large	high evidence	Very Large
?individual onto:hasRedBodyAwareness ?BodyAwareness .	No		Medium	consistent with other evidence e.g., insula	High
Model V		No individuals from control group was detected			
?individual onto:hasSmallerPupil ?PupilDiameter .	Yes		Small	less insula activation?[29]	Medium
?individual onto:hasHighSelfEsteem ?SelfEsteem .	Yes		Medium	evidence high<low different pattern	Medium
?individual onto:hasHighExtraversion ?Extraversion .	Yes		Small	low evidence can be related to high self-esteem author has some evidence	Small
?individual onto:hasInhibition ?Inhibition .	No		Medium	important-predict overcontrol-more serious violence	Medium

Table S3: Participant characteristics. Pearson correlation coefficient.

Participant Characteristics	Experiment Mean/SD	Control Mean/SD	Test	Correlations*
PANAS-Negative affect	M=20.5 SD = 6.58	M = 19.1 SD = 5.96	(t(77)=-.99, p = 0.33)	$p < .01$ level: agreeableness -.32, neuroticism .34, self-esteem -.49
PANAS-Positive affect	M = 30.3 SD=6.7	M=30.67 SD =5.57	(t(77)=.33 p=0.33)	$p < .01$ level: extraversion .44, self-esteem .36
Extraversion	M=6.43 SD =1.95	M=6.78 SD=1.93	(t(78)=.81 p=.42)	$p < .01$ level: self-esteem .29
Agreeableness	M=7.1 SD=1.78	M=6.8 SD=1.5	(t(78)=-.75 p=.46)	$p < .05$ level: neuroticism-.27, self-esteem .26
Conscientiousness	M=7.0 SD = 1.6	M=7.2 SD=1.3	(t(78)=.46 p=.46)	$p < .05$ self-esteem .26
Neuroticism	M=6.28 SD=2.4	M=5.7 SD=1.67	(t(78)=-1.3 , p=.20)	$p < .05$ level: agreeableness-.27, $p < .01$ level: self-esteem -.42
Openness to experience	M=6.45 SD=2.46	M=7.05 SD=1.99	(t(78)=.39 p=.70)	No correlations
Self-Esteem	M=27.83 SD=4.68	M=28.73 SD=5.12	(t(78)=.82 p=.42)	Correlated with all variables except openness to experience

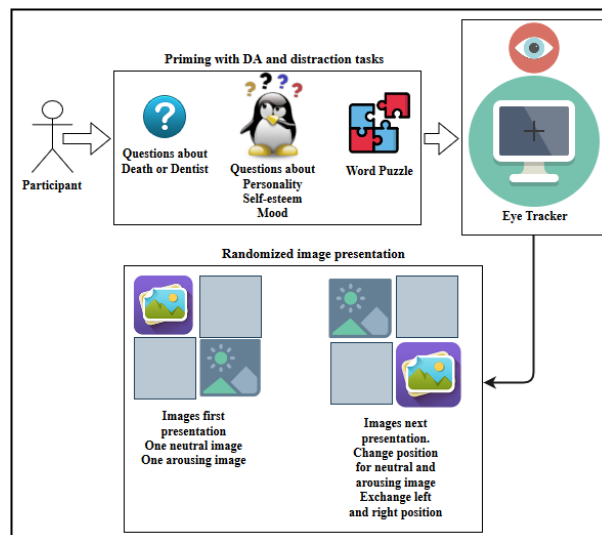


Figure S1. Visualization of data gathering procedure related to test data. Images were presented randomly on a display consisting of two images (one neutral, one fetish). It was controlled for natural leftward bias.

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