

Pre-Analysis Plan—May 4, 2024

Information and silence around sexual harassment

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1. Introduction

There is a culture of silence around sexual harassment (Hershcovis et al. 2021). Victims generally stay silent about their experiences and bystanders generally do not intervene or speak up. Understanding the antecedents to this silence lies at the forefront of sexual harassment research (Fitzgerald and Cortina 2018).

Negative reactions from people inside and outside the workplace make staying silent a safer choice for victims and bystanders of harassment (Cortina and Magley 2003, Hart 2019). Such sanctions can come from colleagues or broader social circles with whom victims and bystanders interact. This study seeks to understand why some people harbor the attitudes in favor of staying silent. We build on previous theory on sexual harassment and social identity to propose and test a novel explanation for *silence attitudes* in the population. This theory—presented in brief in this document—links traits of information flows about sexual harassment in society to silence attitudes via a process of legal consciousness development.

We define silence attitudes as the opinion that victims and bystanders should not speak out when sexual harassment occurs. We argue that information about sexual harassment usually consist of stories about specific cases. These stories can originate with the harassment victim, the harassment perpetrator, or with bystanders. They can reach people by word of mouth, media, or other channels of communication.

While some people may never have heard about a case of sexual harassment, most possess an information consisting of stories they heard or saw. We analyze three features of people's information: (1) their quantity of stories they have heard, (2) whether these stories focus on the harassment target's victimization (victim-based stories) or how that target accused someone of harassing them (accusation-based stories), and (3) the gender composition of the perpetrator and victim. We describe how these information features vary in nationally representative data for Norway. We then study three interrelated research questions that link silence attitudes to information features:

- (1) Does silence around sexual harassment lead to silence *attitudes* about sexual harassment—in other words, is hearing fewer stories about sexual harassment associated with stronger silence attitudes?
- (2) Do accusation-based harassment stories lead to stronger silence attitudes than victimization-based stories?
- (3) Do stories about female-on-male sexual harassment lead to stronger silence attitudes than stories about male-on-female harassment?

Theory in brief

The theory centers on understanding how people form opinions on desirable behaviors of victims and bystanders when they hear a new story about sexual harassment. We argue that attitudes favoring silence over voice develop in response to the traits of the new story and as a function of the information that people have received in the past.

Theory on legal consciousness describes how people make normative evaluations of situations and behaviors to find them more or less morally objectionable. Theory on legal consciousness for sexual harassment breaks this concept down into three components: an evaluation of the situation, an evaluation of the victim, and an evaluation of the perpetrator (e.g., Felstiner et al. 1980—1981, Blackstone et al. 2009). A person evaluates whether the situation was sexual harassment (or not), if the victim was subject to something wrongful (or not), and if the perpetrator conducted themselves wrongly (or not).

Assessments of wrongfulness trigger a desire to voice concern—a process summarized as “naming, blaming, claiming” (Felstiner et al. 1980—1981, Felstiner et al. 2017). The person names a victim, blames a perpetrator, and therefore decides to voice their grievances, for example by claiming some restitution or compensation. This links legal consciousness to silence attitudes (in a similar way to bystander intervention theory, see e.g., Bowes-Sperry and Leary-Kelly 2005). Because we are interested in the attitude that victims or bystanders should not voice their concern, we reverse the concept to focus on *legal unconsciousness* in the remainder of this text.

Number of prior stories. We posit that legal unconsciousness for sexual harassment events is greater for people who have heard few stories about this form of mistreatment. Cognitive biases imply that such people assign a low expectation of importance to a new story because they judge the phenomenon as unusual. Having heard few stories may also be associated with the traits of those stories in ways that lead to silence attitudes: hearing accusation-based rather than victim-based stories, and hearing stories about female-on-male harassment rather than male-on-female harassment (further discussed below). As people who have heard fewer harassment stories in the past develop less legal consciousness, they also have stronger silence attitudes for new harassment stories. We predict that “silence breeds silence”:

- People who have heard fewer harassment stories in the past form less legal consciousness for new sexual harassment incidents (H1a).
- People who have heard fewer harassment stories in the past form stronger silence attitudes around new harassment incidents (H1b).

Narrative focus on accusation or victimization. The core of our theory is that accusation-based harassment stories lead to more silence attitudes than victim-based stories. Stories that focus on the accusation shift the listener’s empathy in the direction of the perpetrator and invites the interpretation that the accusation may have been wrongful or the incident unimportant. In turn, it invites the interpretation that the victim was perhaps not subject to that much harm, and may even have harmed the perpetrator by their accusation. The opposite is true for victimization-based stories that frame the story around how the victim was subject to a behavior from the perpetrator. We predict that:

- Hearing an accusation-based story about sexual harassment leads to more legal unconsciousness than hearing a victimization-based story (H2a)
- Hearing an accusation-based story about sexual harassment leads to more silence attitudes than hearing a victimization-based story (H2b)

If this is true, it should also be true that people’s pre-existing information will be associated with how they evaluate a new story:

- People whose prior information consists to a greater share of accusation-based stories develop more legal unconsciousness for a new story, and vice-versa for the share of victimization-based stories (H2c).
- People whose prior information consists to a greater share of accusation-based stories develop more legal unconsciousness for a new story, and vice-versa for the share of victimization-based stories (H2d).

Gender of the victim and perpetrator. Most harassment perpetrators are men and most harassment victims are women. Gender norms also prescribe behaviors of sexual exploit and aggression to men, and the role of sexual subject to women. These patterns mean that a story about harassment with a male victim and female perpetrator will break expected gender-behavior patterns, while a story with a female victim and male perpetrator will confirm them. The person receiving the story will also be less likely to have heard a story about male victimization and female perpetration in the past, resulting in cognitive bias that judges the new event to be less important. In accordance with prior research on sexual violence that men's experiences are viewed as (much) less legitimate (Schwarz et al. 2020), we expect that:

- Hearing a story about sexual harassment with a male victim and female perpetrator leads to more legal unconsciousness than a story about a male perpetrator and female victim (H3a)
- Hearing a story about sexual harassment with a male victim and female perpetrator leads to more silence attitudes than a story about a male perpetrator and female victim (H3b)

Summary

Figure 1 summarizes the theorization for the three research questions. The gray arrows correspond to hypotheses 1a and 1b, and the black arrows to hypotheses H2a—H2d, and the blue arrows to hypotheses 3a and 3b.

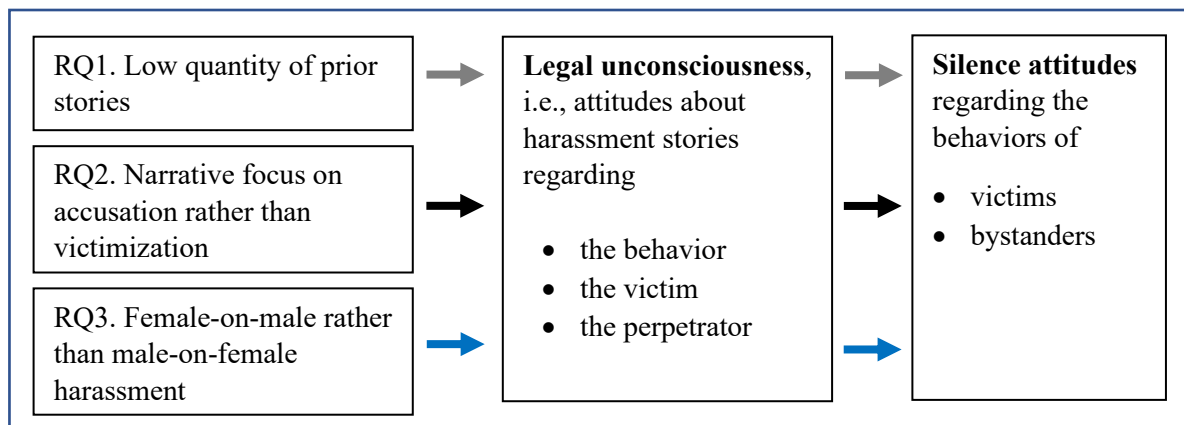


Figure 1. Summary of predictions for the three research questions.

2. Data and Variables

2.1 Data

We conduct our data collection as part of the Norwegian Crime Survey (Nasjonal trygghetsundersøkelse, NTU). A specialized surveyfirm, Ideas2Evidence, collects this data using data from Statistics Norway to conduct a stratified random sampling among people with a permanent address in Norway and using strata based on age, sex at birth, and municipality of residence. Foreign-born individuals are over-sampled. A first wave of data collection occurred in the 2023 wave of the survey and we used these data for preliminary analysis. A second wave of data collected during 2024 will become available to the authors later in May or in June 2024. The datasets are repeated cross sections and as such the individuals in the 2024 data have not answered the survey before. Researchers analyze these data after pseudonymization on the secure server of The Frisch Centre.

We ask survey questions about sexual harassment stories that people may have heard to measure their pre-existing information. We then present them with a new harassment story in the form of a vignette. To elicit their legal unconsciousness around this story, we ask them to assess various aspects of the story, for example if the event was sexual harassment. The survey module ends with a question about general attitudes toward victims' and bystanders' voicing of grievances.

2.2 Pre-existing harassment information

We create four variables to measure people's pre-existing information. Table 1 shows how we created these variables. The table's first row shows our variable names and their units of measurement. The second row shows the translated survey questions and their response categories. Respondents gave the number of harassment stories and described their content.

In the survey, respondents answering that they heard of zero cases could still answer on the share questions but in the main specification we recode those answers to missing. For some exploratory analyses we will use a continuous measure of the number of the stories of different types. We do this by recoding the number of stories as follows: 0 and 1 remain as is; 2-5 is coded to 3.5; 6-10 is coded as 8, and over 10 is coded as 11. We then multiply the number of stories with the shares of the types of stories.

2.3 Legal consciousness and silence attitudes

Our vignette tells a second-hand account about a sexual harassment incident. It asks the survey respondent to imagine hearing a story from a friend about that friend's workplace. Such second-hand accounts are arguably the most common way that people receive information about harassment against people in their social circles or immediate work/education environment. The respondent would be close enough to this harassment event for their attitudes on voicing grievances to potentially affect future behaviors of others. The second-hand account also makes it realistic that the listener does not know the victim or perpetrator personally.

The vignette asks the respondent to "*imagine the following situation. A person you know tells you about a situation in their workplace where...*" followed by the story content which varies randomly in three ways: the harassment behavior (groping or telling crude sexual jokes), the narrative focus (on the victimization or the accusation), and victim and perpetrator genders (male-on-female or female-on-male). Table 2 shows these vignette endings in full.

Table 1. Coding of variables for pre-existing harassment information.

I1. Number of stories (N)	I2a. Share victim-based stories I2b. Share accusation-based stories (0-1)	I3a. Share male-on-female stories I3b. Share female-on-male stories (0-1)
I1. About how many stories about sexual harassment have you heard? These stories can come from friends, acquaintances, colleagues, traditional media, or social media. I have heard...	I2a/b. Stories about sexual harassment can be of different kinds. They can be about how someone was the victim of harassment or how someone was accused of harassing someone else. Think about the stories about harassment that you have heard.	I3a/b. Another difference is the gender of person who was accused and the person who was the victim of sexual harassment. About what share of the stories you have heard were mainly about...
No story One story 2—5 stories 6—10 stories More than 10 stories	About how large share of the stories you have heard were about... I2a. How someone was accused of sexually harassing someone else? I2b. How someone became the victim of sexual harassment?	I3a. A man harassing a woman? I3b. A woman harassing a man?

Table 2. Randomized variation in the vignette’s description of the harassment incident.

		Narrative focus	
		Victimization-based narrative	Accusation-based narrative
Victim and perpetrator genders	Male-on-female harassment	A female colleague was recently groped on the buttocks by a male colleague. A female colleague was recently told crude sexual jokes by a male colleague.	A female colleague recently accused a male colleague of having groped her on the buttocks. A female colleague recently accused a male colleague of making crude sexual jokes.
	Female-on-male harassment	A male colleague was recently groped on the buttocks by a female colleague. A male colleague was recently told crude sexual jokes by a female colleague.	A male colleague recently accused a female colleague of having groped him on the buttocks. A male colleague recently accused a female colleague of making crude sexual jokes.

We define legal (un)consciousness about sexual harassment as the belief that a certain harassment situation was not wrongful. We capture the three theoretical components by responses to questions regarding the situation in the vignette. Table 3 shows these questions and how we code three variables for the legal unconsciousness about the event, victim, and perpetrator. Variable U4 is an index variable consisting of the average of these three variables.

Table 3. Coding of variables for legal unconsciousness.

We ask you to imagine the following situation. A person you know tells you about a situation in their workplace where [harassment occurred or someone was accused of harassment]. Do you disagree with the following statements? 1. Agree completely; 2. Agree; 3. Neither nor; 4. Disagree; 5. Completely disagree			
U1. Event not described as SH (1—5)	U2. Not seeing victim (1—5)	U3. No consequences for perpetrator (1—5)	U4. Unconsciousness Index (1—5)
U1. What happened was sexual harassment	U2a. It is understandable if the [man/woman victim] was upset by what happened U2b. What happened may have been misunderstood by the [man/women victim] (rev) U2. Average of U2a and 2b	U3. The [man/woman] in the story should receive some negative sanction from the employer	U4. Average of U1—U3

Table 4 shows how we code three variables for silence attitudes. They measure two attitudes toward bystander silence and one for victim silence. Variable S4 is the silence attitude index.

Table 4. Coding of variables for silence attitudes.

We ask you to imagine the following situation. A person you know tells you about a situation in their workplace where [harassment occurred or someone was accused of harassment]. Do you disagree with the following statements? 1. Agree completely; 2. Agree; 3. Neither nor; 4. Disagree; 5. Completely disagree			
There are different ways that workplaces can handle situations where someone sees themselves as the victim of unwanted sexual attention like unwanted touching or crude jokes. To what extent do you agree with the following ways of handling the situation? 1. Agree completely; 2. Agree; 3. Neither nor; 4. Disagree; 5. Completely disagree			
S1. Bystander silence (1—5)	S2. (Victim) should not tell leader (1—5)	S3. (Bystander) should not intervene (1—5)	S4. Silence attitude index (1—5)
S1. Your acquaintance did the right thing in telling you this story	S2. The person who is targeted by the behavior should bring it up with their supervisor, union rep, or workplace safety representative	S3. A person who sees a situation like this should intervene to stop it	S4. Average of S1—S3

All variables for legal unconsciousness and silence attitudes uses the same 5-step Likert Scale. The preliminary data shows that the two index variables (U4 and S4) both have standard deviations of approximately 1 scale step. Should this situation remain in the next wave of data, the main analysis will report results for the Likert scale. Should the standard deviation be substantially larger or smaller than 1, we may instead transform the variables in Tables 3 and 4 to Z-scores to facilitate the interpretation of the results.

3. Empirical methods

Hypotheses will be tested with graphical analysis as well as regression analysis. The main text will present results for the index variables for legal unconsciousness and silence attitudes, with sub-index analysis included in the main text conditional on space constraints.

Samples. All analyses will be run on the 2024 data separately to test the hypotheses on data not yet available to the researchers when the plan is written. We will pool the data from the two waves in exploratory analyses, especially when analyzing heterogeneity, as we expect the results to be similar across waves and as we gain considerable power by pooling. Should the main results substantively between the two waves, the main text will report the results from Wave 2 and we will compare those results against those for Wave 1, which will be placed in the appendix.

Descriptive analysis. We will describe how the information variables (I1—I4) vary in the population by respondent gender, age, education, immigrant status, and sexual orientation. We will also describe how legal unconsciousness (U1—U4) and silence attitudes (S1—S4) differ by these variables. The focus in the main text will be on the number of stories and narrative focus, and on the index variables U4 and S4.

Control variables in the regression analysis. The regression equations described below have two variable vectors, defined as follows. One variable vector \mathbf{X}_i contains the following variables for socio-demographic traits: age (dummies for brackets of 20 years), education (dummies for three levels), immigrant status (a dummy for being foreign born or having at least one foreign-born parent), sexual orientation (a dummy variable for self-reported sexual orientation as lesbian, gay, or bisexual). A second variable vector \mathbf{Z}_i contains variables for the respondent's prior harassment information, namely variables I1—I3 (see Table 2).

Missing values. Whenever we have missing values on any control variable in the regression analysis, we will include a missing indicator to not lose observations.

Regression analysis of hypotheses 1a—1b. We use OLS to estimate

$$Y\{\text{Legal Unconsciousness}_i, \text{Silence Attitude}_i\} = \beta \text{Stories}_i + \mathbf{X}_i + \mathbf{Z}_i + \varepsilon_i$$

Where Y is the legal unconsciousness variable(s) for H1a, and the silence attitude variable(s) for H1b. We sequentially add variable vectors \mathbf{X}_i and \mathbf{Z}_i , alone and together, to study if the coefficient of interest changes.

Regression analysis of hypotheses 2a—2d. We test hypotheses 2a and 2b by using OLS to regress

$$Y\{\text{Legal Unconsciousness}_i, \text{Silence Attitude}_i\} = \beta \text{Accusation}_i + \mathbf{X}_i + \mathbf{Z}_i + \varepsilon_i$$

where Accusation is a dummy that takes the value 1 for respondents who saw the accusation-based story and 0 for the victimization-based story. We sequentially add variable vectors \mathbf{X}_i and \mathbf{Z}_i , alone and together, to study if the coefficient of interest changes. In this case, adding these controls amounts to checking the randomization in the survey experiment.

To test hypotheses 2c and 2d we run the regression

$$Y\{\text{Legal Unconsciousness}_i, \text{Silence Attitude}_i\} \\ = \beta_1 \text{Share_Accusation}_i + \beta_2 \text{Share_Victimization}_i + \mathbf{X}_i + \mathbf{Z}_i + \varepsilon_i$$

where Y is the legal unconsciousness variable(s) (H2c) or the silence attitude variable(s) (H2d). We run bivariate regressions with the share of accusation-based stories, the share of victimization-based stories, both these variables, and sequentially adding the control variable vectors.

Regression analysis of hypotheses 3a—3b

This analysis follows the same format as that for hypothesis 2a and 2b, but replacing the dummy for the accusation-based vignette to a dummy for the female-on-male harassment event (and 0 for the male-on-female event).

Statistical power. A sample of 20,000 individuals allows us to detect effects smaller than 0.05 standard deviations for the dichotomous treatment variables in the vignette experiment, i.e., the narrative focus and gender composition of perpetrator and victim.

Heterogeneity analysis and empirical extensions. Heterogeneity analysis may include sub-sample analysis by *respondent gender*. It may also include sub-sample analysis by the sex composition of the respondent's workplace. The *workplace sex composition* is of interest because women face the highest risk of sexual harassment from colleagues and supervisors when they work in male-dominated workplaces, and vice-versa for men but at a lower rate (Folke and Rickne 2022). It is therefore of interest to describe silence attitudes and legal consciousness in male-dominate workplaces, in particular.

We will conduct heterogeneity analysis with respect to own *prior victimization to sexual violence in the workplace*. The survey does not include list-based or subjective questions on sexual harassment, but it does include detailed questions on victimization of sexual crimes. These questions include one question each for having been the victim in the previous calendar year of: forced penetration, oral sex, masturbation, touching of breast or sexual organs, unwanted touching in another sexualised way, or sexually offensive behaviour, such as nudity, gestures, or language of a sexual nature, four types of digital sexual crimes, and hate speech based on gender. We code a person as a victim of workplace sexual harassment if they (i) report any such victimization AND, (ii) report that the perpetrator was a colleague OR report that (iii) the incident took place in the workplace.

Conditional on finding similar main results in the two waves of data, the heterogeneity analysis may pool data from the two waves to increase statistical power.

Sensitivity tests. Sensitivity tests will include using reported values on variables I2a—I3b, despite reporting zero prior stories about sexual harassment, rather than setting these values to zero. They will also include adding all the vignette traits to the regressions 2a—b and 3a—b.

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