



Supporting Online Material for
Automatic Mental Associations Predict Future Choices of Undecided
Decision-Makers

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Undecided Decision Makers**

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Supporting Online Materials

Materials and Method

Method

Participants

A total of 132 residents of the city of Vicenza in Italy were recruited from the end of October to the end of December 2007. All subjects were recruited from a pool of volunteers who gave their approval to be contacted for requests to participate in studies by the Department of Psychology of the University of Padova, Italy. Data from three participants had to be excluded from analyses. One participant did not finish the questionnaire measures at Time 1; two additional participants showed excessive error rates on the computer-based response latency task of more than 20% in at least one of the two combined blocks (see below). The final sample consisted of 55 male and 74 female participants, whose age ranged from 18 to 65 years. All participants were tested individually at two measurement occasions, which were one week apart for all participants.

Measures

Single Category Implicit Association Test. To assess participants' automatic mental associations, we used a modified variant of the Single Category Implicit Association Test (SC-IAT; *SI*). The SC-IAT is a computer-based, speeded categorization task in which participants are asked to categorize words and pictures of two different dimensions as quickly as possible. In the present SC-IAT, participants were presented with pictures of the U.S. military base in Vicenza as well as positive and negative words.

The critical blocks of the task included two combinations of response key assignments. In one block, participants had to respond with a right-hand key to negative words and with a left-hand key to positive words and pictures of the military base. In another block, participants had to respond with a right-hand key to negative words and pictures of the military base and with a left-hand key to positive words. For the target category, the SC-IAT used the label *U.S. military base*; for the attribute categories, we used the labels *positive* and *negative*. Five pleasant and five unpleasant words were used as attribute stimuli; five pictures of the U.S. military base in Vicenza were used to represent the target category (see Appendix 1).

In the first block of the task, participants were randomly presented with 20 training trials for the evaluative words, with each word being presented twice during the training block. Participants were instructed to indicate as quickly and accurately as possible if the word presented on the screen was positive or negative by pressing a left-hand key (*D*) for positive words and a right-hand key (*K*) for negative words. In the second block, participants were presented with pictures of the U.S. military base and the same positive and negative words. Participants were asked to press the left-hand key when they saw a positive word or a picture of the U.S. military base and the right-hand-key when they saw a negative word. Target pictures and attribute words were presented in random order. To keep the number of required left-hand and right-hand responses equivalent, the five positive words and the five pictures were each presented twice, and the five negative words were each presented four times, summing up to a total of 40 trials. In the third block, participants were again asked to categorize the same words and pictures. However, differing from the key assignment in the second block, participants

were now asked to press the left-hand key when they saw a positive word, and the right-hand-key when they saw a negative word or a picture of the U.S. military base. Following the procedure employed in the second block, the five positive words were each presented four times and the five negative words and the five USA military base pictures were each presented twice. The order of the two combined categorization tasks was counterbalanced across participants.

On each trial of the task, an attribute word or a picture appeared in the center of the screen until participants gave their response. The inter-trial interval was 150 ms. Incorrect responses were followed by a centered red cross which remained on the screen for 200 ms. Participants were instructed to respond as fast and as accurately as possible. A score of automatic associations regarding the U.S. military base was calculated by means of the D-algorithm that has been particularly designed for analyzing data with Implicit Association Tests (IAT). The D-algorithm compares the extent to which performance on incompatible trials (i.e., pictures of the U.S. military base and negative words sharing the same response key) is impaired relative to performance on compatible trials (i.e., pictures of the U.S. military base and positive words sharing the same response key), taking into account a participant's individual response latencies, standard deviations of latencies, and error rates in each of the two blocks. Scores were calculated such that higher scores reflect more positive associations. The internal consistencies of the two SC-IATs were reasonably high with Cronbach's Alpha values of .93 (Time 1) and .96 (Time 2).

Self-Report Measures. To assess participants' personal decisions regarding the proposed enlargement of the U.S. military base, participants were asked to indicate if

they are (a) in favor of the proposed enlargement, (b) undecided, or (c) against the proposed enlargement. In addition, we assessed participants' conscious beliefs about the U.S. military base by means of a 10-item survey, including questions on environmental (2 items), political (4 items), economic (3 items), and social (1 item) consequences of the proposed enlargement for the Vicenza city (see Appendix 2). The 10 items were aggregated in a single score of conscious beliefs about the U.S. military base, with higher scores indicating higher positivity toward the military base. The internal consistencies of the two resulting scores were reasonably high with Cronbach's Alpha values of .93 (Time 1) and .94 (Time 2).

Procedure

Informed consent was obtained verbally from participants after they had been provided with information about the topic and the contents of the study. Each participant was then assigned a distinct numerical code, which was used to match their responses on the different measures at Time 1 and Time 2. At the beginning of the first session, participants were asked to read a brief, evaluatively neutral description of the proposed enlargement of a U.S. military base in Vicenza (see Appendix 3). Immediately afterwards, participants completed the SC-IAT to assess their automatic mental associations regarding the U.S. military base. Participants were subsequently asked to indicate their personal choice (i.e., in favor of the enlargement, undecided, against the enlargement) and to complete a 10-item questionnaire designed to assess their conscious beliefs about environmental, political, economic, and social consequences of the proposed enlargement for the city of Vicenza. The order of the measures was counterbalanced across participants. Finally, undecided participants were given two

booklets, one of which included six arguments in favor of the enlargement and the other one including six arguments against the enlargement (see Appendix 4). Participants were invited to think about the topic during the next week in order to try to clarify their opinion and to express a definite choice at the end of the second session. One week later, all participants were contacted again and invited to complete the same SC-IAT and the same questionnaire measures a second time. At the end of the second session, participants were thanked and fully debriefed.

References

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Appendix 1

Stimuli used in the Single Category Implicit Association Test

Positive words: gioia [joy], fortuna [lucky], serenita' [serenity], felicità [happiness], piacere [pleasure]

Negative words: orribile [awful], dolore [pain], pericolo [danger], brutto [ugly], disastro [disaster]

Pictures of the U.S. military base:



Appendix 2

Items used to assess consciously held beliefs

Response Format: 0 = strongly disagree; 10 = strongly agree; reverse coded items are marked with R

Environmental Consequences

1. How much do you agree with the statement that the enlargement of the U.S. military base will produce severe environmental consequences, such as increase of noise, water, and air pollution, because of the unavoidable increase of traffic? (R)
2. How much do you agree with the statement that the Americans, to realize the enlargement of their military base, will meet the requirements of the Italian government in terms of preservation of the ground and the environment and respect for the quality of life in the city of Vicenza?

Political Consequences

3. How much do you agree with the statement that the Italian government has to meet the requirement of the U.S. Army because of international treaties that have to be observed?
4. How much do you agree with the concern that the enlargement of the U.S. military base would increase the danger of terrorist attacks? (R)
5. Military bases are generally safe places; therefore they are less vulnerable to terrorist attacks than civil targets. How much do you agree with the statement that a greater presence of U.S. soldiers will make Vicenza a safer place against the danger of terrorist attacks?

6. How much do you agree with Mayor Hullweck's administration?

Economic Consequences

7. How much do you agree with the statement that the enlargement of the U.S. military base will create jobs and increased economic welfare in Vicenza?

8. If the Italian government denies the site requested by the United States for the enlargement of the military base, the Americans will also leave the existing U.S. Ederle base. This will cause many residents of Vicenza to lose their jobs and the economic welfare of the city could suffer a considerable damage. How much do you agree with this statement?

9. How much do you agree with the statement that the jobs that will be lost by residents of Vicenza who work at the U.S. Ederle Base are an acceptable "sacrifice" in order to avoid that the city will become the greatest military center in Europe? (R)

Social Consequences

10. The enlargement of the U.S. military base will strengthen the police headquarters of Vicenza; there will be an expansion of staff and police forces as a result. How much do you agree with the statement that Vicenza will become a safer city?

Appendix 3

Description of the proposed enlargement of a U.S. military base in Vicenza

The U.S. Army has requested a site in the north of Vicenza city from the Italian government (the current site of the Dal Molin civil airport) to enlarge the U.S. Ederle military base that was built in Vicenza at the end of the 1950s. The city council, headed by Mayor Enrico Hullwek, and the provincial council voted in favor of the request on October 26th, 2006; the city council of Caldogno (a district of Vicenza near the Dal Molin civil airport) and most of the residents of Vicenza and its urban districts are against the transfer of the site to the U.S. Army. The Dal Molin airport has always been in part a military base: there were the 10th Helicopter and the 27th Genio Campale of the Italian Air Force, and the NATO headquarters. At the end of the 1990s, there was the Balcan Caoc, the central office of the NATO that coordinated all air missions against Serbia. The U.S. Army has to enlarge the military base in Vicenza in order to reunify the 173rd Brigade “Airborne”. This Brigade is made up of six battalions. Currently, four of them are in Germany and two are in Italy (Aviano). If the site requested for the enlargement of the military base is not given to the U.S. Army, the Americans declared to leave the U.S. Ederle base in order to reunify their battalions in another country. On June 14th, 2007, the Italian government, headed by Romano Prodi, gave the United States official permission for the enlargement of the military base. In this way, the Prime Minister approved the agreement made by the former Italian government, headed by Silvio Berlusconi. The costs for the enlargement of the U.S. military base are around 325 million Euros and the projected completion will be in 2011.

Appendix 4

Arguments in favor of the proposed enlargement of the U.S. military base

1. If the site requested for the enlargement of the U.S. military base is not given to the U.S. Army, the Americans will also leave the U.S. Ederle base. The site currently occupied by the U.S. Ederle base would be abandoned, the activities related to the Ederle base would be closed, and many people would lose their jobs. 744 residents of Vicenza work at the Ederle base, and more than 2,000 residents of Vicenza work at companies with close connections to the military base. Every year the rental of apartments and stores to the U.S. Army yields 10 million Euros, and the rental of apartments to Americans yields another 25 million Euros. We also have to consider that every year the U.S. Army pays 30 million Euros of wages to the employees and 30 million Euros to the companies that provide goods and services for the Ederle base. Currently, the U.S. Ederle base is the second largest employer in the city of Vicenza. If this base would be closed, only 33% of the employees could be absorbed by the country. Are we really able to manage such a serious social situation?
2. The proposed enlargement of the U.S. military base includes the construction of a new district in the city of Vicenza. The Italian companies that will build this new district will make a profit of more than 1.5 billion Euros.
3. The Italian government has to meet the request of the U.S. Army because international treaties have to be observed. The 898 law, passed in 1945, holds that the United States can require vacant military sites in Italy from the Italian government. The Dal Molin airport is actually one of these sites. Moreover, military bases are generally safe places that are less vulnerable to terrorist attacks than civil targets.

4. The enlargement of the U.S. military base will strengthen the police headquarters of Vicenza; there will be an expansion of staff and police forces as a result. In this way, Vicenza will become a safer city.

5. The U.S. Army and the Italian government followed the correct steps on the basis of decisions pondered by the institutions legally elected by the Italians. The requested referendum on the enlargement of the U.S. military base has passed: the city council, legally elected by the residents of Vicenza, voted in favor of the enlargement; the provincial council, legally elected by the residents of the province of Vicenza, voted in favor of the enlargement; the current Italian government and the former Italian government gave their official permission for the enlargement. The democratic values of our country have all been respected.

6. Many people say that the enlargement of the U.S. military base will destroy an area called a “park”. This is not correct! In fact, that area is anything rather than a “park”: it is an Italian Air Force airport, and until 2005 it was also a civil airport. Most importantly, the Americans, to realize the enlargement of their military base, will meet the requirements of the Italian government in terms of preservation of the ground and the environment, and in terms of respect for the quality of life in Vicenza. Moreover, the U.S. Army will have to obey the prohibition of using the airport for military air missions.

Arguments against the proposed enlargement of the U.S. military base

1. The enlargement of the U.S. military base is the result of military and geopolitical decisions. Due to its geographical position, our country is an ideal place for future attacks against the Middle East (Iraq, Afghanistan, and perhaps in the not too distant future, Iran and Syria). The U.S. army wants to change the 173rd Brigade “Airborne” into the Brigade

Combat Team, the largest military force in Europe, made up of six battalions. In this way, the city of Vicenza will become the biggest military centre in Europe and the prime European target of terrorist attacks.

2. The proposed enlargement of the U.S. military base includes a water system without any equipment for water filtration and without any equipment to filter chemical substances, such as gasoline and oil. These substances, jettisoned into the Bacchiglione river, will produce the biological death of the river and all life-forms associated with it. The chemical compounds used for the maintenance of weapons will drain into the subsurface, polluting the water resources that float into rivers in the provinces of Padova, Rovigo, and Venice.

3. The site requested for the enlargement of the U.S. military base is 880,000 m². This area will be covered up with cement. The incessant movement of military vehicles will increase air pollution because of the unavoidable increase of PM10, one of the most noxious and dangerous chemical substances to one's health.

4. Residents of Vicenza know very well how many incidents, fights and riots, provoked by U.S. soldiers, there have been in the city, almost daily in a daily manner. The enlargement of the military base will bring 1,600 additional soldiers to the city of Vicenza. As a result, the perils in Vicenza will increase, because of riots, drunk driving, etc.

5. The UNESCO declared the city of Vicenza a world heritage. This city can not found its existence on a war economy.

6. The official permission given by the Italian government to enlarge the U.S. military base violates the Constitution's article 11 ("Italy rejects war") and did not involve the

local authorities and citizens in all relevant steps. Eighty-four percent of the residents of Vicenza want a public referendum. Citizens have the right to express their opinions about issues that will have a strong impact on their lives.