Causal conditions linked to successful shaming

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberations (R)**	**Success (Y)**
1	0	1	1	1	1
1	0	0	1	0	0
1	0	0	1	1	0
0	0	0	1	0	0
1	1	1	1	1	1
1	1	1	1	0	0
1	1	1	0	0	1
1	0	0	0	0	1

Advice (A): Whether the shamers can substantiate their criticism with reference to explicit recommendations of the regime's scientific advisory body.

Commitment (C): Whether the target behavior explicitly violates a conservation measure adopted by the regime's decision-making body.

Shadow of the future (S): Perceived need of the target of shaming to strike new deals under the regime--such beneficial deals are likely to be jeopardized if criticism is ignored.

Inconvenience (I): The inconvenience (to the target of shaming) of the behavioral change that the shamers are trying to prompt.

Reverberation (R): The domestic political costs to the target of shaming for not complying (i.e., for being scandalized as a culprit).

How this evidence is typical of small-N research:

- The number of cases (10) is more than a handful, but still small enough to permit familiarity with each case. (Two of the eight listed combinations have a frequency of 2.)
- From the viewpoint of conventional quantitative social science, however, the number of cases (10) is very small relative to the number of causal conditions (5). This ratio essentially eliminates the possibility of any form of multivariate statistical analysis.
- If the cases are viewed configurationally, then the analytic prospects seem even more dismal, for there are 2^5 logically possible combinations of five causal conditions. There is empirical evidence on only eight of the 32 combinations.
- This pattern of **limited diversity** is characteristic of comparative research and, more generally, of research on naturally occurring social and political phenomena.

While having ten cases is really not enough for quantitative analysis, let's take a look at the usual starting point, correlations of the independent variables with the dependent variable:

	Success
Advice	0.3780
Commitment	0.2582
Shadow	0.5000
Inconvenient	-0.5774
Reverberations	0.2582

The correlations are not overwhelming. Shadow of the future has a moderate positive correlation with successful shaming; inconvenience of the behavioral change has a moderate negative correlation.

As a general rule, it is a good idea to have 10-20 observations per independent variable. With 5 independent variables, a multivariate analysis would require at least 100-200 observations.

What about a more qualitative approach to the same evidence?

Here's how qualitative research typically starts:

First step: Define the outcome of interest.
Second step: Identify good instances of the outcome.
Third step: See if they share any causally relevant conditions.

The outcome is successful shaming.
The instances are the rows with success = 1.
These cases share only one antecedent condition: Advice.
This condition makes sense as a shared antecedent condition, even though it is not strongly correlated with the outcome.

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberations (R)**	**Success (Y)**
1	0	1	1	1	1
1	1	1	1	1	1
1	1	1	0	0	1
1	0	0	0	0	1

Next consider the analysis of the negative cases:

The outcome is unsuccessful shaming

The instances are the rows with success = 0.

There is one shared antecedent condition: inconvenient.

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberations (R)**	**Success (Y)**
1	0	0	1	0	0
1	0	0	1	1	0
0	0	0	1	0	0
1	1	1	1	0	0

A More Ambitious Approach to Similarities/Differences

Case	Advice (A)	Commitment (C)	Shadow (S)	Inconvenient (I)	Reverberations (R)	Success (Y)
1	1	0	1	1	1	1
2	1	0	0	1	0	0
3	1	0	0	1	1	0
4	0	0	0	1	0	0
5	1	1	1	1	1	1
6	1	1	1	1	0	0
7	1	1	1	0	0	1
8	1	0	0	0	0	1

MDSO = most different, same outcome
MDSO (Success): 1x5 (1), 1x7 (3), 1x8 (3), 5x7 (2), **5x8 (4)**, 7x8 (2): Advice
MDSO (Failure): 2x3 (1), 2x4 (1), 2x6 (2), 3x4 (2), 3x6 (3), **4x6 (4)**: Inconvenient
(x) = number of differences

MSDO = most similar, different outcome
MSDO: 1x2 (3), **1x3 (4)**, 1x4 (2), 2x5 (2), 2x7 (2), **2x8 (4)**, 3x5 (3), 3x7 (1), 3x8 (3), 4x5 (1), 4x7 (1), 4x8 (3),
5x6 (4): Shadow + Inconvenient + Reverberations (different pairings give different answers)
(x) = number of similarities

A still better way to conduct the analysis:

When qualitative researchers study an outcome, they focus primarily on the positive cases. This focus derives from an interest in “how” things happen. Negative cases, because they lack the outcome, are not very useful when it comes to explaining how an outcome comes about. In statistical parlance, qualitative researchers commit the crime of “selecting on the dependent variable” when they focus on positive cases.

Using the Stokke data, the positive cases are:

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberation (R)**	**Success (Y)**
1	0	1	1	1	1
1	1	1	1	1	1
1	1	1	0	0	1
1	0	0	0	0	1

When qualitative researchers examine positive cases, they search for causal conditions that “make sense” as conditions that “should be” linked to the outcome. They are likely to pass over those that don’t make sense. In other words, they use their background knowledge to identify the relevant causal conditions in each case. If a contributing cause is absent, it is considered irrelevant (as opposed to being relevant in its absence). This focus on “contributing cause is present versus irrelevant” transforms the data as follows:

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberation (R)**	**Success (Y)**
1	-	1	-	1	1
1	1	1	-	1	1
1	1	1	0	-	1
1	-	-	0	-	1

The dashes (-) indicate that a condition has been designated irrelevant because it is inconsistent with the researchers substantive and theoretical knowledge. In other words, the condition does not make sense as a contributing cause. For example, demanding a behavioral change that is “inconvenient” is unlikely to contribute to the success of shaming.

This table can be represented as an equation and then simplified using Boolean algebra:

A·S·R + A·C·S·R + A·C·S·i + A·i = successful shaming

"·" indicates set intersection (combined conditions)
"+" indicates set union (alternate combinations)

A·C·S·R is a subset of A·S·R and is therefore redundant.
A·C·S·i is a subset of A·i and also is redundant.

The simplified equation is:

A·S·R + A·i = successful shaming

(This formalization of conventional case-oriented practice produces results that are the same as QCA's intermediate solution.)

The negative cases:

These same principles of qualitative analysis can be applied to Stokke's instances of unsuccessful shaming. First, consider the table showing the four combinations linked to unsuccessful shaming:

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberation (R)**	**Success (Y)**
1	0	0	1	0	0
1	0	0	1	1	0
0	0	0	1	0	0
1	1	1	1	0	0

Next, observe the transformation of "presence versus absence" to "contributing versus irrelevant" (notice that these codings are the opposite of the codings for the positive cases):

Advice (A)	**Commitment (C)**	**Shadow (S)**	**Inconvenient (I)**	**Reverberation (R)**	**Success (Y)**
-	0	0	1	0	0
-	0	0	1	-	0
0	0	0	1	0	0
-	-	-	1	0	0

Conversion of the second table to equation form yields:

c·s·I·r + c·s·I + a·c·s·I·r + I·r = shaming failed

"·" indicates set intersection (combined conditions)
"+" indicates set union (alternate combinations)

c·s·I·r is a subset of both c·s·I and of I·r and is therefore redundant.
a·c·s·I·r is a subset of both c·s·I and of I·r and also is redundant.

The simplified equation is:

c·s·I + I·r = shaming failed

Set-theoretic analysis is inherently asymmetrical. The causal conditions linked to the presence of an outcome (shaming succeeded) are rarely the exact reverse of those linked to its opposite (shaming failed).

fsQCA results: Stokke data

Complex Solution:

```
                    raw       unique
                   coverage    coverage   consistency
                  ----------  ----------  ----------
A*S*I*R           0.500000    0.500000    1.000000
A*c*s*i*r         0.250000    0.250000    1.000000
A*C*S*i*r         0.250000    0.250000    1.000000

solution coverage: 1.000000
solution consistency: 1.000000
```

Parsimonious Solution:

```
             raw       unique
            coverage    coverage   consistency
           ----------  ----------  ----------
i          0.500000    0.500000    1.000000
S*R        0.500000    0.500000    1.000000

solution coverage: 1.000000
solution consistency: 1.000000
```

Intermediate Solution:

```
               raw       unique
              coverage    coverage   consistency
             ----------  ----------  ----------
A*i          0.500000    0.500000    1.000000
A*S*R        0.500000    0.500000    1.000000

solution coverage: 1.000000
solution consistency: 1.000000
```

Assumptions of intermediate solution:

A	C	S	I	R	Y
0	0	0	1	0	0
1	0	0	0	0	1
1	0	0	1	0	0
1	0	0	1	1	0
1	0	1	1	1	1
1	1	1	0	0	1
1	1	1	1	0	0
1	1	1	1	1	1
1	0	0	0	1	*
1	0	1	0	0	*
1	0	1	0	1	*
1	1	0	0	0	*
1	1	0	0	1	*
1	1	1	0	1	*

The *intermediate* solution assumes that if instances of the rows with “*” in the outcome column (y) could be found, they would display the outcome (successful shaming).

Assumptions of parsimonious solution:

a	c	s	i	r	y
0	0	0	1	0	0
1	0	0	0	0	1
1	0	0	1	0	0
1	0	0	1	1	0
1	0	1	1	1	1
1	1	1	0	0	1
1	1	1	1	0	0
1	1	1	1	1	1
0	0	0	0	0	*
0	0	0	0	1	*
0	0	1	0	0	*
0	0	1	0	1	*
0	0	1	1	1	*
0	1	0	0	0	*
0	1	0	0	1	*
0	1	1	0	0	*
0	1	1	0	1	*
0	1	1	1	1	*
1	0	0	0	1	*
1	0	1	0	0	*
1	0	1	0	1	*
1	1	0	0	0	*
1	1	0	0	1	*
1	1	1	0	1	*

The *parsimonious* solution assumes that if instances of the rows with “*” in the outcome column (y) could be found, they would display the outcome (successful shaming).