A quantitative analysis of German success factors during the 1944 razzia in Rotterdam

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ABSTRACT

In this paper we quantitatively analyze which factors led to the success of the razzia that took place in Rotterdam in 1944. We show that the factors which made people less likely to evade capture were the use of surprise and the creation of a feeling of fear. Factors which made people less likely to evade and also less likely to escape after being captured were the use of misinformation and the creation of a feeling of powerlessness. We also found that, counter to expectations, a person's demographic background did not impact the success of this razzia.

Keywords

Razzia, Rotterdam 1944, success factors, wartime strategy, quantitative analysis.

INTRODUCTION

In this paper we focus on the razzia that took place in Rotterdam on the 10th and 11th of November, 1944. It was the largest razzia in the Netherlands during the Second World War as 8,000 soldiers captured and transported more than 50,000 of the 70,000 men between 17 and 40 who were present in Rotterdam and Schiedam during the two day period. The Germans then shipped 10,000 of these men to labor camps in the Eastern part of the Netherlands and 40,000 to labor camps in Germany [3].

Soon after the war scholars wondered how such a large percentage of men could have been taken in such a short period of time. One can state that the Germans were very successful since a relatively small number of German soldiers were able to gather and remove 50,000 of the 70,000 men from Rotterdam and Schiedam. In 1951 Sijes [3] qualitatively researched which factors led to this success. To do so, he performed a large-scale survey among the men who had been captured, asking them about their background information and experiences during the razzia. In this paper we use this survey to build upon his work by quantitatively analyzing which factors led to this razzia's success.

Our central question is 'Which factors caused the Germans to be so successful?'. In contrast to Sijes [3] who posed this same question and answered it using qualitative methods, we will use quantitative methods for our analysis of the survey data from the 1944 razzia. This makes it possible to quantitatively test Sijes' work. In this paper, 'successfulness' is defined as the inverse of evasion and the inverse of escape. In other words, a factor which made people less likely to evade and/or escape, would be a factor which made the razzia more successful. 'Evasion' means preventing oneself from being captured, e.g. by fleeing or hiding, and 'escape' means getting away from the Germans after being captured. Thus if a factor prevents a person from evading, this factor would have a short-term effect. If a factor also prevents a person from escaping, it would not only have a short-term, but also a long-term effect.

Two types of 'success factors' can be distinguished. On the one hand, we look at factors related to the circumstances created by and choices made by the Germans, namely the use of surprise, the use of misinformation, the creation of a feeling of powerlessness, the creation of a feeling of fear and the day a person was arrested. On the other hand, we look at factors related to a person's demographic information, specifically a person's marital status, religious affiliation and occupation.

DATA AND METHODOLOGIES

To allow for a statistical analysis, Lotte Mulders digitized 1,115 free-form questionnaires. The original questionnaires contained 42 questions of which the most relevant were selected to keep the digitization process focused and timely. We then wrote a program which automatically converted these digitized responses into a single file which contained all the digitized information of the 1115 respondents. This data consisted of the answers of the respondents stored in twelve variables. Examples of these variables are 'marital status' and 'evasion'.

To analyze this data, Chi-Square and Cramér's V tests were used to first find relations between different variables. Binary logistic regression and multinomial logistic regression were used to calculate the relative impact of one or more variables on a dependent variable [1] [2].

RESULTS

Surprise and misinformation

The relation between the variable 'information at hand' and the variable 'evasion' is set out in Figure 1. This figure shows that 16% of the people who mentioned that they were 'unaware/surprised' tried to evade while 43% of the people who were 'aware' tried to evade. The Cramér's V value for these two variables is 0.26 (95%CI [0.20, 0.32]), showing that there are significant differences in evasion between the different 'information at hand' categories. To examine whether the differences between being 'unaware/surprised' and being 'aware' are also statistically significant, binary logistic regression was used, which showed that being 'unaware/surprised' made a person 3.9 (95%CI [2.6, 5.9]) times less likely to evade compared to people who were 'aware'.

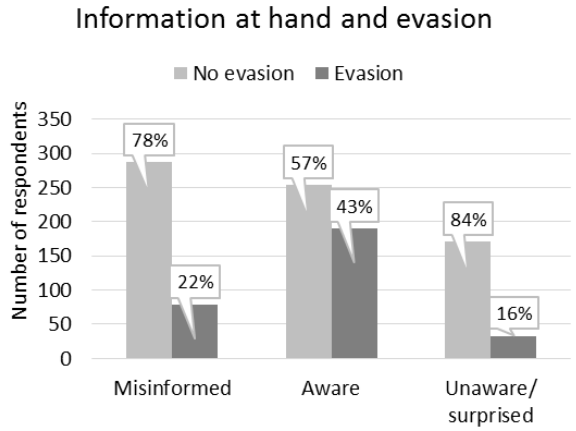

Figure 1: The relation between the variables information at hand and evasion.

To examine the effect of being surprised on whether people tried to escape, Figure 2 was created. This figure shows that there is a small difference of 8% between, on the one hand, being 'unaware/surprised' and escaping and, on the other hand, between being 'aware' and escaping. The Cramér's V value is 0.08 (95%CI [0.03, 0.15]), which furthermore confirmed little differences between the categories. Using binary logistic regression, no statically significant effect was found between being 'unaware/surprised' and being 'aware' on whether a person tried to escape.

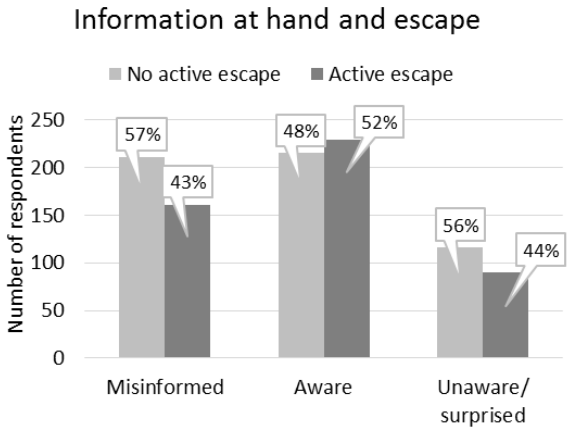

Figure 2: The relation between the variables information at hand and escape.

Misinformed, powerlessness and fear

In this section the relation between the variables 'motives' and 'evasion'/'escape' is set out. The variable 'motives' contains the answers of the respondents to the question 'Which motives caused you to evade or not to evade?'. Figure 3 shows that people with the motive 'misinformed' were least likely to evade and people with the motive 'anti-German' were most likely to evade.

Logistic regression showed that people with the motives 'powerlessness' and 'fear' were less likely to evade compared to people with the motive 'misinformed' but more likely to evade compared to people with the motives 'other' and 'anti-German'.

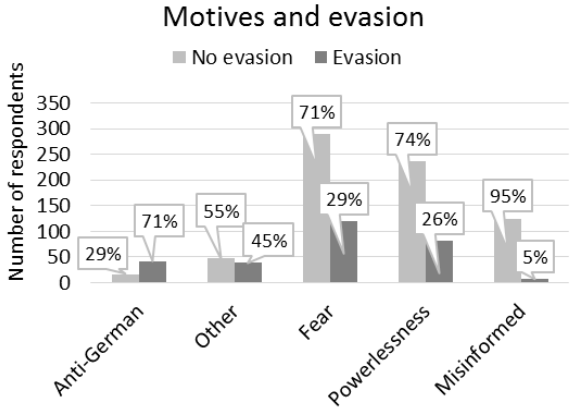

Figure 3: The relation between the variables motives and evasion.

The relation between the motives and whether a person tried to escape can be seen in Figure 4. Here we see that that people with the motive 'misinformed' are least likely to escape while people with the motive 'anti-German' are most likely to escape. Binary logistic regression shows that people with the motives 'misinformed' and 'powerlessness' are less likely to escape compared to people with the motives 'fear', 'other' and 'anti-German'.

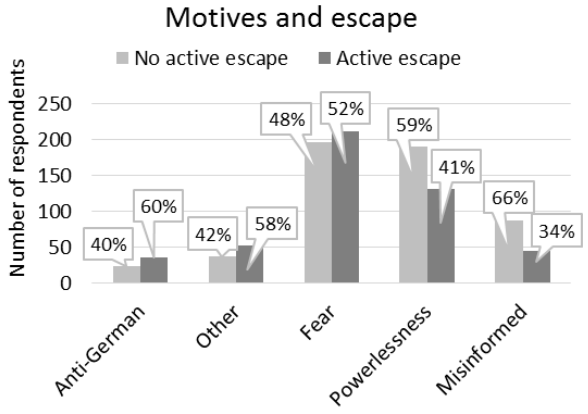

Figure 4: The relation between the variables motives and escape.

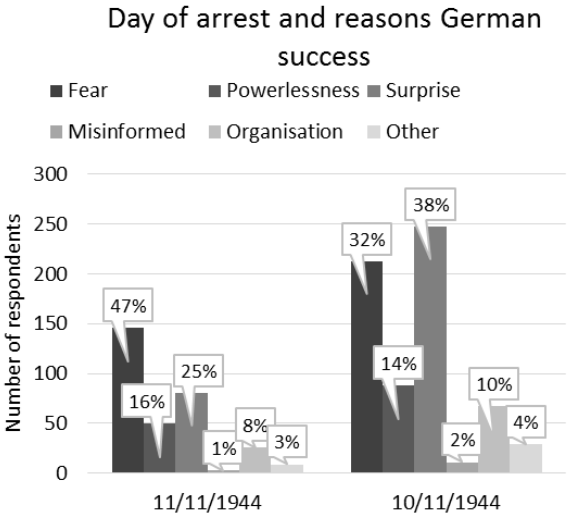

Figure 5: Relation between the variables day of arrest and reasons German success.

Day of arrest

We found no significant correlation between the day a person was arrested and whether a person tried to evade or escape. We did, however, find a relation between the day a person was arrested and what that person gave as the reason for the German success. This relation is set out in Figure 5 and the Cramér's V value for this relation is 0.16 (95%CI [0.11, 0.24]), which means there is a small correlation between these variables.

Two differences stand out within this figure, namely that 38% of the people who were arrested on the first day named 'surprise' as reason for the German success while only 25% of the people arrested on the second day named 'surprise'. Furthermore, 32% of the people arrested on the first day named 'fear' as the reason for the German success while 47% of the people who were arrested on the second day named 'fear' as reason for the German success. Thus, more people named 'surprise' on the first day compared to the second day and more people named 'fear' on the second day compared to the first day.

Multinomial logistic regression showed that these differences were significant and that people who were arrested on the first day compared to people who were arrested on the second day, are 2.1 (95%CI [1.5, 3.0]) times more likely to name 'surprise' as reason for the German success than to name 'fear'. People who were arrested on the second day compared to people who were arrested on the first day, are 2.1 (95%CI [1.5, 2.9]) times more likely to name 'fear' as reason for the German success than to name 'surprise'.

A person's demographic information

There does not seem to be a significant effect of a person's occupation on whether said person tried to evade or escape. This was concluded after ordering the occupations both hierarchically (higher and lower occupations) and in terms of their connectivity (extent of contact with other people). However it could be that ordering occupations based on different characteristics would yield a correlation between, on the one hand, occupations and, on the other hand, evasion or escape.

There is no effect of being religious on whether a person tried to evade or escape. Neither does a person's marital status seem to have an effect on whether that person tried to evade or escape. As we expected a married person to be less likely to evade, as not to risk their families, and more likely to escape to get back to their families, this is a remarkable result. This may be the case because we looked at all men between 17 and 40 years old. For instance, 17-year-olds would likely not be married, but they would still have wanted to get back to their families. So perhaps comparing 'marital status', and the other variables which pertain to a person's demographic information, within certain age groups would yield more information about the relation between said variable and whether one would try to evade or escape. At this time, however, it is not possible to test this hypothesis as the ages of the respondents were not digitized.

CONCLUSION

The data suggests that the circumstances created by the Germans, namely the use of surprise, the use of misinformation, the creation of a feeling of powerlessness and the creation of a feeling of fear, caused people not to try to evade and were therefore short-term success factors. The use or misinformation and the creation of a feeling of powerlessness also made people less likely to try to escape after being captured, making these factors long-term success factors. A person's background characteristics, specifically his marital status, religious affiliation and occupation, had no statistically significant effect on whether a person would try to evade or escape. This is summarized in Table 1.

	Evasion	***Escape***
Use of surprise	Negative impact	None
Use of misinformation	Negative impact	Negative impact
Creation of a feeling of powerlessness	Negative impact	Negative impact
Creation of a feeling of fear	Negative impact	None
Marital status	None	None
Religious affiliation	None	None
Occupational hierarchy	None	None
Occupational connectivity	None	None

Table 1: Summary of the results.

Surprise is often named as the reason for the success of the Germans on 10th and 11th of November in 1944 [3] [4]. My work has shown that, indeed, the short-term effect of being surprised or unaware is strong as it made people less likely to try to evade. There is, however, no long-term effect of being surprised. In comparison, the use of misinformation had both a short-term and long-term effect, making the use of misinformation a stronger reason for the success of the Germans when compared to the use of surprise.

We were able to confirm Sijes' work [3] with regard to the motives 'misinformed', 'powerlessness' and 'fear', as we showed that being misinformed, feeling powerless and feeling fearful were reasons why people did not evade. Additionally, this quantitative analysis was able to show that the negative effect of misinformation on whether a person evades was stronger than the effect of powerlessness and fear.

Regarding the day of arrest, Sijes [3] stated that the Germans knew that they had lost the element of surprise after the first day and that they tried to compensate for this lack of surprise by increasing their intimidation tactics on the second day. This analysis has shown that this could be true as people on the second day were less surprised and more fearful. What this analysis has added to Sijes' statement, is that it provides evidence that this German tactic worked since people were not more likely to try to evade on the second day compared to the first day, even if they were not as surprised.

Sijes [3] had qualitatively analyzed the 1944 razzia in Rotterdam and in this thesis we have built on his work by quantitatively analyzing the survey of this razzia. By doing so we were not only able to confirm and question some of Sijes' findings but we were also able to show what the relative impact of different success factors were and if these success factors had a short-term or a long-term effect.

On a side note, the goal of the Germans was twofold, on the one hand, recruiting more labor for Germany and, on the other hand, removing men from threatened areas to prevent these men from joining forces with the Allies. Even short-term success factors such as the use of surprise and the creation of a feeling of fear would be enough to accomplish the removal of able-bodied men from the advancing western front.

ROLE OF THE STUDENT

Seyla Wachlin was a BSc student of Computer Science working under the supervision of Rick Quax and Omri Har-Shemesh when the research in this report was performed. The topic was proposed by the supervisors, the raw data was provided by the NIOD and digitized by Lotte Mulders. The research question, the hypotheses, the program and the analyses of the data were all designed and implemented by the student.

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