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Understanding Patriarchal Sexual Scripts in an Anonymous Survey Using Network Analysis

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Abstract

This thesis explores patriarchal sexual scripts through network analysis of data collected in an anonymous survey with a final sample of $N = 1.029$ responses. The aim is both conceptual and methodological insofar as the project uses Gaussian Graphical Models to develop a radical feminist point about patriarchal sexuality. For this purpose, the concept patriarchal sexual scripts is developed from radical feminist theory and sexual script theory and operationalised into a short questionnaire. Data was collected using this questionnaire in an anonymous public survey and analysed through several methods (descriptive statistics, correlation analysis, regression analysis, factor analysis, network analysis) with a focus on network analysis, within which four overarching themes can be detected: (1) *sexual discomfort* emerges as an overarching theme, (2) *asymmetrical pleasure* and *phallocentrism* are featured in all models, but configured differently according to gender, (3) *masculine dominance* emerges as a distinct theme for women, while (4) *naturalized masculine initiative* emerges as a distinct theme for men. These findings are interpreted to give a more nuanced account of radical feminist analysis of sexual intercourse and allow for a methodological discussion of the advantages and issues of network analysis in the context of understanding sexual scripts.

Key Words: Radical Feminism, Network Analysis, Sexual Scripts, Feminist Data Science, Survey Data

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Popular Science Summary

Radical feminists believe that the way that men and women interact with each other sexually plays a big role in shaping our collective understanding of what it means to be a man or a woman. In the patriarchal idea of gender and in a lot of (heterosexual) sex, men are dominant over women, which means they are usually in charge of the situation and their needs and desires are often de facto more important than those of women.

To make this more tangible, I use the concept “patriarchal sexual script”. Sexual scripts are shared ideas about what sex usually looks like that both influence and are influenced by how people usually behave during sex like a self-fulfilling prophecy: if you believe that the man usually kisses the woman first on a heterosexual date, you are likely to act in line with this belief, and that in turn will lead to situations that strengthen the belief. In combination with radical feminism, that leads us to the idea of patriarchal sexual scripts.

For my thesis, I made a questionnaire with ten items that correspond to such patriarchal sexual scripts and let 1.029 people fill it out. I analysed this data using network analysis, which is a type of statistical analysis that is used to understand how different things (those could be people, cities, cells, etc.) relate to each other. In my case, the things that are related to each other are the different statements of the survey that express patriarchal sexual scripts, and the network analysis can help us understand better what image of patriarchal sexual scripts emerges from the data I collected.

In this analysis, I build different network models for men and women to see if the patterns of sexual scripts are different according to gender. I found four themes in the data: first, both men and women have patterns in their network that express *discomfort with sex* in general. Second, there is a theme that is about *sexual pleasure*. This theme was configured differently by gender: while women associate their lack of sexual pleasure with a focus on men’s orgasms and penetrative sex, men associate it more with an overall conservative description of sex (that is penetrative sex in the missionary position). Third, there is a theme of *masculine dominance* that only shows up distinctly in the women’s network, while the fourth theme expresses *men being imitators as well as a biological focus* of sexuality. These results suggest that men and women interpret patriarchal roles in sex differently, which can help us in understanding the patriarchal sexual dynamics that radical feminism criticises.

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INTRODUCTION

The current thesis is motivated by two impulses, one political and one methodological. First and foremost, I am writing toward sexual violence prevention. My experience working in this field has given me an understanding of the systemic, gendered nature of sexual violence, and a strong conviction that to overcome sexual violence as a structural issue, we must understand just how entrenched it is in our lives and minds. To construct a thesis that captures this thought has been a challenging process – due to the opaque nature of the topic, as well as due to concerns about research ethics and data protection. It has led me away from directly studying sexual violence or aggression, and towards studying how patriarchal principles saturate how we think about sex even in nonviolent situations. It has also led me to radical feminist theory, developing the notion of patriarchal sexual scripts to conceptualise how normative sexual practices are informed by patriarchal norms.

Secondly, methodologically, I want to integrate elements of radical feminist theory with contemporary statistical methods. Historically, feminist theories have rightfully critiqued the positivist epistemological stance that much quantitative research subscribes to, which has led some feminist scholars to favour qualitative methodologies. It has also inspired a tradition of quantitative feminist scholarship – a prominent example is the work of Emma Fulu and her colleagues, who apply feminist principles to quantitative research about sexual violence against women and girls in low and middle income countries (Fulu et al., 2013; Leung et al., 2019). However, I believe that work remains to be done in the realm of feminist quantitative sociology, especially when it comes to incorporating recent developments within quantitative social scientific methodologies. To take a step in this direction, I am using network analysis, which has been gaining popularity in recent years. I am taking particular inspiration from the work of Timothy Luke, who uses Gaussian Graphical Models (GGMs) to develop a theoretically sound quantitative analysis of rape myth acceptance. He argues that GGMs are particularly suited for the analysis of agreement to social discourses because they do not make any assumptions about

causal structures. I replicate this methodological approach within an explicitly feminist theoretical frame and within the disciplinary realm of sociology.

Conceptually, my thesis develops the theoretical notion of *patriarchal sexual scripts* from a combination of radical feminist theory and sexual script theory. Sexual scripts are shared narratives about what “normal” sexuality looks like that both shape and are shaped by concrete sexual interactions between people. Thus, sexual scripts can be a conceptual tool to understand the social construction of sexuality. Patriarchal sexual scripts specifically are narratives of sexuality that relate to patriarchal ideas, such as a focus on men’s pleasure, the phallogentric and heteronormative equation of sexuality with penile penetration, and an implicit assumption of consent unless specified otherwise.

It is beyond my scope to explore the functionality of patriarchal sexual scripts in the context of the societal construction of sexuality and gender. My aim in this thesis is merely to explore how such different aspects of patriarchal sexual scripts relate to each other, and specifically – as radical feminist theory would suggest – whether masculine sexual dominance emerges as a central theme in the context of relational patterns emerging from this analysis. For this purpose, I have constructed an anonymous questionnaire containing ten items that capture different aspects of patriarchal sexual scripts. A final sample of 1.029 responses to this questionnaire was collected in a public survey over the period of a month. I am conducting a quantitative network analysis of the collected data using Gaussian Graphical Models to explore what patterns emerge between the different aspects of patriarchal sexual scripts as represented by the questionnaire items. To adequately contextualise the network analysis and understand its conceptual contribution, I additionally conduct a basic descriptive analysis, correlation analysis, regression analysis, and factor analysis of the collected data. The survey was distributed via Lund University’s own software Sunet Survey. For the statistical analysis I used both SPSS (for descriptive statistics, correlations, regression analysis, and factor analysis), and R (for network analysis). Reflecting that my thesis is a methodological as well as a conceptual endeavour, my research is guided by the following two questions:

1. Conceptual Question: What patterns can be observed between aspects of patriarchal sexual scripts, and how does masculine sexual dominance figure within these patterns?
2. Methodological Question: In what ways is Network Analysis with Gaussian Graphical Models specifically appropriate or useful in the context of studying patterns of patriarchal sexual scripts?

My thesis is structured as follows: I will first engage in a brief review of some relevant literature. This is followed by a theoretical section that draws on radical feminist theory of sexuality and sexual script theory to suggest the notion of patriarchal sexual scripts. The methodological section entails the operationalisation of patriarchal sexual scripts, a short discussion of the use of quantitative methods in the context of feminist sociology, explanations of my methods of data collection and data analysis, and a statement about the research ethics of my project. My results-section is split into five parts to accommodate my methods of data analysis: (1) descriptive statistics, (2) correlation analysis, (3) regression analysis, (4) factor analysis, and (5) network analysis. This is followed by a discussion of my results in relation to my research questions and my broader theoretical and methodological frame. Finally, I will address some shortcomings and limitations of my project, and finish with a concluding summary.

PREVIOUS RESEARCH

In the following, I will briefly sketch three strands of research I consider especially relevant to my project. First, my project has drawn inspiration from quantitative studies measuring different kinds of attitudes about sex, which are mostly (socio-)psychological. Second, there is a socio-psychological and sociological body of research using the notion of sexual scripts. Third and finally, I want to address some theoretical debates about radical feminism to justify my choice of theory.

Sexual Fantasies, Attitudes on Gender, and Sexual Aggression

Insofar as my thesis is a quantitative study measuring agreement with statements about sex, it is related to a body of psychometric literature researching peoples' attitudes, fantasies, and behaviours related to sexual intercourse. Within this body

of research, many studies follow a descriptive logic in developing and modifying scales about sexual fantasies. Some tools that have emerged from this literature are the Wilson Sexual Fantasy Questionnaire (Joyal et al., 2015), Gray's Sexual Fantasy Questionnaire (Bartels and Harper, preprint), the Sexual Desire and Erotic Fantasies Questionnaire (Nimbi et al., 2023), and the Sexual Fantasy Experience Scale (Hasson and Ginzburg, 2024). Further, some studies about sexual fantasies use scales related to the DSM-based concept of *paraphilia* (Joyal and Carpentier, 2017; Joyal and Carpentier, 2022).

An important sub-branch of the field explores the acceptance of *Rape Myths*, i.e., false ideological beliefs about sexual violence that blame the victim for experienced assault (Balezina and Zakharova, 2023; Łyś et al., 2023; Nyúl and Kende, 2023; Dawtry et al., 2019). These studies sometimes also associate rape myth acceptance with conservative gender-related opinions such as sexism (Balezina and Zakharova, 2023; Nyúl and Kende, 2023), social dominance orientation, cultural conservatism and beliefs in the biological origin of gender differences (Łyś et al., 2023).

This is part of a larger trend that attempts to link different kinds of sexual fantasies and/or sexual desires to other attitudes. Some evidence suggests that sexual fantasies featuring aggression or dominance might be linked to rape-prone attitudes (Bartels and Gannon, 2009) and hostility towards women (Bartels et al., 2020). Some studies go even further and attempt to link sexual desires and gendered attitudes to sexual behaviour or self-reported proneness to sexual aggression. For example, Abrams et al. (2003) find that hostile attitudes towards women influences how research participants read stories about rape, including whether they report proneness to behaving similarly to the perpetrator in the story. Bondü and Birke (2021b) find aggression-related fantasies to be the strongest predictor of sexually coercive behaviour compared to other factors like general aggression, psychopathy, rape myth acceptance, and violent pornography consumption. Begany and Milburn (2002) find that hostile sexism, along with right-wing-authoritarianism (mediated by rape myth acceptance) predicts male participants' likelihood to indicate they would be willing to sexually harass a hypothetical female university student.

Operating with the DSM-based concept of paraphilia, Baur et al. (2016) found moderate to strong correlations between almost all “paraphilic interests” (exhibitionism, masochism, sadism, and voyeurism) and sexually coercive behaviour¹. The three strongest associations between interest and behaviours were found for sexual sadism, exhibitionism, and sexual masochism. Further, they find fetishistic, voyeuristic, and exhibitionistic behaviours to be associated with being a man, while masochistic behaviours seem associated with being a woman.

Importantly, some attention has been paid specifically to the role of BDSM affiliation in this context, to differentiate between the desire for consensual dominance-submission dynamics and behaviour that is sexually coercive or aggressive. Larue et al. (2014) develop the notion of *preference for sexual violence* and find that for men specifically, preference for sexual violence in sexual fantasy is a moderate predictor for interest in non-consensual sexual activity. They attribute the fact that the correlation is only moderate to the importance that is placed on the difference between consensual dominance/submission and non-consensual violence in the BDSM community. However, according to Bondü and Birke (2021a), people with a BDSM affiliation did report significantly more nonconsensual behaviours than people without it, which indicates that despite the communities focus on the difference between consensual BDSM and sexual violence, engaging in consensual BDSM is not a protective factor against violence perpetration.

These findings underline the urgency for feminist scholarship about attitudes about sex: there does seem to be some empirical support for the idea that (the desire for) sexual dominance is more common among people who identify as men, and also that this desire is to some degree linked to hostile attitudes toward women, and potentially even to sexually aggressive behaviour. This is especially important considering that most of the studies cited so far are not feminist: despite the fact that these studies consistently find women to show greater interest in sexual submission/masochism and men to show greater interest in sexual dominance/sadism, and

¹ The exception to this is “transvestitism”, which is listed in the DSM as a paraphilic interest but does not predict sexually aggressive behaviour.

in spite of the connections found between dominance fantasies, hostility towards women, and sexual violence, it is not common for such studies to choose feminist theoretical frameworks or actively include feminist considerations into their methodologies. Of course, notable exceptions exist. I mentioned Emma Fulu’s work earlier, another good example I found is a large population-based study conducted by Jewkes et al. (2011) in South Africa, in which the authors studied the prevalence of sexual violence perpetration within a feminist theoretical framework.² Further, some recent studies also suggest a broader reconsideration of much of the research on sexual fantasies which they view as partially outdated: Lindley et al. (2022) find in their study about sexual desire and gender identity that cis-men and cis-women in their sample were equally likely to fantasize about themselves as givers of sexual pleasure or the dominant partners, and men were just as likely to describe emotional aspects in their sexual fantasies. This causes the authors to reflect that their “results highlight the need to reinvestigate sexual research which relies on outdated gender scripts which might not align with our modern society” (Lindley et al., 2022: 173).

Methodologically, most of the studies cited so far use either factor analysis to observe patterns and/or latent variables or classes in the occurrence of sexual fantasies, behaviours, etc. Alternatively, they use regression analysis or correlation analysis to examine relationships between attitudes, desires, and self-reported behaviours. These statistical methods are useful and effective in the described studies – especially insofar as most of them are located in the disciplinary realm of psychology. However, to foster a more structural and constructivist understanding of sexuality, it seems desirable to explore methods that take seriously the discursive nature of sexual norms. Timothy Luke (so far only available in preprint: see <https://osf.io/preprints/psyarxiv/x5jr3>) addresses this issue in his methodological

² They specifically omitted the word “rape” in their questionnaire and found that 27.6% of the men that participated in the study reported having coerced a woman into sex at least once in their lives. This leads the authors to the conclusion that while “rape” is largely condemned as unacceptable, most perpetrators of sexual violence simply avoid labelling their actions as “rape”, see Jewkes R, Sikweyiya Y, Morrell R, et al. (2011) Gender Inequitable Masculinity and Sexual Entitlement in Rape Perpetration South Africa: Findings of a Cross-Sectional Study. *PLOS ONE* 6(12): DOI: 10.1371/journal.pone.0029590.

criticism of the use of factor analysis for social concepts (in his article specifically rape myth acceptance). He explains that factor analysis assumes common latent variables that cause individuals to answer to items in specific ways. This, however, cannot be taken for granted for a discursive concept like rape myth acceptance: factor analysis in this case would have to assume that there are latent variables (such as the “it wasn’t really rape”-attitude or the “the victim must have provoked the assault”-attitude) that individuals possess to different degrees and that cause their responses to specific statements. These latent variables would have no causal relations to each other, but together they would make up the concept of “rape myth acceptance” and thus be measured by a rape myth acceptance scale. These ontological assumptions seem hard to verify (how can we know any of the assumed latent variables exist as independent phenomena? And even if they did, how can we know that this is actually what the scale measures? And if it did, how could we know that it is this underlying psychological entity that *causes* response behaviour?). Luke argues instead that rape myth acceptance should not be interpreted as stable beliefs that can be measured as such at all, but rather as discursive expressions.³ This approach takes seriously the methodological fact that a response to a survey is always reactive and that respondents thus do not necessarily express their authentic beliefs, but rather position themselves in relation to the social discourse about rape myth acceptance. Network modelling provides an analytical approach that is appropriate to this methodological understanding of attitudes as discursive expressions: rather than assuming latent variables, network analysis understands key concepts to emerge from the analysis itself.

Studying Sexual Scripts

Another strand of research my project is drawing on uses the notion of *sexual scripts*. This body of research is diverse in terms of the methodologies it uses, as well as in terms of the role that sexual scripts play in the different studies. In some

³ Similar arguments have been made about a range of different phenomena (see for example Cramer AOJ, Waldorp LJ, van der Maas HLJ, et al. (2010) Comorbidity: A Network Perspective. *Behavioral and Brain Sciences* 33(2-3): 137-150. for a similar argument about the medical concept of comorbidity).

projects, sexual scripts are understood as attitudes or cognitive structures, similarly to the psychological studies outlined above. Seabrook et al. (2016), for example, launch the Heterosexual Script Scale (HSS) that captures endorsement of traditional gender roles and sexual scripts, but also captures elements of sexualization, objectification, and idealized beliefs about romantic relationships. The authors then link these findings to participants' self-reported consumption of reality TV, arguing that the heterosexist norms portrayed in mainstream entertainment take part in reinforcing the heterosexual sexual script. Schuster and Krahe (2019) and Krahe and Berger (2023) engage the notion of *risky sexual scripts* containing behaviours like drinking alcohol, communicating sexual needs ambiguously, and engaging in casual sex, and relate these behaviours to prevalence of sexual violence among adolescents. Sakaluk et al. (2014) develop a sexual scripts scale from the qualitative results of focus groups they conduct, thus putting sexual scripts into a mixed-methods research design.

A somewhat different approach are scenario-based methods, in which research participants are confronted with different ways a sexual situation could go (usually still in the format of a survey) and are asked to choose between different courses of action. Krahe et al. (2007) use such a design to study the difference between general sexual scripts (i.e. what people think a typical sexual interaction looks like), personal sexual scripts (i.e. what people think a sexual interaction typically looks like for them), and rape scripts (i.e. what people think a typical non-consensual sexual interaction usually looks like). The researchers found the three kinds of scripts to be distinct, and also found a notable optimistic bias, meaning participants were likely to view their own sexual experiences as more positive than other people's.

There are also some sociological studies that use sexual scripts as an instrumental concept to understand other aspects of sexual behaviour, for example understanding the influence of pornography consumption on sexual violence perpetration (Marshall and Miller, 2023) or pornography use (Bridges et al., 2016) and its relationship to enjoyment of sexual practices (Ezzell et al., 2020) more generally. Further, a number of qualitative studies use the notion of sexual scripts to understand

how different kinds of people make sense of their sexual experiences, especially involving sexual violence (French and Neville, 2016; Carroll, 2019), or how the delineation between rape and consensual sex is constructed through sexual scripts (Ryan, 2011). These studies generally take a more constructivist and more feminist approach, and the concept of sexual scripts specifically is used in this context to theorise the collective and discursive nature of sexuality. Similarly, there is a body of sociological and usually feminist literature using the concept of sexual scripts to read cultural material, specifically pornography and the more aggressive or degrading acts portrayed in it (Fritz and Paul, 2017; Vera-Gray et al., 2021). Finally, some studies also use related concepts like *relational scripts* (Senkans et al., 2020) or *rape scripts* (Gunnarsson, 2018; Rousseau et al., 2020).

This more sociological academic discourse about sexual scripts is more methodologically diverse than the psychological literature cited above. It also frequently employs discursive or otherwise constructivist understandings of sexual interests and behaviours, which I wish to mirror in my thesis. Further, the way that *sexual scripts* are used in these studies is diverse: some authors use it as an operational concept to study other phenomena, some use it as a singular entity (“the heterosexual script”) that captures a notion akin to hegemonic understandings of sexuality, and others use the idea of “script” in a quite literal sense, to describe different situational courses of action individuals can take or consider normative. I will relay my own understanding of sexual scripts in more detail at a later point, but I take from this review of literature about sexual scripts that it is an advantage of sexual script theory that it lends itself to different interpretations and adaptations, thus opening up space for diverse kinds of studies around the discursive shaping of collective sexual interests and behaviours.

Why Radical Feminism?

Finally, this thesis is a radical feminist project. To frame this choice, I want to draw on Breanne Fahs’ recent essay *The Urgent Need For Radical Feminist Thinking Today* (Fahs, 2023). Fahs argues for the need to reconnect to radical feminism as a political movement and way of analysing the social world considering the most

recent erosion of feminist political achievements⁴. Radical feminism is hard to define, and it has meant different things to different people at different times. It emerged as a branch of the feminist political movement in the 1960s to 1980s. Fahs argues that to fully understand the radical feminist political impulse, it must be seen as connected to the other radical social movements of the mid 20th century USA, such as radical labour and early civil rights activism. In this context, radical feminism emerged from a dissatisfaction with liberal feminism: while liberal feminism had improved (some) women’s lives, it had largely operated within existing political structures. Radical feminists thus called for deeper analysis:

“[...] second wave radical feminism wanted to look at the structural and systemic roots of patriarchy and sexism, with particular interest in how seemingly private experiences (sexuality, the body, spirituality, housework, emotions, the family) connected to broader structures that disempowered women and limited their freedom and autonomy.” (Fahs, 2023: 481)

Thus, radical feminism was ultimately about developing a more thorough understanding of patriarchy, targeting a wider range of oppressions, and taking more extreme kinds of public action in favour of women’s liberation. At the time, this meant more extreme ways of protest as well as radical feminist community building in the form of (for example) organizing self-defence lessons for women and building shared narratives of oppression in consciousness-raising sessions. In this way, radical feminists established a notion of shared feminist praxis that “reimagined solidarity between movements [and] made space for angry agitators” (Fahs, 2023: 482).

For my project, I am using the theoretical work of Catharine MacKinnon, a US legal scholar who has also engaged in producing radical feminist theory. In her

⁴ Fahs is mostly referencing the overturn of *Roe v. Wade* 2022 in the USA, which stripped AFAB people in the US of the federal right to abortions. However, I believe that a regression of feminist achievements is also visible in other contexts. To name an example from my own home country: as I am writing this thesis in March and April 2024, the state of Bavaria has just ruled that using gender inclusive languages featuring the signs “*” and “:.” is no longer permissible in public schools, see AssociatedPress (2024) *German state of Bavaria bans gender-sensitive language in schools and other public bodies*. Available at: <https://apnews.com/article/germany-gender-language-bavaria-change-school-grammar-8a0ac45ebf0134627221382d0bbb0ef0> (accessed 06.05.2024)..

book *Toward a Feminist Theory of the State* (MacKinnon, 1989), which I will be referencing as the theoretical point of departure of my thesis, MacKinnon builds an account of patriarchy based on feminist critique of Marxism. Her account centres the sexual submission of women under male dominance as the root of gender as a system of social hierarchy that specifically harms women. This theory has been criticised extensively, most famously by Judith Butler (Butler, 1991; Butler, 1994; Butler, 1997). While I unfortunately do not have the space here to engage in an appropriate discussion of the issues of this debate, I want to mention two interrelated strands of criticism I believe to have detected in Butler's writing and position myself and my project in relation to them.

First, Butler (1994) considers MacKinnon's account "rigid determinism" (Butler, 1994: 7) in the way that it associates sexual submission, sexual victimization, and femininity. Butler argues that, since MacKinnon posits the opposition of sexual dominance and submission as the origin of masculine and feminine gender roles, MacKinnon's theory conceptualises all "female sexuality as coerced submission" (Butler, 1994: 7) and fails to "distinguish the presence of coerced domination on sexuality from pleasurable and wanted dynamics of power" (Butler, 1994: 7). Butler then frames MacKinnon's account as opposed to "the feminist tradition in favor of sexual freedom" (Butler, 1994: 7). I believe that framing radical feminism as opposed to "sexual freedom" is a problematic rhetorical strategy that misrecognises the radical feminist point. MacKinnon's theory does not oppose sexual freedom so much as it calls into question what sexual freedom can even mean in a social system whose institutions, laws, gender roles, cultural narratives, etc. structurally benefit men. MacKinnon does hold that women are structurally harmed by patriarchy (that they are, if you will, "victims"), both in the sense that they are subjected to male violence and in the sense that their own thoughts, desires, and identities are shaped by the patriarchal structures they were socialised in. However, it is precisely MacKinnon's point here that victimization and agency are not mutually exclusive. "Feminism locates the relation of woman's consciousness to her life situation in the relation of two moments: being shaped in the image of one's oppression, yet struggling against it" (MacKinnon, 1989).

Second, Butler addresses the issue of how MacKinnon connects pornography (that is, “text”, the narrative, symbolic dimension of sexuality) to material harm done to women (Butler, 1997). According to MacKinnon, there is no distinction to be made between depictions of misogyny and misogyny itself: pornography is *in itself* harmful and degrading. Butler argues against this account because they disagree that the coupling between speech acts and their social meaning is as direct as MacKinnon seems to suggest, stressing that different words can have different meanings in different contexts, which opens up the important possibility for reclaiming. Thus, according to Butler, MacKinnon’s account which directly ties imagery/language to meaning is simplified in a politically harmful way. I somewhat agree with this argument, even as applied to MacKinnon’s theory more generally. What I value about her theory is that she takes seriously the meaning of the dynamic of sexual dominance and submission for patriarchy as a sociocultural system. I do believe, however, that the concrete mechanisms of this meaning-making are underdetermined in MacKinnon’s account. Exactly *how* are the individual instances of masculine sexual dominance that many women experience related to broader cultural narratives and shared meanings about masculine dominance? And *how* are both in turn active in creating gender as a hierarchical binary structure? These connections remain abstract in MacKinnon’s theory. To mitigate this issue in my thesis, I will use the theory of sexual scripts.

The criticisms of Judith Butler and other authors have led radical feminism to fall out of favour over time. It is now “one of the most fraught, maligned, and misunderstood segments of the feminist movement” (Fahs, 2023: 479) due to its (as I am trying to argue, false) associations with gender essentialism and sex-negativity. A contribution to this negative image has been the use of the phrase “radical feminism” in the acronym TERF (“Trans Exclusionary Radical Feminist”), which denotes a group of people who hold gender essentialist beliefs that lead them to exclude trans people from feminism among other things (see Fahs, 2023). While there were and are some women who identify as radical feminists and who also advocate for the exclusion of transwomen from women’s spaces, this belief has always been

marginal within radical feminism, and most academic publications about TERFism acknowledge this (Fahs, 2023; see also Rogers, 2024; Thurlow, 2022; Tudisco, 2023).

Of course, engaging radical feminism in 2024, one must keep in mind the historical context of radical feminism, and the important contributions that have been made to it since its inception. In the current thesis, I am dealing with this issue in several ways: first, I have just contextualised radical feminism historically and discussed some important criticisms that have been formulated against it. Second, I am combining radical feminist theory with sexual script theory to fill in some theoretical gaps and provide a better operationalization. Finally, I will attempt to translate what I value about radical feminism and MacKinnon's theory in particular into a more contemporary language in some places. For example, I will not mostly speak about "women's oppression", but rather about "gender as a hierarchical social structure". I thus align myself with the authors, most prominently Finn Mackay (2015) and now Breanne Fahs (2023), who have made arguments in favour of re-connecting to radical feminism, and this includes rereading the aged original theories and using what is good about them: their boldness, their unwavering stand for the rights of women, and their insistence on the political centrality of the most intimate dimensions of our lives.

THEORETICAL CONCEPTS

Sexual Intercourse in Radical Feminist Theory

This thesis engages a radical feminist approach because radical feminism provides an account of the importance of sex – that is, sexual intercourse – for the hegemonic order of binary gender under patriarchy. It takes sexual intercourse seriously as a domain of gender relations and as a site of meaning-making in which gender as a system of social hierarchy is both expressed and produced. At the centre of this account is the opposition between (masculine) sexual dominance and (feminine) sexual submission, which creates the symbolic repertoire for hierarchical binary gender as a social structure: "The man/woman difference and the dominance/submission dynamic define each other" (MacKinnon, 1989: 113). Patriarchal gender is

thus a hierarchical binary defined in sexual terms. Sexuality and gender are mutually constitutive, and sex (meaning sexual intercourse) is at the centre of their dynamic (see MacKinnon, 1989: 113). Men are *socially* dominant over women because they are *sexually* dominant over women.

In the patriarchal configuration of gendered sexual dynamics, men are active, dominant subjects and women are made into passive, submissive objects for male sexual satisfaction (MacKinnon, 1989: 137). This dynamic is reified in sexual interactions where men hold the initiative and women are responsive, where the focus is on men's pleasure and male anatomy, where men are physically or symbolically dominant or inflict force on their partner, where men's needs are naturalised, where consent is implicitly assumed until it is explicitly withdrawn, etc. These could be considered different aspects of sexual intercourse that adhere to patriarchal principles, which is most simply and directly defined by upholding masculine dominance. Such patriarchal sexual encounters thus produce the meaning of gender as a binary social structure so that masculinity is defined by dominance and femininity is defined by submission. Gender as a social structure extrapolates this basic opposition of masculine dominance and feminine submission into all other aspects of the social world.

In this view, gender is a deeply political construct: “[m]ale is a social and political concept, not a biological attribute, having nothing to do with inherency, pre-existence, nature, essence, inevitability, or body as such” (MacKinnon, 1989: 114). Thus, while a critique of phallocentrism is part of radical feminism, the penis is only indirectly, symbolically related to masculinity. It is dominance that defines the patriarchal masculine. The fact that dominance is symbolically related to penetration is specifically what is patriarchal about patriarchal sex: penetration symbolizes being dominated and being feminized not because of anything inherent in the physical act, but because the masculine, the dominant, and the phallic are tied together in the patriarchal imaginary. MacKinnon sometimes goes as far as to use the words Male/men/”boy” and Female/woman/”girl” independently of gender identity all together, describing merely the role taken on in the dynamic of dominance and submission:

“What is heterosexuality? If it is the erotization of dominance and submission, altering the participants’ gender does not eliminate the sexual, or even gendered, content of aggression. If heterosexuality is males over females, gender matters independently. Arguably, heterosexuality is a fusion of the two, with gender a social outcome, such that the acted upon is feminized, is the ‘girl’ regardless of sex, the actor correspondingly masculinized” (MacKinnon, 1989: 178-179).⁵

This view provides the basis for a feminist reading of the sexual, including the meaning of rape and its distinction from consensual sex. Radical feminism refuses to conceptualise sex and rape as exclusively disjunct or unrelated concepts because both normative sex under patriarchy and rape are expressions of the same principle of masculine dominance and feminine submission. This distinguishes radical feminism from other feminist theories about rape like that of Susan Brownmiller (1993), according to which the purpose of rape is not sexual, but rather lies in the exertion of power over one’s victim. Radical feminism argues that separating violence/rape and sex is precisely missing the point: rape *is* sexual, and in much consensual sex women (people) *are* hurt. In the radical feminist understanding, sexual violence is “not the erotization of something else, like dominance; eroticism itself exists in this form” (MacKinnon, 1989: 113). Obviously, the important difference between rape and consensual sex is that in the latter, all parties agree to engage in the sexual encounter. However, if we were to take consent as some kind of ultimate boundary within which all sexuality is equally unproblematic, we would neglect one (or possibly even the most) important domain of gendered social interaction. Thus, sex-positivity is not inherently liberatory, because it tends to depoliticise the sexual. Of course, radical feminism is not in favour of sexual repression. It does, however, demand a critical analysis of “normal” sexual practices. A lot of sex that

⁵ This, then, is how homophobia and transphobia can be understood from a radical feminist perspective: because masculinity means acting upon others, and is symbolically related to penetration, masculinity is threatened by gayness (i.e., by the idea that a masculine person can be penetrated by penis). And because lesbians live a feminine sexuality that is not (or at least not directly) defined by masculine domination, masculine hegemony is threatened by lesbianism. Transgender and nonbinary people in turn pose a threat to the entire system of the gender binary, as they expose its radical constructedness.

cannot (and should not) meaningfully be called rape is at the same time enacting and reinforcing patriarchal norms and can be harmful especially to feminine and feminised people. It is this I am studying in the current thesis: sex that is perfectly normal, sex during which nobody is (overtly) harmed, yet sex that is saturated with patriarchal meanings and dynamics.

Sexual Scripts Theory

To operationalise this notion, I am making use of the concept of sexual scripts. Sexual script theory was first formulated by Simon and Gagnon (1986) to offer a sociological alternative to the deterministic theories of sexuality that were dominant at the time (psychoanalysis and biological explanations (Wiederman, 2015: 10)). According to sexual scripts theory, sexual behaviours, including what makes them sexual, “derive from metaphorical scripts individuals have learned and incorporated as a function of their involvement in the social group” (Wiederman, 2015: 7). Sexual scripts can be seen as a cultural syntax for concrete sexual behaviours, akin to how *langue* (language) relates to *parole* (speech) in functionalist linguistics. To conceptualise the relationship between macro-level cultural narratives and concrete actions, Simon and Gagnon differentiate between sexual scripts on three layers: *cultural sexual scripts* are large-scale narratives a social group or society holds about sexuality (Wiederman, 2015: 8). They are determined by collective discourses, including but not limited to art and media, societal institutions like monogamy and marriage, and the law. Due to their overarching nature, sexual scripts on this cultural level must be vague and generic so they can be applied in a large array of actual social situations. In such situations, *interpersonal sexual scripts* (Wiederman, 2015: 8) emerge as a relational concept: individuals interpret, adapt, and improvise based on the cultural material. Finally, sexual scripts exist on an *intrapsychic*, individual level in the form of sexual fantasies and desires (Wiederman, 2015: 8). All three levels are dynamically interrelated: while cultural sexual scripts provide the shared meanings that define certain behaviours, objects, attributes etc. as sexual, they are not accurate predictors of actual behaviour. Rather, sexuality is always subject to spontaneous reinterpretations, innovations, and idiosyncrasies, which in turn shape collective narratives over time. Similarly, individual sexual

fantasies are certainly informed by cultural narratives and interpersonal experience, but their relationship to both is not straight-forward, but rather one of constant change and reimagination.

This theory provides an account of how sexual scripts are produced dynamically on different social levels and why they are collective and thus relatively stable, but still dynamic and open to change and reinterpretation at the same time. It is in line with a critical realist account of ontological emergence, according to which the social world is emergent from human interaction yet irreducible to it (Pratten, 2013). What is considered sexual, what sexual encounters and fantasies usually look like, what is normal or desirable to achieve sexually, with whom, and at what age, etc. – all of this is determined by collectively produced scripts and can thus be subjected to political and sociological analysis. This is where radical feminism and sexual script theory can be merged: sexual scripts theory provides an account of the mechanisms through which sexuality is shaped by shared social tropes, and radical feminism can expose these tropes as patriarchal.

METHODOLOGY

Measuring Patriarchal Sexual Scripts

Combining sexual scripts theory and radical feminism, we can assume that there is an inventory of sexual scripts that are specifically patriarchal, i.e., that manifest masculine dominance and feminine submission. These scripts shape expectations and understandings of sexual intercourse both in the sense that they inspire individual sexual fantasy and imagination, and insofar as they inspire how individuals behave and expect each other to behave in concrete sexual interactions. If, for example, you believe that “women have a hard time reaching orgasm”, you are likely to behave in ways that align with this belief (e.g., not taking the time to understand your female partner’s sexual needs, or, if you are a woman, not communicating your sexual needs clearly because you expect not achieving orgasm anyway). This behaviour might lead people to experience sexual intercourse in which the woman does not have an orgasm, in turn strengthening the belief that “women have a hard time reaching orgasm”. Based on radical feminist descriptions of patriarchal sexual

intercourse, I have derived the following ten items to capture the notion of patriarchal sexual scripts:

Table 1: Items as listed in the survey, with explanations, and their abbreviations in variable names

Item wording	Explanation	Variable name⁶
In a romantic situation between two people, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.	This item expresses the implicit assumption of consent in romantic situations: the belief that explicitly talking about physical intimacy as it is happening can take away from the experience may prevent people from communicating openly around it, thus potentially leading to situations in which consent is not provided.	romance
Most women have a hard time reaching orgasm.	In the patriarchal gender binary, women and men are considered fundamentally different in relation to sexual arousal and satisfaction, with AFAB ⁷ bodies often being considered more “difficult” than AMAB bodies (Frith, 2015: 48ff), resulting in a phallogentric sexuality that neglects female pleasure – leading to the “orgasm gap” (Wetzel et al., 2022) frequently discussed in popular feminism.	female_orgasm
With heterosexual couples, the man is usually on top of the woman during sex.	This item refers to male sexual dominance in the simple form of men being physically above women during sex.	missionary

⁶ To save space, I sometimes chose to abbreviate the items with their variable names, which is why I provide them here.

⁷ The acronyms AFAB (“Assigned Female At Birth”) and AMAB (“Assigned Male At Birth”) are used here to express the fact that people with clitorises, uteruses, and female endocrine systems are interpreted as more complicated than people with penises. While the terms “AFAB people” and “women” refer to different groups of people, it should be noted that they are not independent: I believe that the sexist stereotype of women being complicated and the perception of AFAB bodies being perceived as more complicated are related in the patriarchal imaginary.

<p>When someone tells me they “had sex”, I assume that means penile-vaginal penetration.</p>	<p>This item expresses phallocentrism: sex is defined by penetration (notice also that the concept of penetration itself implies the phallus as subject – it is entirely possible to think of penile-vaginal intercourse as a vagina actively <i>enclosing</i> a penis, but this interpretation is at odds with patriarchal sexuality).</p>	<p>piv</p>
<p></p>	<p>This also features a heteronormative understanding of sex, as for lesbian and gay people, sex usually does not include both a penis and a vagina.</p>	<p></p>
<p>In sex, there is usually a more dominant partner and a more submissive partner.</p>	<p>This item is directly derived from radical feminist theory, for which the dichotomy of (masculine) sexual dominance and (feminine) sexual submission is the defining feature of patriarchy per se. It is formulated here in a gender-neutral way as according to radical feminism, dominance/submission structures are expressions of the same basic principle regardless of the gender identity of the people involved.</p>	<p>domsub</p>
<p>It is a biological need for men to release pressure from time to time.</p>	<p>This is a measure of gender essentialism (i.e., the belief that men and women are fundamentally different). It also locates male sexual desire in the realm of biology, thus potentially providing the ideological grounds for excusing male aggression and veiling the social nature of sexual desire.</p>	<p>bio_need</p>
<p>In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man</p>	<p>This item expresses the expectation of masculine dominance. It is also a more subtle version of items sometimes found on hegemonic masculinity scales, expressing that men should take the lead in social/sexual situations, and that women should be available to their male partners sexually. Further, it</p>	<p>male_pace</p>

to introduce tongue into kissing).	relates to MacKinnon’s discussion of the asymmetry that exists in patriarchal sexuality between initiative and consent: the notion of consent suggests the choice to agree or disagree to someone’s sexual initiative. Even in the ideal, this is different from a relation of mutuality.	
I usually consider a sexual interaction complete when a man ejaculates.	This expresses the focus on male pleasure in sexual interactions and a phallogentric definition of sexuality.	ejaculation
Having sex during (my or my partner's) menstruation seems off-putting to me.	This statement expresses a devaluation of the natural female body. The item is formulated in a gender-neutral way, as some trans and nonbinary people also menstruate, and as for queer women, this item can plausibly refer to both the respondent’s and her partner’s menstruation.	menstruation
It is awkward to talk during sex.	This item expresses some degree of shame or vulnerability people feel during sex. It also hints again to the implication of consent, since people who have this conviction are probably less likely to ask for verbal consent within a sexual encounter.	awkward

It should be noted that these scripts are different from sexual fantasies or desires, in that they do not express what an individual *would like to* happen during a sexual encounter. They are also different from rape myth acceptance, as these statements do not relate to non-consensual sex– they are explicitly supposed to capture how individuals see *normal* sex in patriarchal ways. Finally, they don’t necessarily measure *endorsement* of patriarchy. A non-sexist (even feminist) individual could believe that women have a hard time reaching orgasm, sexual intercourse is commonly defined as penile-vaginal penetration etc. This captures exactly the radical

feminist conviction that under patriarchy, problematic/coercive sexuality and normative sexuality are not disjunct concepts, and even normative sexuality is determined by patriarchal norms that ultimately favour masculine pleasure and masculine dominance in subtle ways. I believe this scale is unique compared to existing scales in the field. At the same time, the statements are formulated in very generic ways that leave much room for personal interpretation. This is to some degree intended, as it is a characteristic of sexual scripts that they must exist in very un-specific ways (at least on a cultural level) in order to allow for individual use and (re)interpretation in concrete social situations. It is also (not unrelatedly) a practical choice, as this research design needs the statement to be as generic and as simple as possible to enhance the chances of many people filling out the survey.

Note also that people who engage in queer sex probably react differently to these statements than straight people. Since I am not asking for the sexual orientation or queerness of my research participants (see my discussion of limitations of this projects for further discussion), I tried to formulate the items in a way that a queer person could still reasonably answer to the questions: if you are a lesbian, you will probably not agree to the statement “I usually consider a sexual encounter complete when a man ejaculates”, simply because there are probably no men present in most of your sexual encounters. Other items are just formulated in a gender-neutral way so that they should also be answerable by people of different sexual orientations, gender identities etc. (e.g., “In sex, there is usually a more dominant and a more submissive partner”).

Additionally, I decided to include four demographic variables: age [numeric], gender [*woman, man, nonbinary, other, prefer not to say*], country of residence [choosing from a list of countries], and student status [*“Are you currently a university student?” – yes; no*]. It was not easy to decide which variables to include here, because there are many factors weighing on this decision: for ethical reasons I chose to avoid collecting any potentially sensitive data related to sexual orientation, queerness, race, etc. However, I did not want to omit demographic data altogether: First, because specifically the age of participants might be a confounding factor

which could influence the results of the analysis in unintended ways. Second, due to my open strategy for response-acquisition, it must be assumed that a diverse group of people may have answered my survey, and I wanted to have the possibility to have some idea about the demographics of my data. Third, I wanted the possibility to conduct a gendered analysis of the data. It is neither my goal to “predict” people’s answers based on their gender nor to “explain” gender as a result of sexuality in a straightforward way. I merely believe that patriarchal sexual scripts, the way they relate to each other, and the discourse they form, can be analysed in a more nuanced way if the self-identified gender of the participants is taken into account.

Feminism, Statistics, and Network Methodology

Obviously, sexual scripts are difficult to observe or measure. This is in part due to their ontological structure as concepts that emerge through human interaction. Further, there are some practical difficulties associated with studying sexual scripts. For example, if I were to try and access sexual narratives through interviews, it is very likely that my positionality as a woman and a feminist researcher would impact the kinds of narratives respondents are willing to produce in my presence. Further, if I were to research sexual scripts on a discourse analytical level, I would miss the radical feminist point that sexual intercourse as a concrete gendered interaction must be taken seriously as a locus of symbolic production. For these theoretical and methodological reasons, I am conducting a quantitative analysis of survey data in my thesis.

Within the field of feminist epistemology, scientific positivism has long been an object of critique (for a systematic discussion of feminist perspectives on science, see Crasnow, 2020). Feminists have argued that the positivist ideals of objectivity and detachment from one’s object of knowledge are flawed epistemological ideals (Haraway, 1988) that reflect an androcentric perspective (Keller, 1985). Feminist theorists have instead proposed alternative epistemological approaches like *situated knowledge* (Haraway, 1988) and *epistemologies of connection* (Hill Collins, 1991: 217), that have led many feminists to favour qualitative scholarship.

I fully share the feminist critique of scientific rationality and recognize the importance of producing scholarship that valorises the lived experience of marginalised people. At the same time, feminists have argued for the importance of feminist perspectives in quantitative research, and there is a growing body of such research that I want to contribute to (see for example Browne, 2010; Else-Quest and Hyde, 2016; Leung et al., 2019; Criado-Perez, 2019; D'Ignazio, 2020; Heilmann, 2021). Statistical tools can be useful to understand the prevalence and nature of (some) gendered phenomena, as I am hoping to show with this thesis. It also allows feminists to access knowledge that might not otherwise be documented – I believe, for example, that it is more likely for a conservative man to fill in a three-minute survey about sex than to agree to a face-to-face interview with a feminist graduate student. Sometimes, distance from and anonymity of one's research participants is an advantage for feminist scholarship, both in terms of what knowledge can be produced and in terms of the ethical implications of this process (see more below).

Furthermore, I believe that existing androcentrism in quantitative sociology can only be combatted by quantitative feminist scholars. In this vein it should be noted that there are different kinds of statistical methods, that correspond to different methodological and theoretical assumptions, and can be used in different ways. It is one of the explicit goals of my thesis to illustrate this point by employing a theoretically sound statistical analysis to feminist ends. Thus, I will be using network modelling to explore the discursive nature of patriarchal sexual scripts.

Most generally, network analysis is used to capture how the elements of a system – in my case statements about sex, but it could also be people, cities, cells, etc. – are related to each other. Within such a system, the statements are interpreted as nodes (also referred to as vertices) and the connections between the nodes are called edges (see the schematic example in figure1). Network analysis can then determine which

statements form communities (“clusters”) of nodes, that will be represented by different colours in my network models (again, see the colours in figure 1, for more details on cluster detection see the section *Methods of Data Analysis*). Specifically, I will be using Gaussian Graphical Models (GGMs), in which edges are modelled after the partial correlations between items (i.e., the correlations

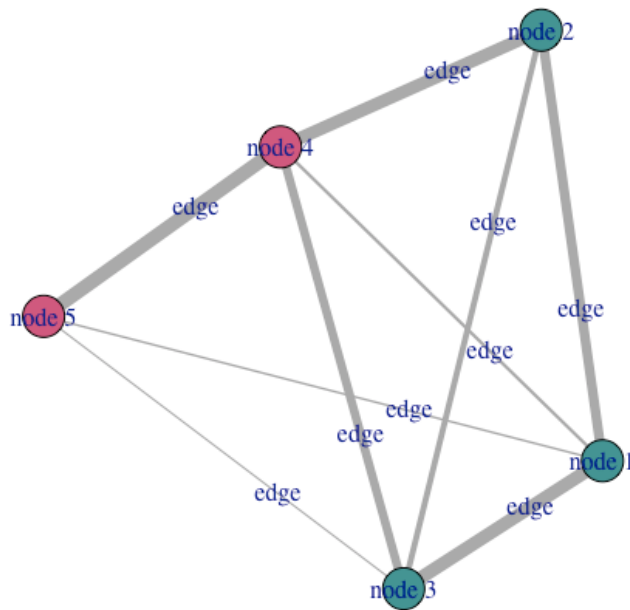


Figure 1: Schematic Network Model

between the two items controlling for all other items in the system). This methodology has recently been popularised in psychology because it provides a more theoretically sound basis for understanding abstract phenomena than similar methods, e.g., factor analysis. The theoretical difference between network and factor models is that factor models reduce the dimensions in a dataset by assuming common causes (“factors”) for observed variables, thus simplifying the structure. A prominent example of this are psychological intelligence tests (see McGrew et al., 2023): A factor model would assume that there is an underlying concept (“intelligence”) that is objectively existent in peoples’ minds and causes different people to reply differently to the items of an intelligence test. This is theoretically very assumptive – what is “intelligence”? How do we know it is a separate entity that exists in peoples’ minds? How can we be sure that “intelligence” is actually what causes people to react differently to an intelligence test? These are epistemological issues that cannot be solved by statistical tools themselves but must be accepted as theoretical assumptions about intelligence – and it is assumptions like these through which inequalities tend to sneak into research: if your underlying concept of “intelligence”

is sexist, your intelligence test will produce sexist results, despite its statistical neutrality.

To deal with this issue, network analysis has been proposed as a statistical method that measures similar structures but with less loaded epistemological assumptions. As previously mentioned, Gaussian Graphical Models use partial correlations to conceptualise how related the different elements in a system are to each other. For this purpose, it is not necessary to assume any underlying causes. Instead, the structure of the network captures the relations in the observed system in a genuinely emergent way. Picking up the example of the intelligence test, a network model of intelligence does not assume “intelligence” as an underlying entity that causes you to behave in certain ways. Rather, we might call you “intelligent” *because* of the way you react to the items of an intelligence test: the concept emerges from the observed variables, not the other way around.

In using Gaussian Graphical Modelling, my research design is inspired by Timothy Luke’s research (so far only available in preprint: see <https://osf.io/preprints/psyarxiv/x5jr3>), who conducts secondary network analyses of data from factor analytical studies about rape myth acceptance. He makes the theoretical argument that for measuring *attitudes* especially, it is not appropriate to assume underlying latent variables like factor analysis does, because this would mean we have to assume some kind of stable belief as an underlying cause of peoples’ responses, which we have little reason to. Instead, he argues that network analysis allows us to conceptualise the items of an attitudinal scale as *discursive expressions* that individuals are momentarily agreeing with in a survey. The network being constructed in this kind of study is thus a network of positions that individuals are currently willing to take in relation to a social discourse. While this approach has been used mainly in psychology – Timothy Luke himself being a social psychologist – I believe that this approach can be especially fruitful in sociological analysis. Its particular strength is that it makes few assumptions about underlying causality and thus provides a quantitative methodological framework that takes seriously the emergent nature of social discourses as represented in individual utterances.

In my thesis, then, I am exploring patriarchal sexual scripts as an emergent concept based on a network of specific kinds of beliefs about sexual intercourse. Since I cannot plausibly assume that there are any underlying entities causing individuals to (dis)agree with statements exemplifying patriarchal sexual scripts, it makes more sense to analyse these statements in a network analytical approach. This is why the ambiguity in the formulation of my items is not a serious threat to my project: If an individual agrees that “women have a hard time reaching orgasm”, I ultimately do not care if they do so because they have read about the orgasm gap or because they have unsatisfying sex personally or because they are anxious about not being able to satisfy their female partners. What matters to me is that the individual is willing to reproduce the patriarchal narrative that “women have a hard time reaching orgasm”. Then, if I get hundreds of people to indicate their willingness to agree with these statements, I should be able to show an emergent network structure of patriarchal sexual scripts as a discursive formation.

Similarly, it is an advantage of network analysis that the strength of a partial correlation does not depend on whether participants agree or disagree to the correlated items: if people that strongly disagree that “in sex, there is usually a more dominant and a more submissive partner” also tend to strongly disagree that “in a heterosexual scenario, the man is usually on top of the woman during sex”, this suggests a strong partial correlation between the items just as much as it would if the person strongly agreed to both items. This is an advantage especially considering my methods of data collection. As I will explain in the following section of my thesis, I am using methods of data collection that mostly target young people and especially students. While I am not attempting to generalize my results to any larger population, it can still be considered useful that network analysis does not emphasize respondents’ total (dis-)agreement with the statements, but rather the relations between item scores.

Methods of Data Collection

I collected an initial sample of $N = 1.045$ responses to my survey. Since GGMs are a comparatively recent method of sociological analysis, there is relatively little information about how sample size affects such analysis. In psychometrics, it is

argued that for networks with small to moderate amounts of nodes (10-30), a sample size of 250 is sufficient (Dalege et al., 2017; Epskamp, 2016). For factor analysis, there are different rules of thumb regarding adequate sample size. Older publications state that 100 is a poor sample size, 200 is acceptable, 300 is good, and 1.000 is excellent (Comrey and Lee, 1992). More recent publications acknowledge the problem of sample size to be much more complex, with some authors recommending an absolute sample size of 400 (Goretzko et al., 2021) while others argue that even small samples can generate good factor solutions based on the factor loadings emergent from the data at hand (de Winter et al., 2009).

The survey was kept concise, with ten items and an additional four questions about basic demographic data (age, gender, country of residence, student status), which means that it took only a few minutes to fill out.⁸ It was possible to skip questions about the patriarchal sexual scripts, but not about the demographic data. To distribute the survey, I used a publicity-oriented strategy, meaning that I made the survey link publicly available and set up no restrictions as to who could fill in the survey (except being over 18 years of age). I mostly attempted to reach university students, because this is a population that is relatively accessible (especially to me as a university student myself), but also opened the survey to the general public to maximise possible respondents. I pursued the following channels of distribution:

- 1) **Survey exchange:** I linked the survey on SurveySwap (<https://surveyswap.io/surveys>), which is an online platform where users can link surveys and get other users to fill out their survey via a credit system (you collect credit on the site by filling out other users' surveys, or you can buy credit, which I did not do). I gained a total of 103 respondents through SurveySwap.
- 2) **Online student networks:** As another strategy of online recruitment, I distributed the survey through different online forums frequented by students. I shared it in the Lund University related Facebook groups "LU International Exchange Students Erasmus Master 2023-2024" (private

⁸ In total, the survey was opened but left incomplete 174 times. Considering that 1.045 respondents did complete the survey, I believe this strategy worked rather well.

group with 5.445 members), Lund Medical Students (private group with 2.453 members) and the general Lund University Students Facebook group (public, 9.739 members). Through this avenue alone I have thus theoretically reached over 17.000 students, although I have no way of knowing how many actual respondents were acquired through this route.

- 3) **On campus advertisement:** I commissioned 500 flyers (see the designs in appendix figure 1) to be printed and put them up in many Lund University buildings and buildings students enter frequently. Three student nations agreed to let me put up my flyers in their buildings. Additionally, since I am myself a part of Kalmar Nation, I shared the survey in their internal members Facebook chat and hung up a flyer in the student housing building Kalmar Västra. Finally, toward the end of the period in which the survey was public, I distributed the leftover flyers around student accommodations.
- 4) **Informal networks/snowball sampling:** Finally, I shared the survey on my personal Instagram and Facebook accounts. I received a lot of support in this area, with ten people that I know of (combined following of over 6.700 people) sharing the survey publicly on their social media, and many more people sharing the link in numerous private group chats. I also received word that the survey link was shared on social media by people I do not personally know, meaning that it is impossible for me to follow even approximately how many people the snowball sampling reached.

Methods of Data Analysis

Data Cleaning, Assumption Checks, and Descriptive Statistics

Before conducting the inferential analysis, data was appropriately cleaned by removing any observations with missing values. Further, I detected multivariate outliers by conducting a χ^2 -test of the Mahalanobis distance. Three observations were

thus removed since they appeared not to follow the overall distribution of the data.⁹ According to de Winter et al. (2009), the desired N for satisfactory factor analysis depends on the factor loadings and the numbers of variables and factors in the model. There is no estimation for 10 variables (only for 6 and 12, respectively). In the case of 12 variables and factor loadings no smaller than 4, a sample size of 186 would be necessary for extracting two factors, and a sample size of 353 would be necessary for extracting three factors. For a data set with 6 variables, the sample sizes for two vs. three factors would be 370 and 1.159, respectively. Following this logic, it seems permissible for me to extract two, maybe even three factors (considering that my sample size almost reaches the limit for three factors with 6 variables, and my model includes 10). Multivariate normality was assessed using the chi²-values vs. the Mahalanobis distance plot (see appendix figure 13). Finally, I assessed factorability using the Kaiser-Meyer-Olkin measure for each factor model. All frequency tables of the demographic variables, as well as the gendered item distributions in the form of frequency bar charts are documented in the appendix.

Partial Correlations and Regression Analysis

In preparation of the analyses of relational patterns between the items, I report the partial correlations between all ten items, controlling for the demographic variables age, gender, country of residence and student status, as well as for the time the answers were recorded, to account for any potential effects of the respondent acquisition strategy. To analyse the effects of gender and age on respondent's reactions to the items, I build a series of multiple linear regression models predicting each of the ten variables. The first models included only the self-identified gender of participants in the form of a dummy variable, using "woman" as the reference category, the second models additionally include the numeric variable age.

Exploratory Factor Analysis

As mentioned above, factor analysis is a method of dimension reduction to simplify a given dataset and understand its underlying structure. This means it extracts a

⁹ These outliers are by definition observations that differ greatly from the overall distribution of the data. Since it is only three out of over a thousand observations that were outliers in this way, removing them can be assumed to have no serious consequences for the analysis of the data.

number of “factors” or underlying variables so that instead of ten variables there are fewer (in my case two) factors that explain as much as possible of the overall variance in the items. I used maximum likelihood extraction (granted the multivariate normality is mostly unviolated) and varimax rotation to return uncorrelated factors.

Considering the effects of participants’ gender on the item scores, I built a series of four different factor models: one initial full model ($N = 1.029$), two models for women ($N = 669$) and men ($N = 321$)¹⁰ respectively, and one binary weighted model ($N = 642$, containing the 321 men and a random selection of 321 women) to account for the larger number of women in the initial sample.

Exploratory Network Analysis: Gaussian Graphical Models

Network analysis is similar to factor analysis at face value insofar as it simplifies the variance structure of the items in a given dataset to recognize patterns. However, it is quite different on a methodological level: while factor analysis simplifies data by reducing the dimensions of measurement, thus summarizing multiple variables into a common “factor” that is assumed as an underlying cause, network analysis visualises interrelations between the items of a dataset (while filtering out small correlations) and summarizes the emergent structure into communities of nodes, also called “clusters”. Gaussian Graphical Models (GGMs) specifically use partial correlation coefficients to build graphical representations of how strongly different variables relate to each other. Thus, each edge of the network represents the correlation between two items controlling for all other items in the network.

In my exploratory network analysis, I fit a weighted, undirected GGM to my data using LASSO regularization to reduce complexity in the model (see Burger et al., 2023; Nitin et al., 2019; Epskamp and Fried, 2018). My R-script includes the following steps¹¹: I computed the partial correlation matrix from the data and regularized it using the graphical lasso algorithm from the *glasso* package. I chose an

¹⁰ Unfortunately, there are not enough nonbinary people or people who chose the gender options “other” or “prefer not to say” for me to conduct separate analyses for these groups.

¹¹ Timothy Luke, whose paper I am using as methodological orientation, uses the *qgraph* package in R. However, this package has since been deprecated, which is why I used the packages *glasso* and *igraph* instead.

appropriate regularization parameter λ in an iterative process based on the Bayesian Information Criterion (BIC) as well as on the visual appearance of the networks¹²: a bigger λ leads to more regularization, which leads to a smaller – hence, better – BIC (since the BIC penalizes more complex models), but also to fewer edges showing up in the network model. Thus, while too little regularization can make the models hard to interpret and also less precise, too much regularization will suppress relevant edges, thus defeating the point of the analysis. After some iterations, I settled for $\lambda = 0.1$.

I then created an *igraph* object based on the regularized partial correlation matrix, introduced a threshold removing small edge weights (smaller than 0.01) and specified the model to exclude loops (i.e., items' correlations with themselves). Thus, my model can be said to only include non-spurious, significant edges. Further, I used the *fast greedy modularity optimization algorithm* (also from the *igraph* package) to detect the community structure of the networks (Kolaczyk, 2020: 60; Clauset et al., 2004). I then created the visual network models, colouring the nodes according to the previously generated cluster structure and representing edge strength visually through the thickness of the edges. For visualization I used the *Fruchterman-Reingold algorithm*, which is one of the most common tools for visualising network graphs (Kolaczyk, 2020: 32). It is classified as a *spring-embedder* method, which uses the analogy of the relational structure of a network model to physical models, associating vertices with balls and edges with springs.

Finally, I calculated some global as well as node-specific metrics to describe the model in more detail. Globally, I calculated the density of the model (meaning the percentage of possible edges that was realised in the empirical model) and the clustering coefficient (this does not have a straightforward interpretation but can be used to compare the amount of clustering between networks). On the level of

¹² This logic is based on Epskamp S and Fried EI (2018) A Tutorial on Regularized Partial Correlation Networks. *Psychological Methods* 23(4): 617-634., who use the same procedure except that they use the EBIC (extended BIC) rather than the regular BIC. However, the only difference between EBIC and BIC is the inclusion of an additional hyperparameter that controls how much the EBIC favours simpler models. Considering that all of my models only include ten nodes each and thus are not overly complex, I have decided to use the BIC instead, which is the functional equivalent of setting the hyperparameter to zero.

individual vertices, I conducted a centrality analysis using three separate centrality measures: *degree centrality* counts the edges that an individual node borders on. *Closeness centrality* captures how “close” a node is to all other nodes on average (based on the inverted edge weights interpreted as distances). Finally, *betweenness centrality* expresses how important a node is in connecting other nodes by counting on how many shortest paths between other nodes the vertex in question lies. Together, these values of centrality should provide a nuanced analysis of the internal structure of the network.

Similarly to the factor analysis, I repeated this network modelling process for four datasets (one initial full model (N = 1.029) one with only women (N = 669), one with only men (321) and one weighted full model (N = 642). All models are reported on separately and compared in order to uncover gender specific structures in the emergent patterns of patriarchal sexual scripts.

Ethical Statement

Before discussing the results of my analysis, I want to briefly address the issue of research ethics as it applies to this project. Since I am researching sexual scripts which are ultimately societally shared discursive tropes, anyone could potentially be a participant in this project. Thus, it is not necessary for me to collect any sensitive data or any identifying data at all. My methodology was purposefully designed to maximize this advantage, insofar as I took a number of measures to assure my participants’ anonymity: the survey did not include any open questions so that participants did not have the opportunity to disclose any personal details (the only field that people had to manually enter data into was the *age*-item, and this was set so that only numbers could be entered). Further, I contacted the administrator of Lund University’s survey tool Sunet survey which I used for this project to inquire whether it would be possible in any way or for anyone to access any personal data (such as IP-addresses) from filling out the survey. The administrator assured me that such information could not be extracted by me or the university or any third parties, making the survey completely anonymous. Despite this guaranteed anonymity I chose to keep the data on a non-synchronized, password protected folder on my laptop and a single copy on an encrypted USB drive. Further, I set the limit

from which I could see the responses to my survey to 100, making it impossible for me to track individual responses as they were coming in. I thus believe to have done my due diligence in protecting the anonymity of my research participants as fully as possible.

Informed consent was obtained through a consent form that appeared before the survey when clicking the link (see the form as displayed in appendix figure 2). This form was modelled based on the consent form template provided by Lund University's Graduate School at the Faculty of Social Sciences. It features my name and association with the department of Sociology at Lund University, as well as a short description of my thesis project. It further informs participants that no personal or sensitive personal data is collected in the survey and refers them to Lund University for any inquiries about data processing. While the form was kept in neutral language to not influence the participants' responses, it mentioned that the thesis uses feminist theory, thus informing participants about the kind of project they were engaging in. Further, the flyers I mainly used for recruiting respondents (see appendix figure 1) already introduced possible participants to the project by stating my name, the fact that this survey is part of a master thesis at the department of sociology, and a very brief description of the topic. Participants had the choice to skip items about patriarchal sexual scripts (the demographic data was mandatory to fill out but featured a "prefer not to say" option for the questions about country of residence and gender identity). Finally, I avoided any questions relating to sexual violence in my survey to avoid triggering respondents, and all statements were formulated as generically as possible to make the survey inclusive and accessible to all possible participants (see more about this issue in the limitations section).

RESULTS

Descriptive Statistics

My data collection returned an initial sample of $N = 1.045$ responses. I removed eleven observations with missing values in the sexual scripts items, as well as two observations where respondents indicated being less than 18 years of age, and three multivariate outliers leaving me with a final sample size of $N = 1.029$. All

demographic frequency tables can be found in the appendix (tables 1–4). About 48.0% (494 people) of my sample indicated currently living in Sweden. The second most frequent country of residence was Germany (192 (18.7%)), followed by Belgium (67 (6.5%)). My survey reached respondents in a total of 42 different countries, with all continents being present at least once. However, most participants (967 or 94.3%) indicated living in Europe. 65.0% of participants indicated identifying as women (669) and 31.2% identified as men (321). Additionally, 27 people indicated identifying as non-binary (2.6%), and 5 people (0.5%) and 7 people (0.7%) selected the gender categories “prefer not to say” and “other”, respectively. The majority of participants (763 or 74.1%) were university students at the time of filling out the survey. The age distribution of the data further indicated that most participants were young people: 55.5% (571) were between 21 and 25 years old, and young adults aged 18-30 accounted for 88.3% of the total sample.

Item distributions vary considerably. Participants overwhelmingly disagreed that asking for consent can ruin the mood of a romantic situation and that talking during sex is awkward, and mostly disagreed that they would expect a man to determine the pace of a heterosexual encounter and that they consider a sexual interaction complete with ejaculation. People mostly agreed, on the other hand, that women tend to have trouble reaching orgasm, that “having sex” usually refers to penile-vaginal penetration, that there is usually a more dominant and a more submissive partner during sex, that it is a biological need for men to release sexual pressure from time to time, and that men are usually on top in heterosexual encounters. Finally, the item regarding sex during menstruation did not clearly show a tendency of overall agreement or disagreement. All gendered frequency charts can be found in the appendix (figures 3–12).

Partial Correlations

Almost all pairs of items are significantly correlated at the 0.1%-level when controlling for all other items, as well as for answer date/time, country, gender, age, and student status. The only exceptions are the partial correlations between the items “in a romantic situation between two people, if one person asks the other ‘can I kiss you?’, that takes away from the romantic mood” and “with heterosexual

couples, the man is usually on top of the woman during sex”, as well as “it is a biological need for men to release sexual pressure from time to time” and “it is awkward to talk during sex”. However, both of these were still significant ($p = 0.001$ and $p = 0.005$, respectively). All correlations were relatively small. The strongest correlation (0.33) existed between the items “in sex, there is usually a more dominant and a more submissive partner” and “In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter”, which could be read as an indication that respondents who are likely to associate sex with power dynamics are also likely to view these power dynamics as gendered. The full table of partial correlations can be found in the appendix (table 5).

Regression Analysis

Seven out of ten items were significantly predicted by gender in some way (a full table containing the regression results can be found in appendix table 6). Specifically, people who identified as men were more likely than women to agree that asking for a kiss can ruin a romantic mood, that sex usually means penile-vaginal penetration, that there is usually a more dominant and a more submissive partner in sex, and that it is a biological need for men to release sexual pressure from time to time. Men were on the other hand *less* likely than women to agree that women have a hard time reaching orgasm and that they consider a sexual interaction complete with ejaculation.

Nonbinary people were significantly less likely than women to agree that sex usually means penile-vaginal penetration, that men usually determine the pace of a sexual encounter, and that sex usually ends with ejaculation. Further, people who selected the “other” category were also significantly less likely than women to equate sex with penetration, to agree that sexual release is a biological need for men, that men usually determine the pace of a sexual encounter, and that sex usually ends with ejaculation. The fact that the gender categories nonbinary and “other” yield significant effects at all is remarkable considering the small number of such individuals in the dataset. This means that nonbinary people and those who identify as “other” must have unanimously and strongly disagreed with the statements in question.

These results suggest that people's willingness to agree to patriarchal sexual scripts is gendered, but not in a straightforward way. While men are more likely than women to agree to four out of ten statements (*romance, piv, domsub, bio_need*), women were more likely than any other gender group to agree that women have a hard time reaching orgasm and that sex is complete at ejaculation. People who identified outside of the binary were significantly less likely to agree with four (three for people who identified as nonbinary specifically) out of the ten items. On the other hand, some items were not significantly gendered in any way: agreeing that men are usually on top of women during heterosexual, that sex during menstruation is undesirable, and that talking during sex is awkward is equally distributed across gender categories.

Further, age significantly predicted six out of ten items. With higher age, participants were *less* likely to agree that women have a hard time reaching orgasm, that the man is usually on top of the woman in heterosexual interactions, that sex usually means penile-vaginal penetration, and that there is usually a more dominant and a more submissive person during sex. Older people were increasingly *more* likely to agree, however, that asking for a kiss in a romantic situation can ruin the mood, and that it is a biological need for men to release sexual pressure from time to time.

Two of the items (*menstruation* and *awkward*) were not significantly predicted by either age or gender. Finally, it should be noted that none of the models built in this analysis have a particularly strong explanatory power (none explained more than 10% of the overall variance in the item). This is not surprising considering the simplicity of the models, but it needs to be kept in mind when interpreting the effects of age and gender on the item distributions.

It should also be noted that due to the high number of regression models and predictors that I have run for this analysis, there might be some issues with multiple hypothesis testing (Lehmann, 2022: 405ff), which increases the risk of generating

false positives. However, since almost all relevant *p-values* are smaller than 0.001, we can assume that this is not a severe problem in the current case.¹³

Factor Analysis

Initial Full Model (N = 1.029)

Multivariate normality seemed to be mostly unviolated (see appendix figure 13) The rule of thumb that Eigenvalues be greater than one suggests extracting three factors (see appendix table 7) that cumulatively explain 28.6% of the total variance in the data. The Scree-plot, however (see appendix figure 14) suggests extracting only two factors. Choosing the more conservative of the two indicators, I believe it would be more appropriate to extract only two factors under these circumstances (see the rotated factor matrix in appendix table 8), which together explain 20.8% of the overall variance. According to the Kaiser-Meyer-Olkin measure, factorability was sufficient (KMO = 0.80, the conventional threshold is 0.6).

Factor one in this model was associated with the items *missionary* (loading = 0.54), *domsub* (0.5), and *female_orgasm* (0.41). Combining the notions that men are usually on top of women in straight sex and that sex tends to involve a power imbalance seems to suggest that the underlying factor captures a notion of men's dominance, which it also associates with women's lack of sexual satisfaction.

Factor two is associated with the items *bio_need* (0.53), *romance* (0.43), and *piv* (0.43). This seems to capture a biology-related or even phallogentric idea of sexuality. The romance item might seem slightly less fitting to this theme at face value, but it could be hypothesized that a more biological and less relational/affective view of sex is associated here with discomfort with explicit communication of romantic or sexual desires.

Gendered Model 1: Women (N = 669)

Again, Eigenvalues were greater than one for the first three factors (see appendix table 9), but the scree-plot indicated the extraction of only two factors (see appendix

¹³ A common method to deal with the issue of multiple hypothesis testing is the Bonferroni-correction of p-values, see Armstrong RA (2014) When to Use the Bonferroni correction. *Ophthalmic Physiol Opt* 34(5): 502-508. However, since most p-values are already low in my case, I have decided not to use this correction here.

figure 15), cumulatively explaining 22.6% of the overall variance. Factorability for this model is provided (KMO = 0.78). Factor one was associated with the items *domsub* (0.58), *missionary* (0.56), and *male_pace* (0.42) (see appendix table 10). Even more clearly than in the full model, the underlying factor seems related to masculine dominance, as all three items are related to the idea of a power dynamic in sex (two of them specifically putting men at the top of this power dynamic).

Factor two was associated with the items *ejaculation* (0.51), *piv* (0.47), *romance* (0.43), and *bio_need* (0.42). Similarly to the initial full model, the second factor seems to capture a notion of sex as biological or phallic (as this includes a focus on ejaculation, penile penetration, and men's biological needs).

Gendered Model 2: Men (N = 321)

Again, the Eigenvalues were above one for the first three factors (see appendix table 11), but the scree-plot suggested only extracting two factors (see appendix figure 16) that explained a cumulative variance of 23.61%. Factorability was provided (KMO = 0.79). Factor one (see appendix table 12) was associated with the items *piv* (0.50), *male_pace* (0.49), *missionary* (0.46), *domsub* (0.45), and *romance* (0.42). This factor is notably different from the first factor in the initial full model and the model for women only. While it does feature the three dominance-related items, it also features the items related to penetration and asking for a kiss. This could suggest that for people who identify as men, the dominance-related aspects and the biology-related aspects of sexuality are more closely related: Men who define sex as penetration are more likely to think of (themselves or other) men as sexually dominant and are less likely to integrate explicit communication into their idea of romance.

Factor two was associated with the items *ejaculation* (0.47), *menstruation* (0.47), and *awkward* (0.47). This is also quite different from the first two models, as it combines the focus on ejaculation with discomfort around menstruation and communication during sex. It could be hypothesized that this factor captures something like general discomfort with sexuality or sex-negativity: discomfort with talking during sex, discomfort with menstruating bodies, and not wanting to engage in sexual activities once one has reached orgasm. Another possible interpretation

could be that this factor is related to male homosexuality, in that gay men are probably likely not to want to engage with the idea of having sex with a menstruating person, and that in sex between two people with penises it might make more sense to consider sex done with ejaculation.

Binary Weighted Model (N = 642)

Again, the Eigenvalues suggested extracting three factors (see appendix table 13), but the scree plot only suggested extracting two (see appendix figure 17), explaining 25.19% of the overall variance. Factor one (see appendix table 14) was associated with the items *domsub* (0.53), *male_pace* (0.51), *piv* (0.51), *missionary* (0.47), and *bio_need* (0.45). This factor combines the dominance related elements, and the biology/penis related elements present in the other factor structures, suggesting there is ultimately one underlying belief in something like phallic dominance.

The second factor was only associated with the item *female_orgasm* (0.98). It seems quite surprising that this item seems to express its own separate concept. This suggests that although the notion that women tend to lack sexual satisfaction is related to the ideas of sexual power imbalance for women, this is not true regardless of gender.

Factor Analysis Summary

Masculine dominance and the biological nature of sexuality appear as underlying factors in the initial as well as the women's model. In the men's model, the first factor seems to combine these two elements, thus capturing something like phallic dominance, i.e. combining a focus on penile penetration with masculine sexual dominance. Further, there is a factor expressing discomfort around sex in the men's model only. Finally, in the binary weighted model, the item about women's orgasm constitutes its own factor. Thus, the central concepts influencing peoples' response behaviours seem to be masculine dominance (for men especially combined with a phallogentric focus), a biological view of sex, sexual discomfort and (lack of) women's pleasure, as well as one large factor combining masculine dominance and phallogentrism.

Network Analysis

Initial Full Model (N = 1.029)

In the network built from the initial full dataset, approximately 46.7% of all possible edges are realised, the clustering coefficient is 0.45, and the BIC = 167.63. A comparison of all network model metrics can be found in appendix table 19. The network shows three clusters as depicted both in the network graph in figure 2 and table 2. This structure is similar to the factor structure revealed in the previous analysis in that the items *missionary*, *domsub*, and *female_orgasm* (cluster/factor 1), and *bio_need*, *piv*, and *romance* (cluster/factor 2) are grouped together, respectively. However, there are some notable differences: in the network analysis, the items *male_pace* and *ejaculation* are also grouped into the first cluster.

Table 2: Clustering Structure of the Initial Full Network Model (N = 1.029)

Cluster 1	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
Cluster 2	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
Cluster 3	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>awkward</i>	“It is awkward to talk during sex.”

Extraction: fast greedy modularity optimization algorithm

Further, the items *menstruation* and *awkward* emerge as a third cluster that is especially far removed from the rest of the network. The centrality analysis yields that for this model, the items *piv* and *ejaculation* are especially central¹⁴: *piv* has the highest degree centrality of the network, which means that it is connected to more items than any other one item. *Ejaculation* on the other hand has both the highest closeness centrality and the highest betweenness centrality. This means that it is especially important in connecting other items to each other – for example, agreeing that sex usually means vaginal penetration and agreeing that women have a hard time reaching orgasm seems to be mediated by considering sex to end with ejaculation.

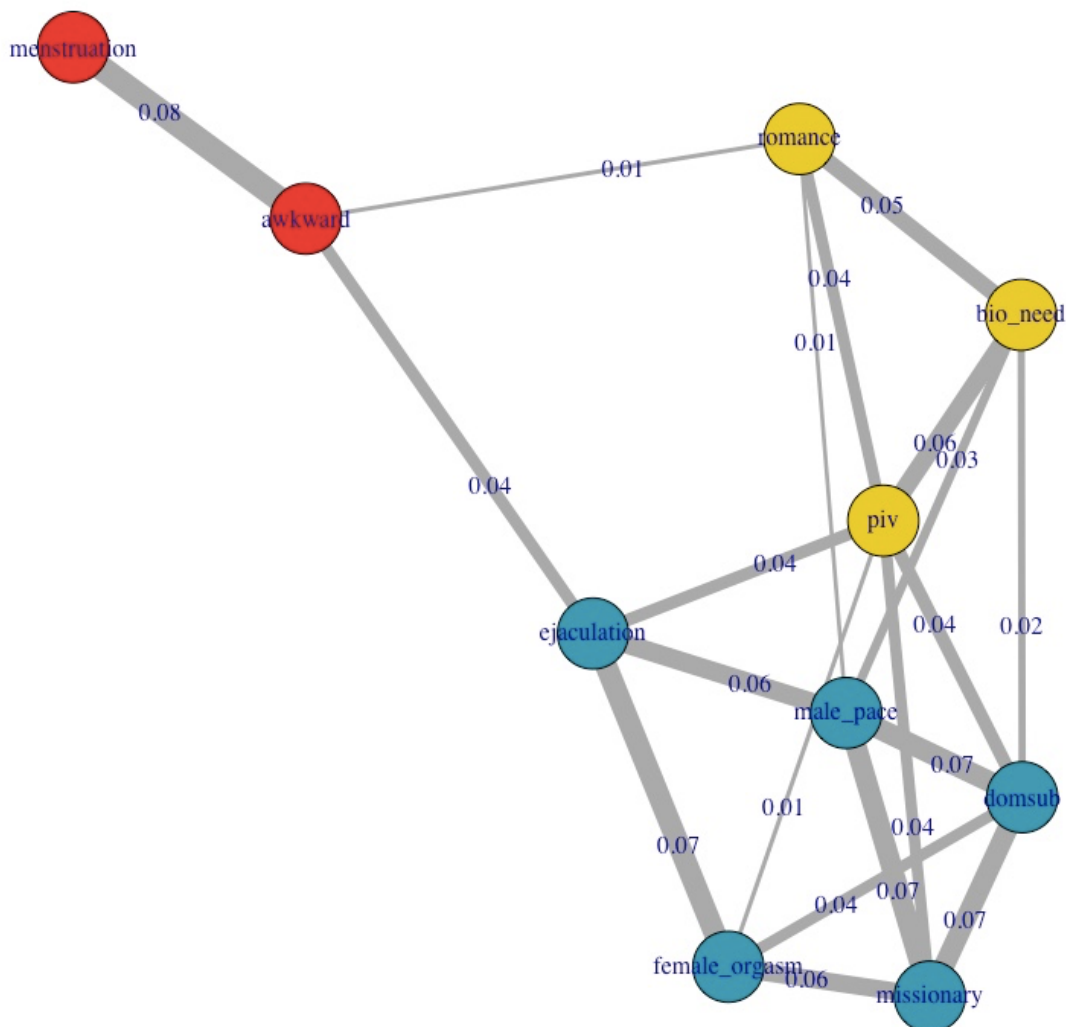


Figure 2: Initial Full Network Model ($N = 1.029$)

¹⁴ A table including all centrality measures for all models can be found in appendix table 19.

Within this model, none of the three dominance-related items seems to be especially central (except for the *male_pace* item, which does have comparatively high scores on all three centrality measures). However, they are all three strongly interconnected, and they do also show strong connections to several other items, especially *female_orgasm*, *ejaculation*, and *piv*.

Gendered Model 1: Women (N = 669)

In the model including only people who identify as women, 51.1% of all possible edges are realised, the clustering coefficient is 0.55, and the BIC is 171.77, thus indicating a slightly worse fit than the initial model. The clustering structure is depicted in fig. 2 and table 3. Again, there are some differences and some similarities compared to the factor analysis of the same dataset. What both analyses have in common is that for the subset of women, the three dominance related items appear as a distinct cluster.

Table 3: Clustering Structure of Gendered Model 1 (Women only, N = 669)

Cluster 1	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>awkward</i>	“It is awkward to talk during sex.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
Cluster 2	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
Cluster 3	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”

Extraction: fast greedy modularity optimization algorithm

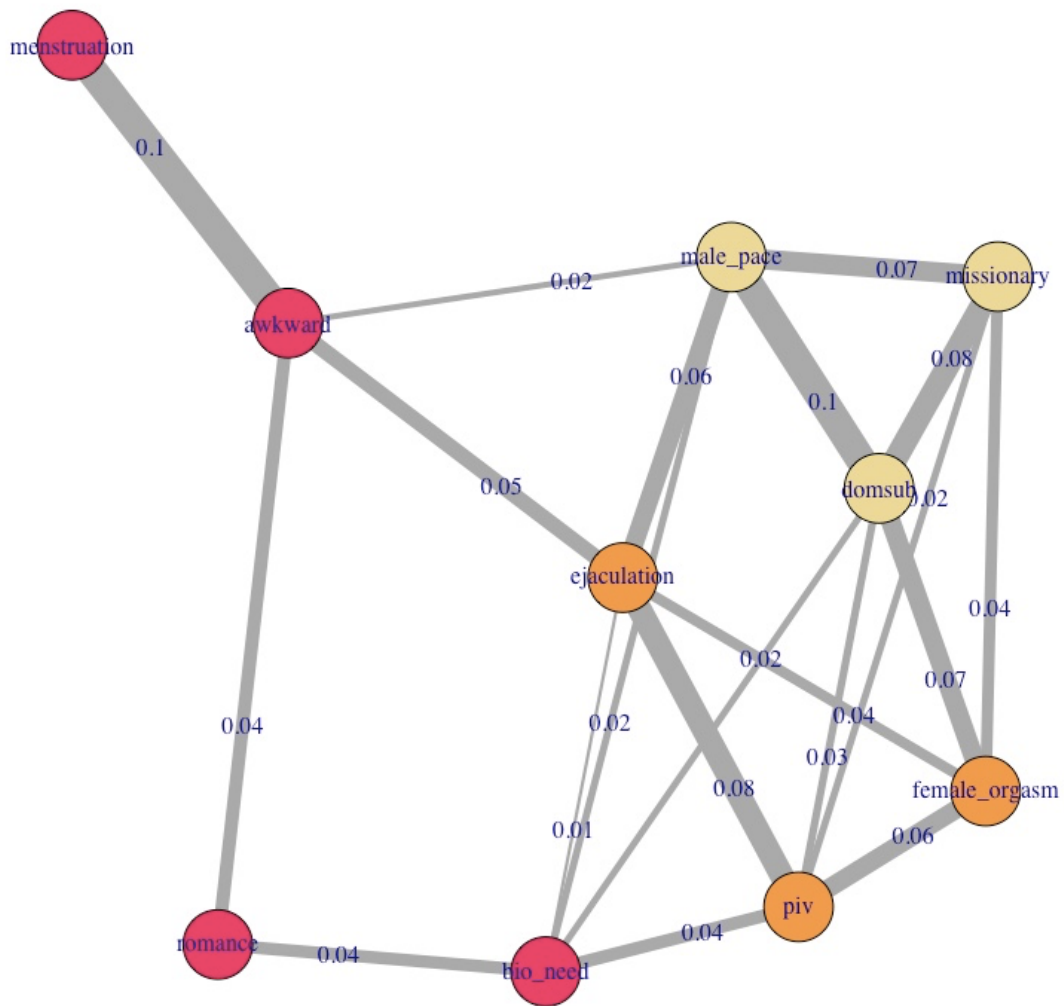


Figure 3: Gendered Network Model 1 (Women, $N = 669$)

The grouping of the other two clusters is, however, notably different from the results of the factor analysis. The second cluster includes the items *ejaculation*, *piv*, and *female_orgasm*. In the factor analysis, the items *ejaculation* and *piv* were instead grouped together with the items *bio_need* and *romance* – which the network analysis can explain to some degree: in the network, all five items are spatially relatively close together, but we can see that *romance* is not directly related to the items *ejaculation*, *female_orgasm* and *piv*, but that instead its connection to these items is mediated by the item *bio_need*: individuals who are uncomfortable with romantic communication are likely to also have a phallogentric view on sex only if they also associate sex with biology. Thus, the relational pattern as visible in the

network model returns genuine connections between the items *ejaculation*, *female_orgasm*, and *piv*. Taken together, the statements that sex ends with ejaculation, that women tend to have a hard time reaching orgasm, and that sex is defined by penetration seem to capture a biological and more precisely phallic focus of sexuality. In this sense it is understandable that the belief that sexual release is a biological need for men is closely connected to this cluster. However, it is related to the belief that women have a hard time reaching orgasm only through the item about penetration: women who agree that sex is a biological need for men are only also likely to agree that women have a hard time reaching orgasm if they associate sex with penetration.

The third cluster groups together the items *menstruation*, *awkward*, *romance*, and *bio_need*. However, the items in this cluster are all comparatively far apart from each other and are only transitively related to each other. This might suggest that rather than showing a genuine third cluster, this structure captures the remaining items that are less central to the overall network. Specifically, the items *menstruation* and *romance* are only intermediately related to other nodes outside the third cluster, making them apparently less relevant to the model.

The centrality analysis for this model reveals that the item *ejaculation* is the most central one: While it has the same degree centrality as four other items, it has both the highest closeness centrality and the highest betweenness centrality. This means it is both central in the sense that it is relatively close to all nodes of the network and in the sense that it mediates a lot of relations between other node pairs. Thus, women who agree that sex is usually complete when a man ejaculates tend to show more willingness overall to reproduce patriarchal sexual scripts – and the focus on ejaculation seems more influential to their overall agreement to patriarchal sexual scripts than other factors such as their belief in masculine dominance or their implicit assumption of consent.

Gendered Model 2: Men (N = 321)

In the model I built from the dataset only including people who identified as men also, 51.1% of possible edges were realized, and the clustering coefficient was 0.47, indicating slightly less clustering than in the model of women. The BIC was 154.85,

meaning the model fit was slightly better than that of the previous two models. Again, the network model revealed a different relational structure from the factor model: In the factor solution, there is one big factor which includes the items *piv*, *male_pace*, *missionary*, *domsub*, and *romance*. It should be noted especially in comparison to the network model that the item *bio_need*, which is spatially closely connected with the items of this factor in the network, is not included in the factor. Further, the structure that this factor captures is split into two clusters in the network analysis: one cluster includes the items *male_pace*, *bio_need*, and *romance*, and the second cluster includes the items *piv*, *domsub*, and *missionary*, as well as the item *female_orgasm*.

Table 4: Clustering Structure of Gendered Model 2 (Men only; $N = 321$)

Cluster 1	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
Cluster 2	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
Cluster 3	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>awkward</i>	“It is awkward to talk during sex.”

Extraction: fast greedy modularity optimization algorithm

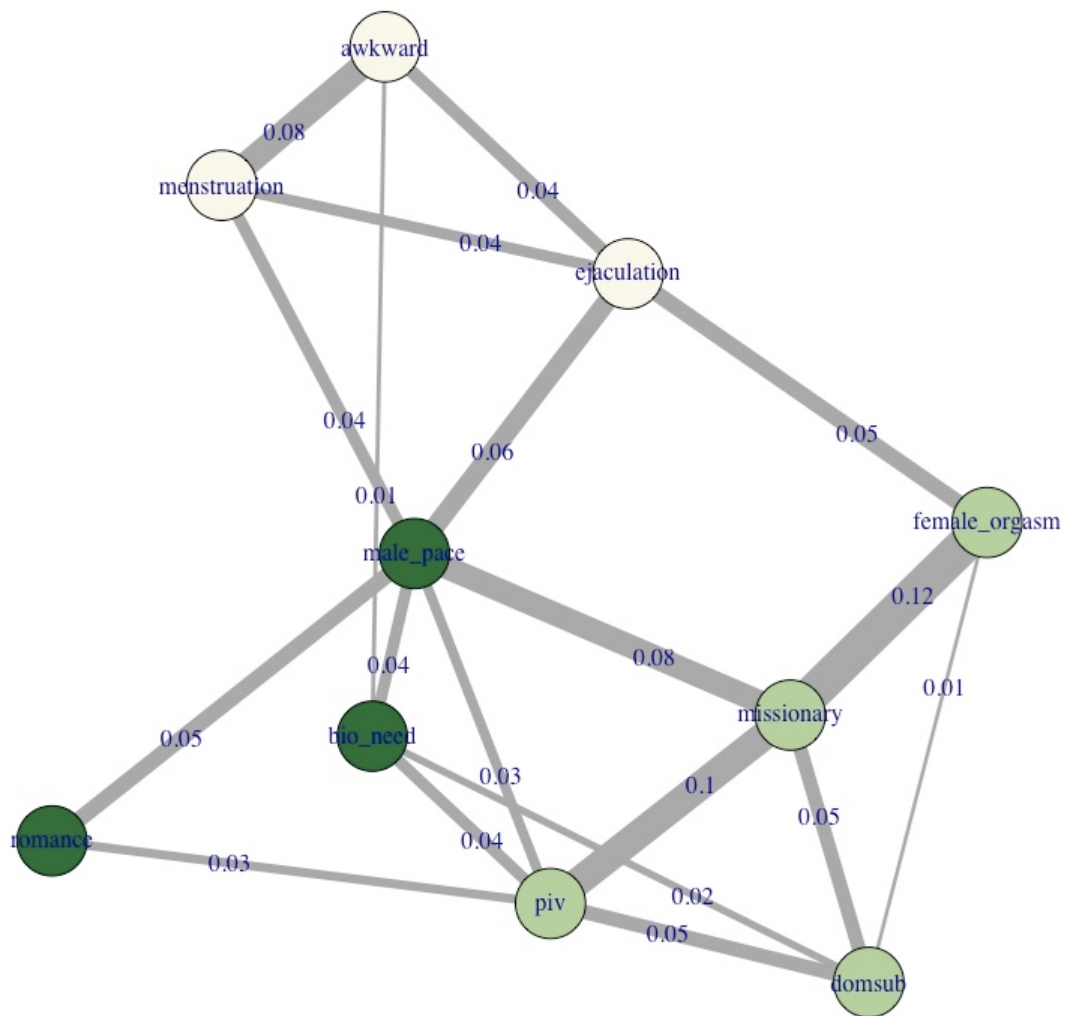


Figure 4: Gendered Model 2 (Men, N = 321)

These relational patterns are notably different from the structures in the full and women’s models: In the women’s model, the three dominance related items and the three biological/phallic items were grouped together respectively. In this model, the items *missionary* and *domsub* are grouped together with the items *female_orgasm* and *piv*, while the *male_pace* item is in a different cluster with the items *bio_need* and *romance*. This suggests that people who identify as men connect the different aspects of patriarchal sexual scripts somewhat differently than those who identify as women. The connections between the items *male_pace*, *bio_need*, and *romance* seem to suggest something like masculine initiative as a common theme: men are seen to have a natural sex drive and they are assumed to determine the pace of a

sexual encounter. Further, the belief that asking for a kiss in a romantic situation might also be associated with masculine initiative in the sense that if a man believes that asking for a kiss can ruin the moment, he might be inclined to just initiate the action under the implicit assumption of consent unless specified otherwise.

The second cluster features especially strong connections between *female_orgasm* and *missionary*, as well as between *missionary* and *piv*. This cluster seems to portray something like “standard” sex, conservative sex, or heteronormative sex, in that it associates penetration with the missionary position (the man lying on top of the woman) and with a power imbalance – albeit less strongly. In this context it is also interesting that the item *male_pace* (the third item related to sexual dominance) is quite strongly related to the *missionary* item, but not to the *domsub* item – this correlation is only mediated through the missionary item.

Finally, the statements that sex during menstruation is off-putting, that talking during sex is awkward, and that sex usually ends with ejaculation form a third cluster. This might be assumed to capture something like general discomfort with sexuality: the belief that sex usually ends with ejaculation (especially for men) might indicate a somewhat instrumental understanding of sex, which is complemented by discomfort with talking about sex openly and discomfort with the menstruating body.

Centrality analysis reveals that for men, the item *male_pace* is most central to the network according to all three measures. Thus, the belief that men are expected to determine the pace of a sexual encounter through showing initiative is especially indicative of men’s overall agreement with patriarchal sexual scripts. Here it might also be possible that men – since they are the subject of this statement – read *male_pace* less as an expression of masculine dominance and more of a statement about gendered expectations that they feel obliged to meet in the context of a sexual encounter.

Binary Weighted Model (N = 642)

The binary weighted model includes all men as well as an equal number of randomly selected women to account for the bigger number of women in the initial

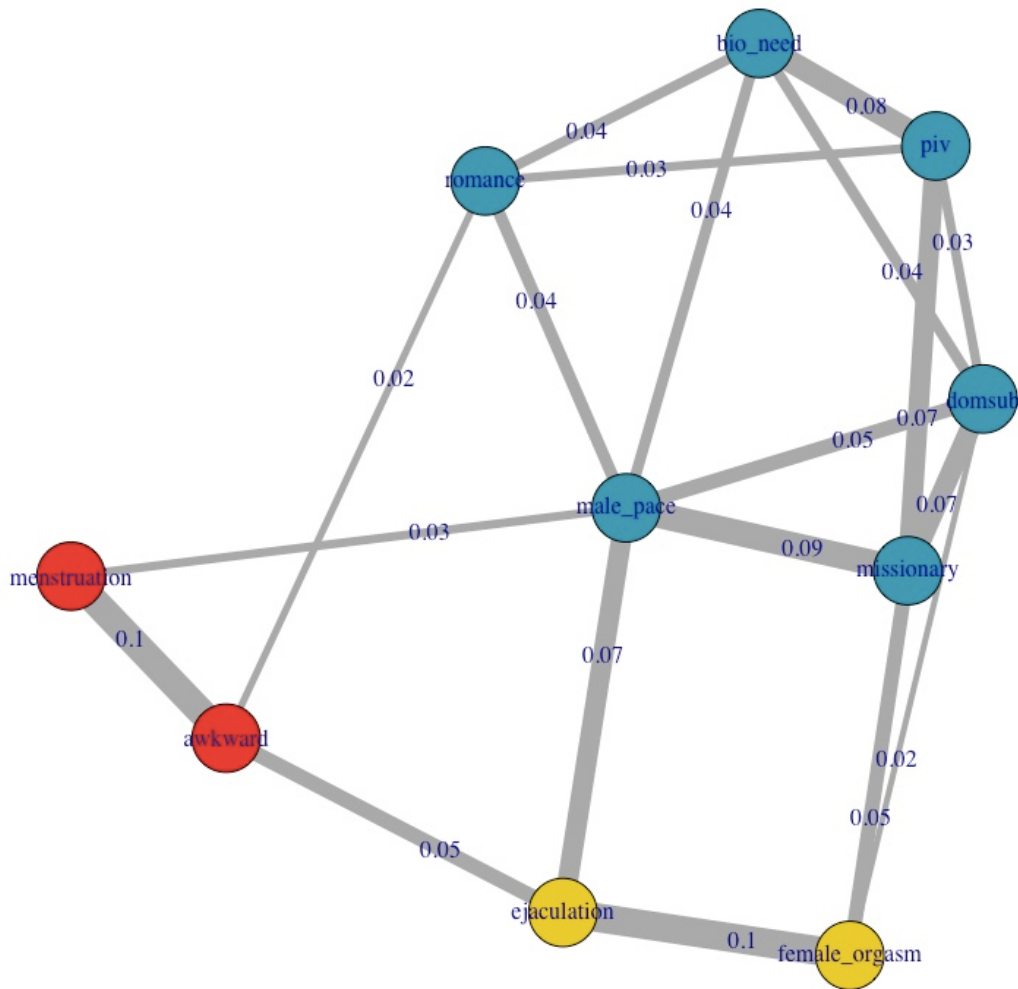


Figure 5: Binary Weighted Model ($N = 642$)

sample. This excludes people who identify outside of the gender binary. The number of these participants is too small to build an interpretable network model, which is why we must stick to the tentative regression analysis as explained above. In the weighted model, 46.7% of all possible edges are realized and the clustering coefficient is 0.41, which is the smallest out of all the models. The BIC is 157.9. In this model, most of the items are part of one big cluster (*dom-sub*, *male_pace*, *piv*, *missionary*, *bio-need*, and *romance*), which is also in line with the factor analysis (where the first factor includes all of these items except for *romance*). This includes most of the items that were clustered into the different groups relating to masculine dominance, focus on male pleasure, assumption of male initiative, and conservative sex into one big group, which can be taken as evidence that – despite gendered differences in how this is configured – many aspects of patriarchal sexual scripts seem to largely work together as a coherent narrative. Further, within this cluster,

two substructures can be visually distinguished based on the spatial distance between the nodes. In this subgrouping, the three dominance related items *domsub*, *missionary*, and *male_pace* emerge as a strongly related triad. The other triad consists of the items *bio_need*, *piv*, and *romance*. This integrates the focus on biology/phallic pleasure with the connotation of male initiative.

Table 5: Clustering Structure of Binary Weighted Model ($N = 642$)

Cluster 1	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
Cluster 2	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
Cluster 3	<i>awkward</i>	“It is awkward to talk during sex.”
	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”

Extraction: fast greedy modularity optimization algorithm

The items *menstruation* and *awkward* are spatially distinct from the rest of the group, which has been a tendency throughout all models. Interestingly, the items *ejaculation* and *female_orgasm* are similarly differentiated from the rest of the model, forming their own cluster. This cluster is obviously orgasm-themed, explicitly relating the focus on male sexual release with the lack of female sexual release.

Further, the centrality analysis shows that the item *male_pace* is most central to the network in terms of all three centrality measures. Thus, overall, when

controlling for the overrepresentation of women in the original dataset, the expectation that a man usually determines the pace of a sexual encounter is the best indicator of agreement to patriarchal sexual scripts – it is connected to most other items, it is the closest to all other items on average, and it is structurally important in mediating many other interrelationships between nodes.

Network Analysis Summary

Overall, there are four loosely defined and interrelated themes that figure differently throughout the different models. The first and most consistent theme seems to be related to *sexual discomfort*. It integrates the expressed dislike of engaging sexually with menstruating bodies and the expressed awkwardness of talking during sex. Depending on the model, there are also more items related to the theme. People who identify as men tend to also associate this with the belief that sex is complete at ejaculation, which fits into the idea of discomfort: men who consider sex done with men's (maybe meaning their own) orgasm might have an instrumental view of sex as something that leads to the goal of sexual release but that you do not want to overly indulge in or talk about. People who identify as women on the other hand tend to associate with this theme the idea that asking for a kiss can ruin a romantic mood and that sex is a biological need for men. This is interesting because the statements that talking during sex is awkward and that asking for a kiss can ruin a romantic mood are only grouped together like this in the women's dataset (I was expecting these items to always be closely related as they both express discomfort with talking). Thus, men apparently rate talking differently in situations they consider sexual vs. situations they consider romantic, which seems to not be such a salient distinction for women. Women further associate sexual discomfort with a naturalized masculine sex drive, which could indicate that women who locate sexuality more in the realm of the biological/natural are more likely to be uncomfortable with talking about or during it. However, I want to stress again that these items for women are not very closely related, which means that the coherence of this cluster should not be overrated.

The second emergent theme relates to *sexual pleasure*, specifically orgasm, and penetration. In the binary weighted model, this encompasses only the

statements that most women have a hard time reaching orgasm and that sex usually ends with ejaculation. It further involves the idea that sex is defined by penetration specifically for people who identify as women, which associates penetrative sex with a focus on men's pleasure.¹⁵ This cluster is also especially relevant for women since the item ejaculation is the most central one in their model, thus suggesting that the degree to which a woman understands sex as instrumental to men's pleasure is the best indicator of her overall agreement to patriarchal sexual scripts within the model. For men, this theme includes the statements that women have a hard time reaching orgasm, that sex is defined as penetration, that men are usually on top of women during sex and that there is usually a more dominant and a more submissive partner, but *not* the idea that sex usually ends with ejaculation. Thus, men seem to associate women's lack of sexual satisfaction most with penetration, the missionary position, and a dominance/submission dynamic – which might be called a “conservative” and heteronormative understanding of sexual intercourse.

The third theme relates directly to *men's sexual dominance* through the three items stating that there is usually a more dominant and a more submissive partner during sex, that men usually determine the pace of a sexual encounter, and that men are usually on top of women during sex. It is especially distinct in the women's network and does not appear as an interconnected triad in the men's dataset, indicating that a discursive focus on masculine dominance might be perceived as more salient by women than by men.

The fourth theme seems the least clearly defined and combines themes of *men's initiative* and the *naturalization of sexual desire*. This theme emerges most clearly in the men's data where it connects the naturalization of (men's) sex drive with the expectation that men determine the pace of their sexual encounters, as well as the statement that asking for a kiss can ruin a romantic mood.

The centrality analysis further shows that men determining the pace of sex (in the binary full model as well as for men specifically) and the focus on men's

¹⁵ This could also be hypothesized to be related to sexual orientation, such that women who engage in sex with men are more likely to define sex as penetration and also more likely to agree that they think of sex in terms of men's orgasms, and a lack of women's orgasms.

orgasm (in the initial full model as well as for women specifically) emerge as the most central statements in the data. This might be taken to indicate that in women's views, patriarchal sexuality is described best by its focus on men's pleasure. For men on the other hand, this is not salient in the same way. For them, the expectation of men's leadership or initiative regarding sexuality seems more central.

DISCUSSION

Gendered Patriarchal Sexual Scripts and the Case for Radical Feminism

These findings can provide a sketch of gendered interpretations of patriarchal sexual dynamics and thus sharpen the radical feminist idea that gendered sexual dynamics are at the core of patriarchal gender roles. Sexual script theory stipulates that sexual scripts act as collective orientations for sexual behaviour (see Wiederman, 2015). If, as the current findings suggest, men and women adhere to sexual scripts differently, this might provide conditions for heterosexual interactions that reify patriarchal sexual norms: within my sample, women tend to centre men's pleasure in their approach to sex, measuring the success of a sexual encounter by the man's orgasm and not expecting to achieve orgasm themselves. Further, while women in my sample are generally not more likely than other people to agree to the three dominance-related items, masculine sexual dominance does emerge as a distinct theme in women's agreement to patriarchal sexual scripts. This suggests that at least some women experience or expect their male sexual partners to assume dominant roles during sex, which might again shape how they behave in sexual encounters, thus reifying women's tendency to take on submissive roles during sex (with men).

For the men in my sample, on the other hand, sexual dominance does not emerge as a coherent theme. Rather, their agreement with patriarchal sexual scripts tends to focus on the one hand on the expectation of them to determine the pace of the sexual encounter, along with a strong tendency to naturalise their sexual desire, and on the other hand on an idea of "conservative" or "standard" sex, which takes place in the missionary position, is defined by penetration and hierarchy, and lacks female orgasm. The fact that men in my sample associate the expectation of male

leadership in sex specifically with the biological nature of men's sexual desires and the fear that asking for consent in a romantic situation might ruin the mood could indicate that men might not interpret masculine leadership as related to dominance structures but rather as a natural part or consequence of their sexual desires or as an expectation that they have to fulfil. In this sense, men might not think of masculine dominance as something they impose on women or that they actively engage in, but rather something that is expected of them or happens to them. According to these gendered tropes, we can easily hypothesise how hierarchical sexual dynamics could be reified in heterosexual encounters: if women might enter heterosexual encounters with a focus on male pleasure and the expectation of male dominance, and men might enter sexual encounters experiencing their desires as a biological need and anticipating leading the pace of the encounter, it seems likely that the resulting encounters might reify masculine leadership and favour men's needs over women's.

Further, I want to highlight that the gendered differences in relation to masculine sexual dominance can be interpreted as an epistemological effect. As described above, the three dominance-related items emerge as an interconnected triad for women in my dataset but not for men. This is epistemologically interesting insofar as radical feminism highlights women's experience as a central source of knowledge of patriarchal power structures (see for example MacKinnon, 1989: 89). If women might tend to see men's sexual dominance as a salient structure within patriarchal sexual scripts and men might not, this could be indicative of women's specific standpoint which enables them to see these structures: maybe, women isolate men's dominance as a discursive theme because they *experience* masculine dominance in a way that men might not. This could suggest a feminist epistemological point about the lived experience of patriarchal sexuality: men, who tend to inhabit sexually dominant roles and whose desires and needs appear central, tend not to express these power dynamics.

These insights can be useful in revisiting Judith Butler's critique of radical feminism as a theory of "rigid determinism" (Butler, 1994: 7) that interprets "female sexuality as coerced submission" (Butler, 1994: 7). My analysis has suggested that

it might be women rather than men who centre men's sexual desire in heterosexual intercourse. Thus, phallogentric sexuality might less be something that women are confronted with as an independent oppressive reality, but women might rather play an active role in producing these dynamics. However, I believe that we should not take women's agency in this context as a justification of the status quo. Rather, I would suggest in line with radical feminist theory that this is precisely the social mechanism through which patriarchal sexual structures are reproduced. The internalization of patriarchal prescriptions about sexuality and women's sexual agency are not mutually exclusive.

In this context, I believe that the concept *patriarchal sexual scripts* as a combination of radical feminist theory and sexual script theory is specifically useful. It suggests a theorization of the intermediate step between patriarchal socialization and concrete sexual behaviour, opening up the theoretical space for individual differences in how much patriarchal discourse one internalizes and how this is enacted in real-life situations. Thus, I believe that my thesis can be seen as a theoretical and methodological contribution to academic discussions around radical feminism. Radical feminism has been criticised as determinist, epistemologically absolute, and simplifying the relations between discourse and material harm (see Butler, 1991; Butler, 1994; Butler, 1997). Sexual script theory can help to clarify some of these points and strengthen the radical feminist account through empirical research: the relation between gender, patriarchal socialization, and hierarchical sexuality is not direct or deterministic, but might rather be mediated by the internalization and reproduction of patriarchal sexual scripts. Of course, this mediation process is complex, and I have only explored a very specific element of it in a non-generalizable way. Much future research is needed here to understand the mechanisms at hand: what factors influence the internalization of patriarchal sexual scripts (i.e., how important is the influence of media and pornography consumption, gendered socialization within families, at school, etc.)? How connected is the agreement to patriarchal sexual scripts to sexual behaviour? How (if at all) do gendered sexual scripts contribute to shaping large-scale discourses about gender and gender roles?

Finally, these findings can contribute to the broader context of literature on attitudes about sex. Some studies in the field have found that dominance- or aggression-related sexual fantasies tend to correlate with rape-prone attitudes (Bartels and Gannon, 2009), hostility towards women (Bartels et al., 2020), and even self-reported sexually aggressive behaviour (Bondü and Birke, 2021b). Similarly, Rape Myth Acceptance has been linked to sexist attitudes (Balezina and Zakharova, 2023; Nyúl and Kende, 2023). Patriarchal sexual scripts are not conceptually equivalent to dominance related sexual fantasies or rape myths, and further research is needed to determine the specific relations of agreement to any other attitudes or behaviours. However, in light of these studies, I believe it could be hypothesized that adherence to patriarchal sexual scripts (i.e., conceptualising sexual intercourse in dominance-related terms) might also bear some relations to sexual fantasies, gender related attitudes, and potentially sexual behaviours.

Thus, I believe that studying patriarchal sexual scripts is relevant for sexual violence prevention. More specifically, we could hypothesise some dynamics leading to this connection based on my data: I see one potential link between patriarchal attitudes and the violation of sexual boundaries in the differing expectations with which men and women might enter sexual encounters. If women really tend to focus on male pleasure, this might make it hard for them to articulate their own needs and boundaries, putting them at risk for violation of said boundaries. Further and more importantly, if men really tend to believe in the expectation of their leadership, the naturalness of their desires, and the potential negative effects of explicit communication in romantic situations, this might lead some men to operate under an assumption of sexual consent that could potentially lead to the violation of one's partner's sexual boundaries. Of course, these are very tentative interpretations, but I believe they spark some potential starting point for more research about the dynamics of sexual violation.

At the same time, within my data there seem to be some hopeful results in terms of sexual violence prevention. The two items that relate to communication in romantic and sexual situations were both met with overwhelming disagreement:

most people in my sample do not believe that asking for consent can “ruin the mood” or that communication during sex is awkward. While I cannot generalize my findings to any larger population, I do see some evidence in my data that people endorse open communication, which can be assumed to lower the risk for sexual boundary violations (see for example Krahe and Berger, 2023: who list ambiguous communication as a risk factor for sexual violence).

Reflections on Network Analysis

As we have seen, network modelling allows for more nuanced interpretations than factor analysis or regression analysis alone. The clustering structure, the visualizations of connections in the network in the form of edges, the spatiality of the nodes, as well as the centrality analysis all provide different kinds of information of the data at hand. I have extracted the clustering structure of the individual models and described the four overarching themes: sexual discomfort, asymmetrical sexual pleasure and phallocentrism, masculine dominance, and naturalization of men’s initiative.

The fact that Network Analysis doesn’t only extract clusters but also visualizes relations between nodes that do not belong to the same structure has added more nuance to this analysis and allowed us to interpret relations between items beyond the cluster structure: for example, we have seen that in the women’s model, the three dominance related items form a distinct cluster. While this is not the case for the men’s data, we can still see that the dominance-items are somewhat closely related¹⁶.

Further, the networks provide the visual element of spatiality that can also be interpreted. For example, I have argued that in the women’s network, the four most marginal items are clustered together probably at least to some degree due to their shared distance from the network rather than due to their mutual closeness.

¹⁶ More specifically, the statement that men determine the pace of a heterosexual encounter is closely related to the statement that men are usually on top of women during sex, which is in turn closely related to the idea that there is usually a more dominant and a more submissive partner during sex. Thus, the item featuring the missionary position can be said to mediate the relation between the other two items, which could be interpreted as an indication that dominance is not the defining theme here: the “missionary” item might be read more as an indication of conservatism than an indication of domination.

Finally, centrality analysis has allowed us to identify the most important individual items within the different networks. We have thus seen that the beliefs that men usually determine the pace of heterosexual encounters and the belief that sex is usually complete at ejaculation are specifically indicative of participants' overall agreement to patriarchal sexual scripts.

At the same time, this richness of information can be considered a disadvantage of Network Analysis: since all connections between nodes can in principle be interpreted, deciding which connections to focus on becomes a challenging and value-laden choice. I have pursued a reading of the network structures that makes sense in the context of radical feminist theory – but this is obviously one of many interpretations I could have developed from the data.

Further, network analysis both allows and forces the researcher to set many parameters of the analysis manually. The edge-weights as displayed in the model are determined based on the partial correlation matrix through applying *lasso* regularization (Epskamp and Fried, 2018; Burger et al., 2023; Nitin et al., 2019). This requires a regularization parameter, which I have set based on several iterations of adjusting the parameter and comparing the BICs of the different models. This is an established logic for determining the regularization parameter (Epskamp and Fried, 2018) which ultimately leaves it up to the researcher to determine the amount of regularization in the model. Similarly, I have chosen the algorithms for visualization and community detection. These decisions have been grounded in methodological literature (especially Kolaczyk, 2020), but they could have been made differently and it would have resulted in visually different models. Finally, the same applies to the colour palettes for the cluster visualization and for the thickness of the edges as a visual representation of their weights.

This can be considered problematic, as it leaves much of the model construction up to the researcher: most of my findings are based on the interpretation of the network models and the community structures that emerge from them. Thus, the fact that the appearance of these models is largely determined by my own methodological choices might open me up to epistemological criticism. However,

methodological choices are crucial to all research projects, and I have cited the methodological literature that I have based these choices on throughout the project. Further, it could even be argued that this is an advantage of Network Analysis: the regularization, visualisation, and clustering algorithms that I have used in this project have allowed me to generate models from my data that can adequately and vividly display the structures I have found and wanted to highlight.

A central benefit of Network Analysis in the current context is that it assumes no causality and no latent variables, but only relies on the partial correlation matrix as derived from the data itself (Luke, preprint). This makes network analysis a particularly elegant method as it creates much nuanced information based solely on correlation analysis. It is also theoretically appropriate for the analysis of discursive statements like patriarchal sexual scripts, which do not need to be assumed as distinct psychological or social entities in this analysis. Rather, the items can be taken at face value as the tendency of research participants to (dis)agree with a particular statement capturing one aspect of patriarchal sexual scripts in the context of an anonymous survey.

However, the meaning of the clustering structure is not necessarily easy to interpret. I have used the *fast greedy modularity optimization algorithm* of the R package *igraph*. This algorithm divides a graph into smaller communities of nodes based on the property of modularity, which “measures when a connection is a good one, in the sense that there are many edges within communities and only a few between them” (Clauset et al., 2004: 1-2; see also Kolaczyk, 2020). However, to translate this very technical understanding into a conceptual interpretation has been challenging, and there remains some methodological doubt about the conceptual soundness of the clusters.

Further, there is some debate about the dynamic nature of network models and the concepts that emerge from them (Kirschbaum, 2019). Timothy Luke (preprint) thus introduces a longitudinal element to his study, which I was not able to do here due to the confines of this project. This obviously limits my analysis to

a temporary snapshot of people's response behaviour. Exploring the stability of patriarchal sexual scripts could be an interesting approach for future research.

To sum up my reflections on network analysis, I believe that this methodology has both advantages and disadvantages. Despite its difficulties in interpretation and its openness to different decisions on the part of the researcher, I believe that it has convincing benefits: it is theoretically appropriate to analyse complex sociological phenomena without making any assumptions about latent variables or mechanisms of causality, and it has allowed for a complex open reading of gendered interpretations of patriarchal sexual dynamics.

Further Limitations and Perspectives for Future Research

Having already discussed some of the methodological limitations related to network analysis, I want to briefly address some further shortcomings of the current project. First, there are some limitations associated with the construction of the questionnaire, relating both to the formulation of items and to the inclusion and exclusion of demographic variables. My first consideration in this process was the ethics of my project: because we are dealing with opinions about sex, which is a sensitive subject, I wanted to protect the anonymity of my research participants at all costs. This means that I do not have any information about participants' sexual orientation or sexual minority status. For the reconstruction of patriarchal sexual scripts itself, I think this can be excused since narratives can be agreed or disagreed with regardless of personal experience or preference – queer people can still share and believe in and act accordingly to heteronormative sexual scripts¹⁷. However, it might thus be an interesting point of departure for future research to investigate further how belonging to different sexual identity groups influences one's agreement with patriarchal sexual scripts.

Further and related to this first point, I tried to formulate the items in the most general way possible to make it as accessible for as many people as possible. I am aware that it is a suboptimal solution, and it has also been brought to my

¹⁷ It has also been brought to my attention that this applies to people of different sexual experience levels as well.

attention that despite the openness of the formulations, they are not universally applicable to all experiences of sexuality. For example, the item “having sex during (my or my partner’s) menstruation seems off-putting to me” does not properly apply to many gay men. In my logic, a gay man would have just agreed to this statement, but that would mean he would score highly on the scale for this item, when really his agreement has little to do with the patriarchal sexual script itself. Thus, the problem with the menstruation item is that it is not general enough, because it is formulated in a way that does draw on the respondents’ desire in sexual partner. Similarly, it is to be expected that there might be many different experiences of sexuality (also and explicitly different sociocultural specificities) that my analysis does not capture. To mitigate this, a more complicated process of constructing the questionnaire might help: in future research, a similar questionnaire might be piloted with a large number of people from different backgrounds with the option for qualitative feedback in order to widen the range of experiences the questionnaire can capture.

Similarly, the items do not reference sexual violence in any way to avoid negative emotional reactions from participants. It might be interesting to study violence-related attitudes in future research, although this would be very close to the study of rape myths, about which a body of research already exists (see for example Balezina and Zakharova, 2023; Bohner et al., 2017; Dawtry et al., 2019).

I have no control over how respondents interpreted the items. This problem is to some degree unavoidable with attitudinal questionnaires and to some degree intended due to the general nature of sexual scripts. However, it does need to be seen as a limitation of the project because it can cause some doubt about the interpretation of the results. If, for example, participants without my knowledge interpreted the items in a normative way (instead of “in a heterosexual scenario, the man is usually on top of the woman during sex”, “I believe that men *should* be on top of women during sex”), that might have influenced peoples’ answers to the questionnaire. This issue is to some degree mitigated by my discursive understanding of the data: I am interested in whether individuals are willing to reproduce patriarchal narratives, regardless of their motivation. However, it must be acknowledged as a source of uncertainty in my dataset.

It is stated in the consent form that “[t]he project is exploring sexual scripts, that is beliefs about what normal sexual encounters look like. For this purpose you will be asked to agree or disagree with statements that reflect beliefs about sex in general, but not about your personal experiences or tastes.” (see appendix figure 2). While I had written this both as an informative statement and as a hint as to how to understand the items (i.e., the items are meant in a general and descriptive way, not normatively or personally), it has been brought to my attention that some items could be read to directly reference personal taste (again, “Having sex during (my or my partner’s) menstruation seems off-putting to me” can be cited as an example). Additionally, in the list of countries to choose from in the *country of residence* variable, the USA are missing. Since this has not been the analytical focus of my thesis, I believe it is rather inconsequential.

Secondly, there are some limitations relating to my sample. The sample I have collected is not random, meaning the findings generated in this project cannot be generalised to a larger population. Further, the sample is asymmetrical in some ways (most but not all people are young, most but not all people live in Sweden, most but not all people are students). I mostly chose an open and somewhat informal sampling strategy to assure I would get enough respondents for my analysis – a strategy that worked: the fact that over a thousand people filled out the survey is obviously a big success and I believe it does mitigate the issues related to my sampling strategy to some degree. However, repeating a similar analysis with a more general sample might be very interesting. Especially relating to the analysis of the influence of age, the current data set can only generate very limited results.

Thirdly, there are some concerns about the statistical analysis. I have already discussed some shortcomings of network analysis in the previous section and will thus not further discuss them here. However, it needs to be mentioned additionally that I am interpreting the answer categories in my dataset as continuous variables, which is strictly speaking not permissible. This interpretation is extremely common, which

is why I chose to employ it here as well. It does, however, need to be listed as a limitation of this kind of analysis.

CONCLUDING SUMMARY

The current thesis has explored gendered patterns in agreement with different aspects of patriarchal sexual scripts using Gaussian Graphical Models of data collected in an anonymous survey. Four interrelated themes have been discovered: sexual discomfort, asymmetrical pleasure and phallocentrism, masculine dominance, and naturalized masculine initiative. These themes figure differently across gendered subgroups of the data, with masculine dominance being especially salient for women and naturalized masculine initiative being especially salient for men. The use of Network Analysis has proven useful to construct this nuanced interpretation of gendered patterns in agreement with patriarchal sexual scripts, despite some methodological difficulties of this method of data analysis.

This thesis has developed the notion of patriarchal sexual scripts from radical feminism and sexual script theory. Radical feminism holds that sexual intercourse under patriarchy is defined by the dynamic of (masculine) sexual dominance and (feminine) sexual submission, and that this dynamic constitutes the ideological basis for large-scale gender inequality through gendered socialization. Sexual script theory holds that what is considered sexual and sexually desirable is shaped through social discourses which are expected to inform individual desires and behaviour. Combining sexual script theory and radical feminist theory, we can assume patriarchal sexual scripts, i.e., sexual scripts that are shaped by patriarchal norms favouring men's dominance.

Based on this concept I developed a questionnaire featuring ten items that express different aspects of patriarchal sexual scripts and collected a final sample of 1.029 responses to this questionnaire. The data was subsequently analysed using descriptive statistics, regression analysis, correlation analysis, factor analysis, and network analysis, with a focus on the network analysis.

The analysis has discovered that agreement to patriarchal sexual scripts within the sample is gendered, but not in a straightforward way: men in the sample

were more likely than women to agree that asking for a kiss can ruin a romantic mood, that sex means penetration, that sexual release is a biological need for men, and that there is usually a more dominant and a more submissive partner during sex. Women in the sample were on the other hand more likely than any other group to agree that women have a hard time reaching orgasm and that sex is usually complete at ejaculation. Further, nonbinary people in the sample are less likely than women to agree that sex is defined by penetration and that they usually consider sex complete at ejaculation. The strongest partial correlation between all items over all appeared between the statements that men usually determine the pace of a sexual encounter and that there is usually a more dominant and a more submissive partner during sex, which might indicate that individuals who think of sex as shaped by power dynamics tend to put men on the top of such dynamics. The factor analysis and network analysis returned similar factor/community structures, from which I extracted four overarching themes that are differently configured in the gender specific datasets: sexual discomfort, asymmetrical pleasure and phallocentrism, masculine dominance, and masculine initiative. Among these themes, masculine dominance seemed specifically defined in the women's model, while naturalized masculine initiative seemed more pronounced for men.

These findings can be taken to bring more nuance to the radical feminist idea that sexual relations under patriarchy are defined by masculine dominance and that this is formative to gender as a hierarchical social system. While for women, the centring of men's pleasure and masculine dominance might emerge as salient themes within patriarchal sexual scripts, men might not tend to distinguish these themes in the same way. For them, a naturalized view of men's initiative, a conservative phallocentric view of "standard" sex, and discomfort with sex might seem more important. Thus, we might hypothesise that heterosexual interactions which are guided by these gendered interpretations of sexual scripts could favour men's needs over women's and reify masculine sexual dominance without men perceiving this dynamic as such.

My thesis project can thus strengthen the radical feminist idea that patriarchal socialization and women's sexual agency are not mutually exclusive. It can

further be seen as a methodological contribution to feminist quantitative sociology. I have used Network Analysis specifically to integrate radical feminist theory with quantitative sociology, thus exploring an innovative approach to telling a story with quantitative data and putting very technical methods of data analysis in the service of producing feminist knowledge.

APPENDIX

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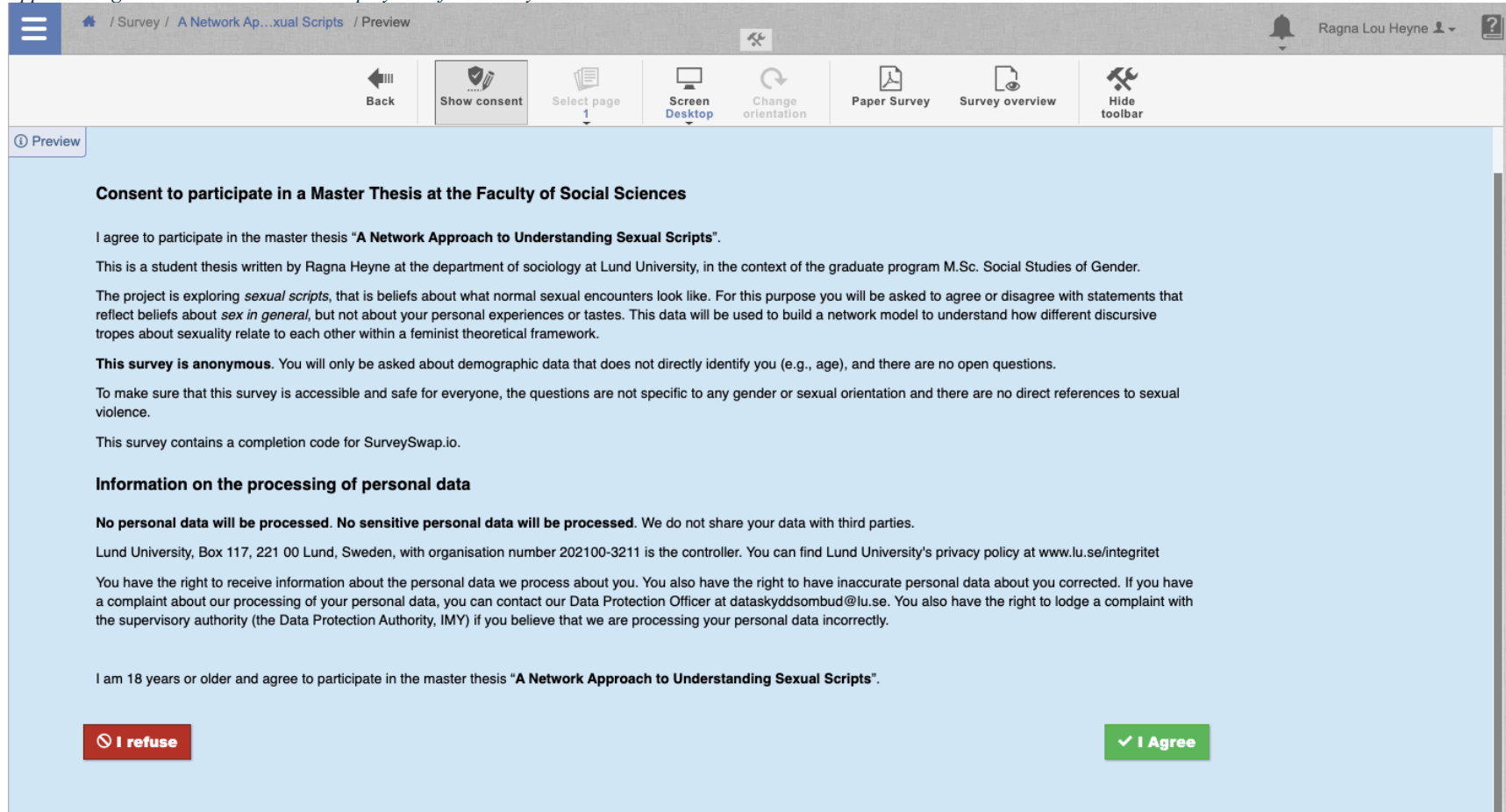
Flyer Designs

Appendix Figure 1: Flyer Designs for Survey Distribution



Consent Form

Appendix Figure 2: Consent Form as Displayed Before Survey



/ Survey / A Network Ap...xual Scripts / Preview Ragna Lou Heyne

Back **Show consent** **Select page 1** **Screen Desktop** **Change orientation** **Paper Survey** **Survey overview** **Hide toolbar**

Preview

Consent to participate in a Master Thesis at the Faculty of Social Sciences

I agree to participate in the master thesis "A Network Approach to Understanding Sexual Scripts".

This is a student thesis written by Ragna Heyne at the department of sociology at Lund University, in the context of the graduate program M.Sc. Social Studies of Gender.

The project is exploring *sexual scripts*, that is beliefs about what normal sexual encounters look like. For this purpose you will be asked to agree or disagree with statements that reflect beliefs about *sex in general*, but not about your personal experiences or tastes. This data will be used to build a network model to understand how different discursive tropes about sexuality relate to each other within a feminist theoretical framework.

This survey is anonymous. You will only be asked about demographic data that does not directly identify you (e.g., age), and there are no open questions.

To make sure that this survey is accessible and safe for everyone, the questions are not specific to any gender or sexual orientation and there are no direct references to sexual violence.

This survey contains a completion code for SurveySwap.io.

Information on the processing of personal data

No personal data will be processed. No sensitive personal data will be processed. We do not share your data with third parties.

Lund University, Box 117, 221 00 Lund, Sweden, with organisation number 202100-3211 is the controller. You can find Lund University's privacy policy at www.lu.se/integritet

You have the right to receive information about the personal data we process about you. You also have the right to have inaccurate personal data about you corrected. If you have a complaint about our processing of your personal data, you can contact our Data Protection Officer at dataskyddsbud@lu.se. You also have the right to lodge a complaint with the supervisory authority (the Data Protection Authority, IMY) if you believe that we are processing your personal data incorrectly.

I am 18 years or older and agree to participate in the master thesis "A Network Approach to Understanding Sexual Scripts".

I refuse

I Agree

Supporting Tables and Figures

Descriptive Statistics

Demographic frequency tables

Appendix Table 1: Frequency Table Countries of Residence

Country of Residence	Frequency	Percent
Angola	1	0.1
Armenia	1	0.1
Australia	5	0.5
Austria	23	2.2
Belgium	67	6.5
Bosnia & Herzegovina	4	0.4
Brazil	2	0.2
Canada	6	0.6
China	8	0.8
Croatia	1	0.1
Czechia	1	0.1
Denmark	17	1.7
Ecuador	1	0.1
Finland	4	0.4
France	7	0.7
Germany	192	18.7
Greece	16	1.6
Hungary	14	1.4
India	5	0.5
Indonesia	1	0.1
Ireland	2	0.2
Italy	16	1.6
Jamaica	1	0.1
Japan	2	0.2
Lithuania	2	0.2
Namibia	1	0.1
The Netherlands	33	3.2
North Macedonia	8	0.8

Norway	1	0.1
Pakistan	4	0.4
Poland	1	0.1
Russia	4	0.4
Serbia	2	0.2
Singapore	2	0.2
Slovakia	1	0.1
South Africa	2	0.2
Spain	9	0.9
Sweden	494	48.0
Switzerland	5	0.5
Ukraine	2	0.2
United Arab Emirates	2	0.2
United Kingdom	45	4.4
Vietnam	2	0.2
other/prefer not to answer	12	1.2
Total	1029	100.0

Appendix Table 2: Frequency Table Gender

Gender	Frequency	Percent
woman	669	65.0
man	321	31.2
non-binary	27	2.6
prefer not to say	5	0.5
other	7	0.7
Total	1029	100.0

Appendix Table 3: Frequency Table Student Status

Student status	Frequency	Percent
Student	763	74.1
Non-student	266	25.9
Total	1029	100.0

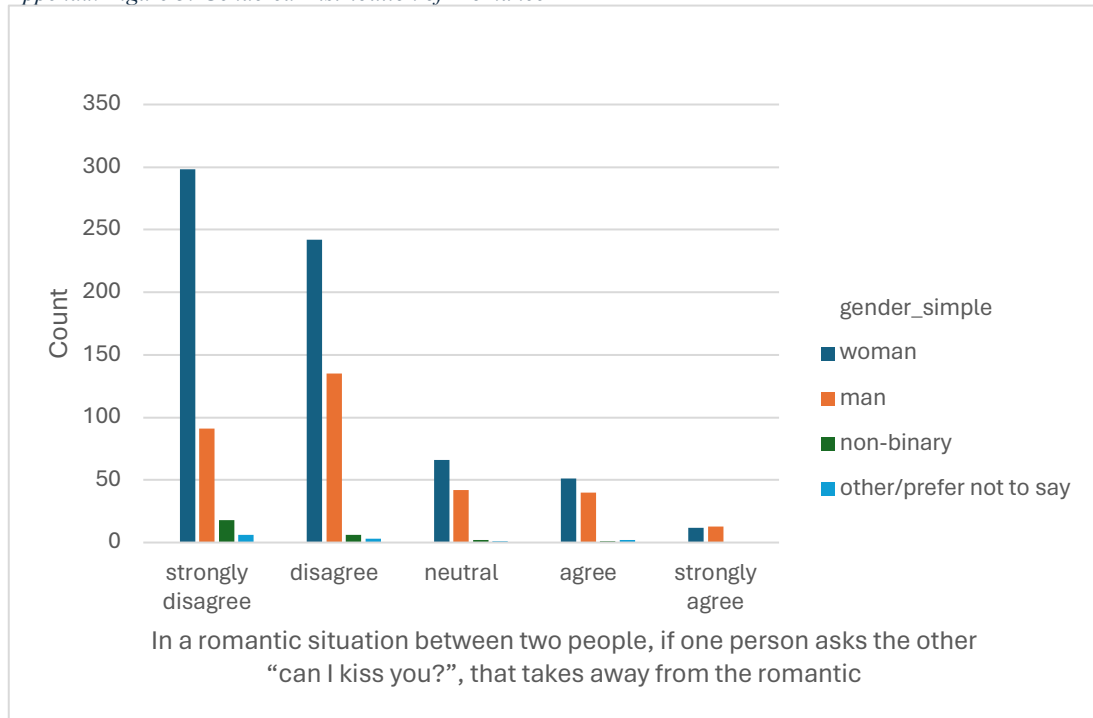
Appendix Table 4: Frequency Table Age (5 Year Bins)

Age	Frequency	Percent
Under 20	107	10.4
21-25	571	55.5
26-30	230	22.4
31-35	53	5.2
36-40	23	2.2
41-45	7	0.7
46-50	8	0.8
51-55	14	1.4
56-60	11	1.1
60 +	5	0.5
total	1029	100.0

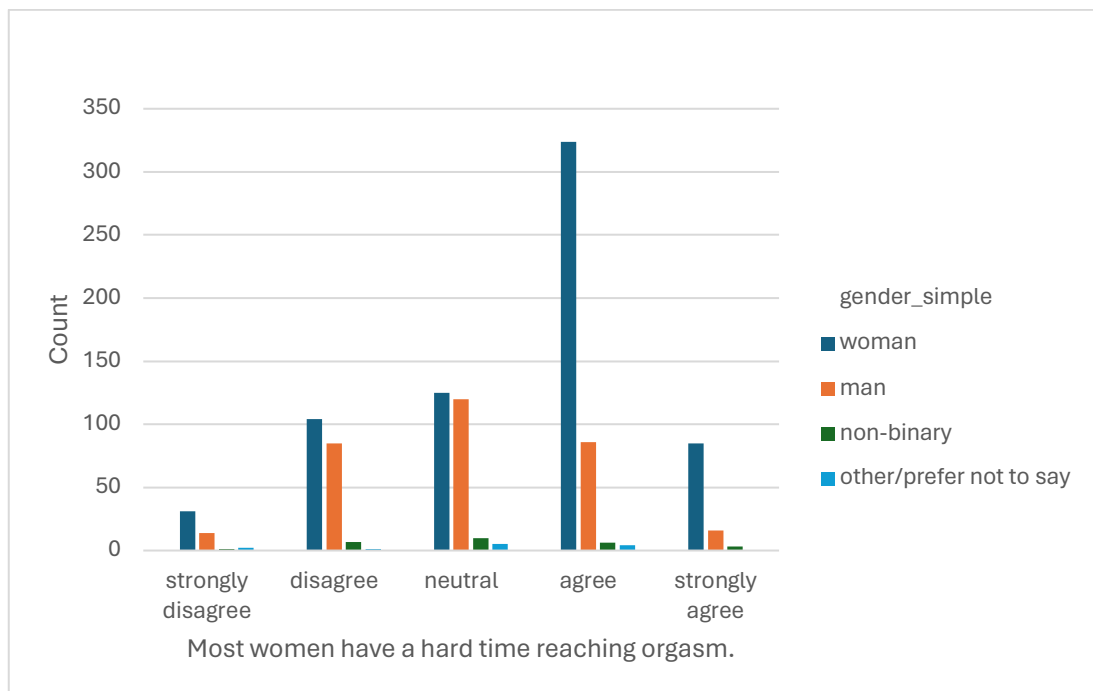
Gendered Item Distributions

I chose to display the gendered item distributions as numbers (not percentages) for readability.

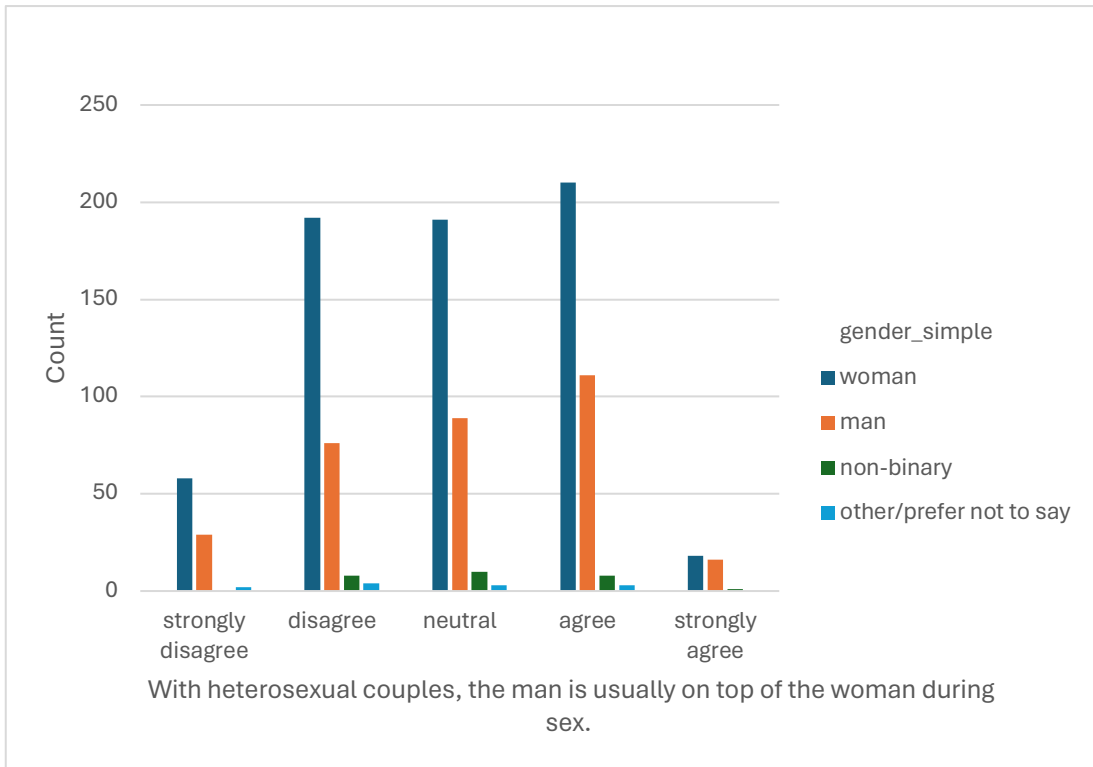
Appendix Figure 3: Gendered Distribution of “romance”



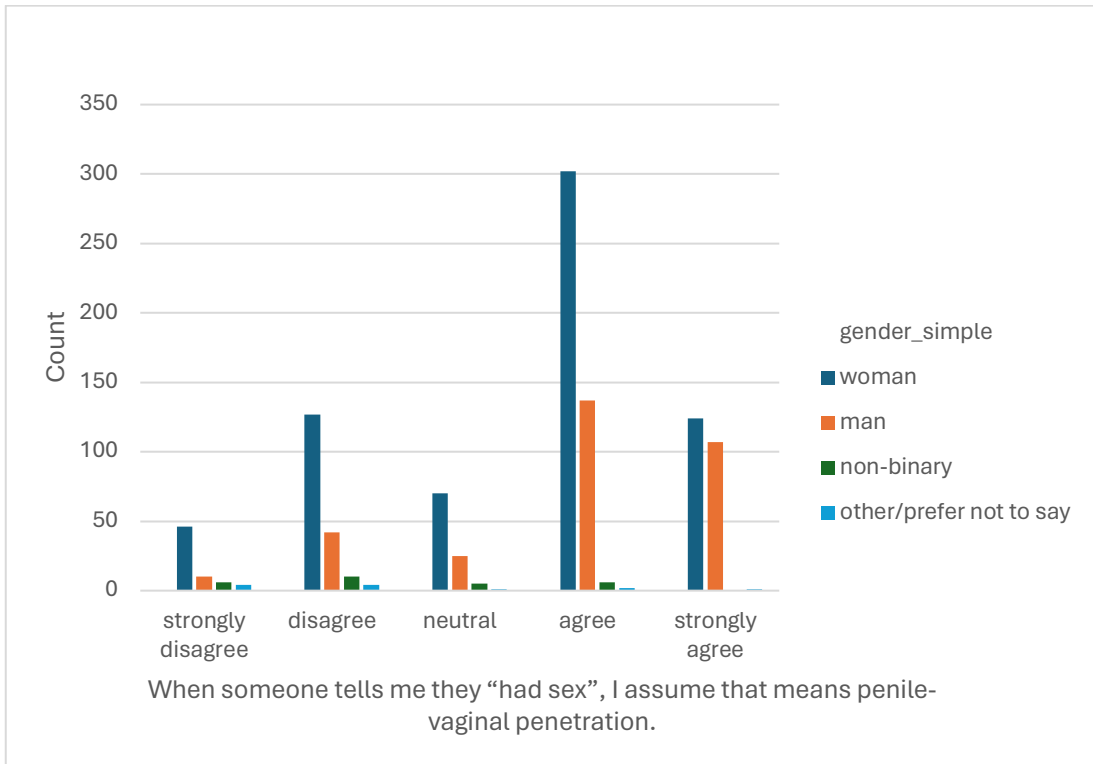
Appendix Figure 4: Gendered Distribution of „female_orgasm“



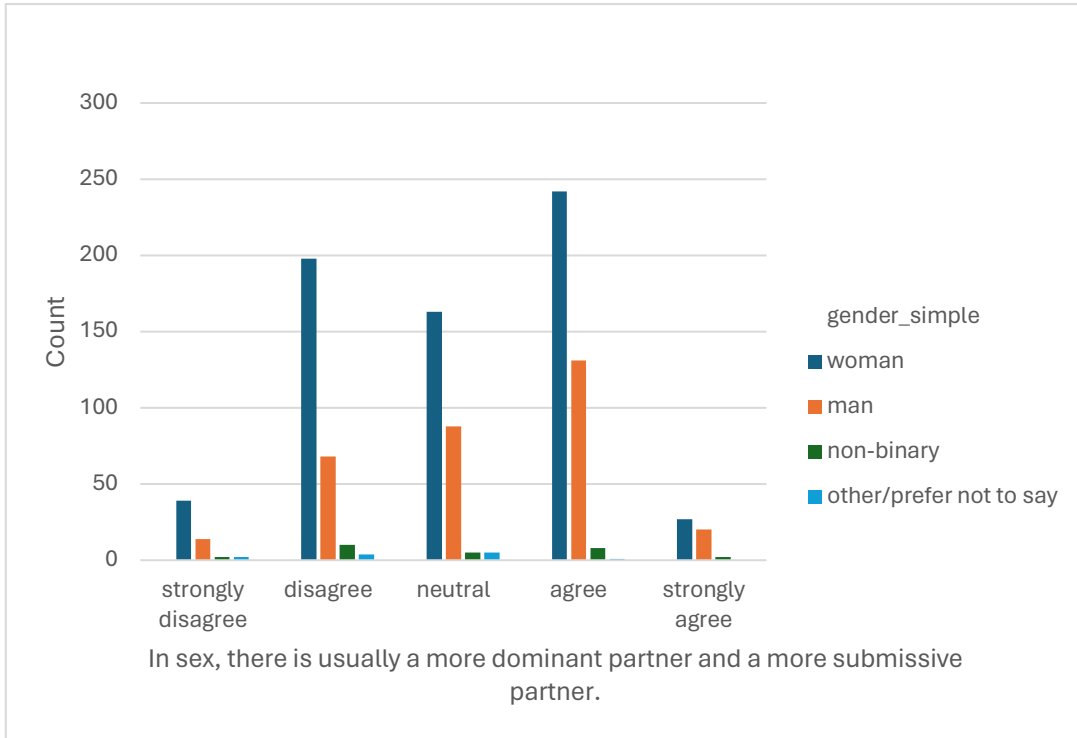
Appendix Figure 5: Gendered Distribution of „missionary“



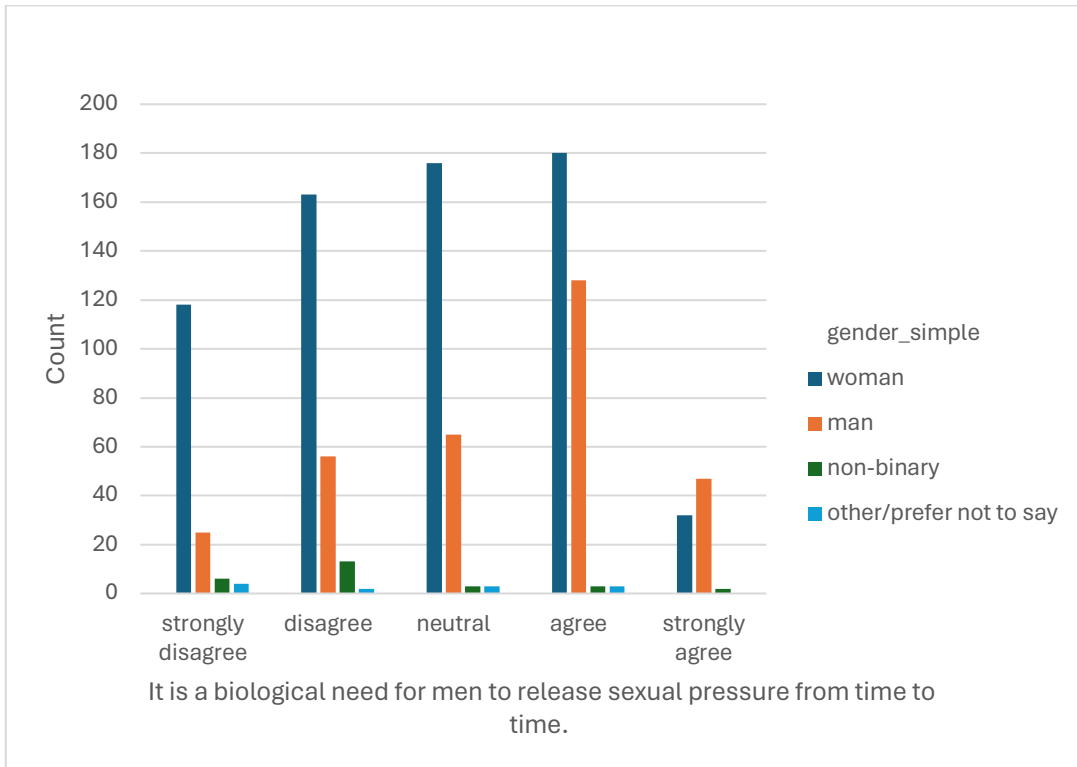
Appendix Figure 6: Gendered Distribution of „piv“



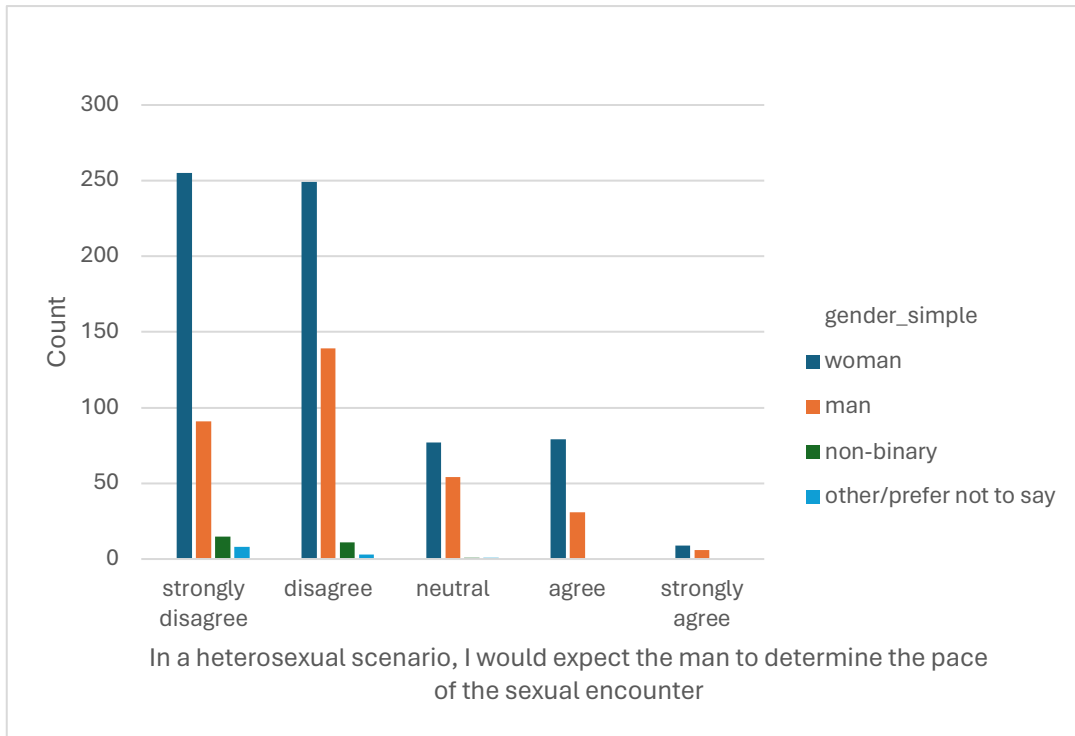
Appendix Figure 7: Gendered Distribution of „domsub“



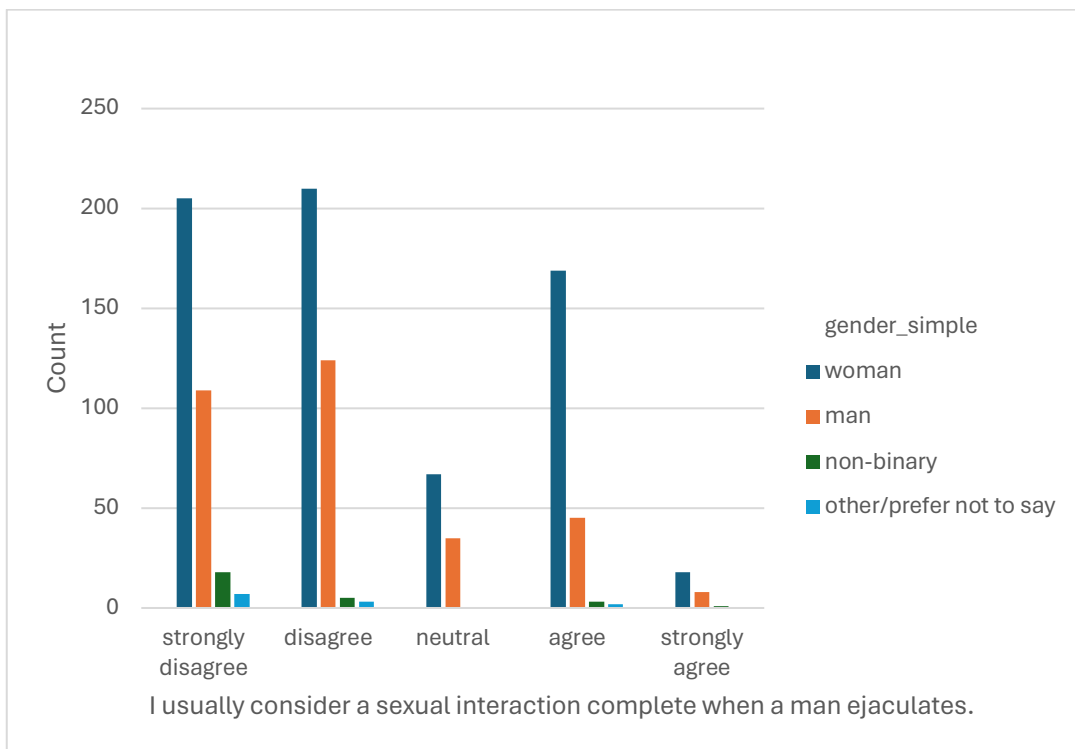
Appendix Figure 8: Gendered Distribution of „bio_need“



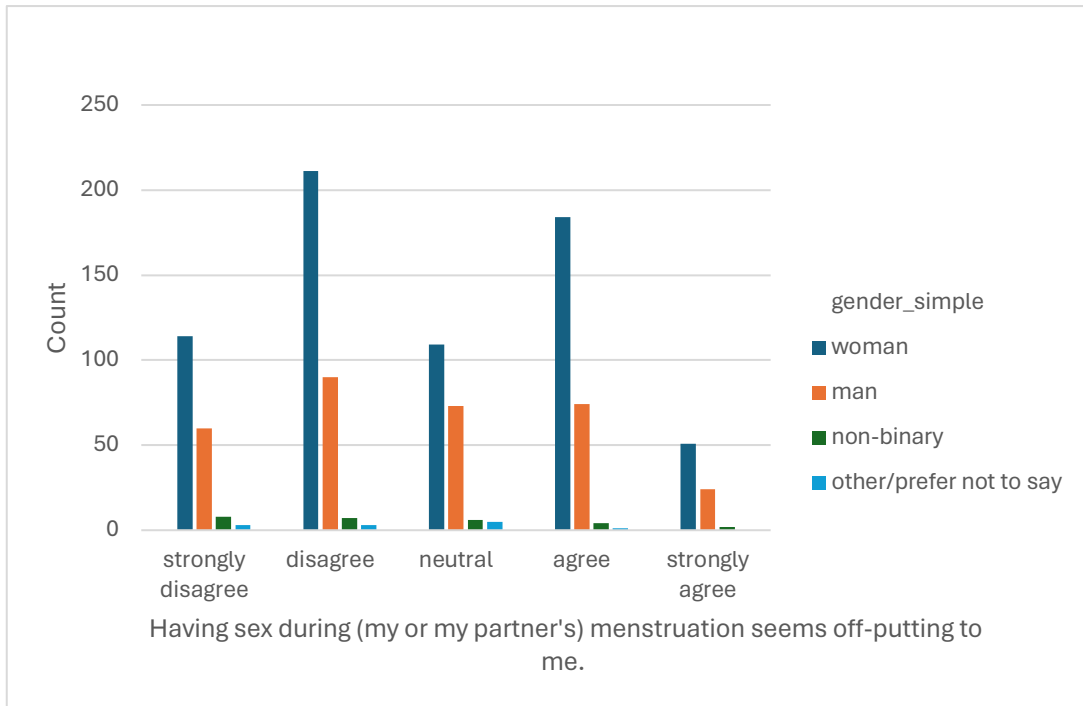
Appendix Figure 9: Gendered Distribution of „male_pace“



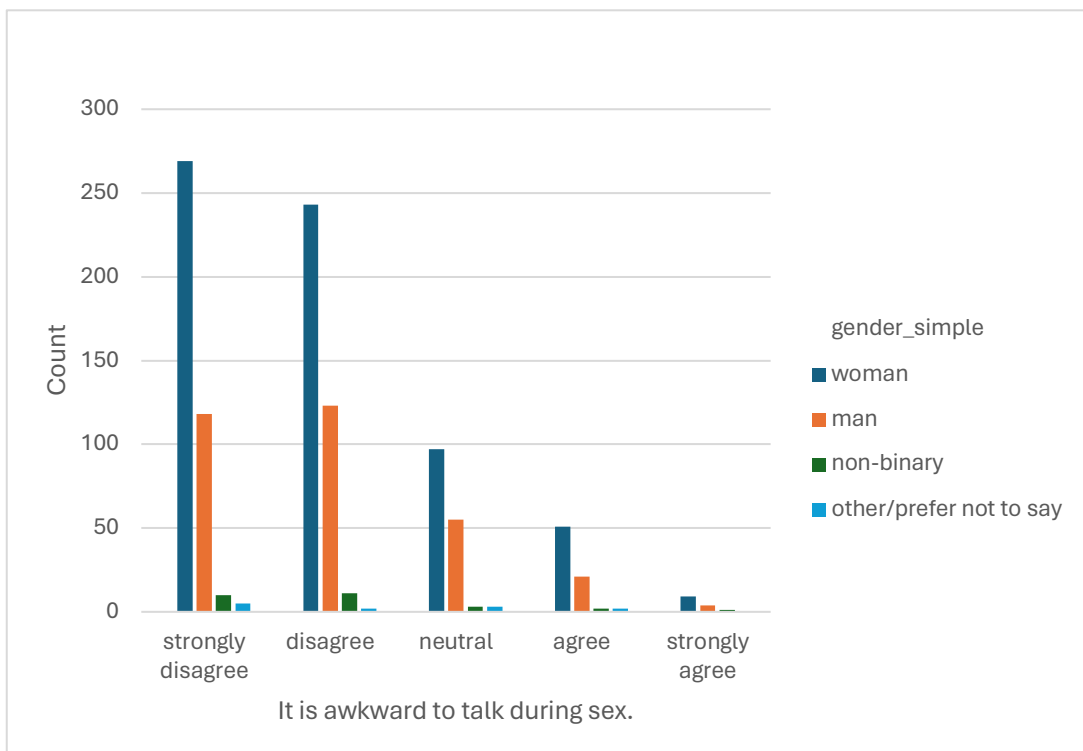
Appendix Figure 10: Gendered Distribution of „ejaculation“



Appendix Figure 11: Gendered Distribution of „menstruation“



Appendix Figure 12: Gendered Distribution of „awkward“



Correlation Analysis

Appendix Table 5: Partial Correlations of all Items Controlling for Each Other, as well as answer date/time, country, gender, age, student status

		romance	female_organism	missionary	piv	domsub	bio_need	male_pace	ejaculation	menstruation	awkward
tomance	Correlation	1.0	0.114	0.099	0.250	0.174	0.240	0.221	0.199	0.106	0.168
	Sig (2-tailed)	.	<0.001***	0.001**	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
	Df	0	1022	1022	1022	1022	1022	1022	1022	1022	1022
female_organism	Correlation		1.0	0.240	0.203	0.237	0.111	0.132	0.241	0.028	0.117
	Sig (2-tailed)		.	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
	Df		0	1022	1022	1022	1022	1022	1022	1022	1022
missionary	Correlation			1.0	0.240	0.296	0.163	0.287	0.123	0.138	0.152
	Sig (2-tailed)			.	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
	Df			0	1022	1022	1022	1022	1022	1022	1022
piv	Correlation				1.0	0.294	0.299	0.244	0.275	0.147	0.113
	Sig (2-tailed)				.	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
	Df				0	1022	1022	1022	1022	1022	1022
domsub	Correlation					1.0	0.248	0.328	0.230	0.165	0.147
	Sig (2-tailed)					.	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
	Df					0	1022	1022	1022	1022	1022
bio_need	Correlation						1.0	0.266	0.220	0.128	0.087

	Sig (2-tailed)						.	<0.001***	<0.001***	<0.001***	0.005**
	Df						0	1022	1022	1022	1022
male_pace	Correlation							1.0	0.294	0.194	0.197
	Sig (2-tailed)							.	0.001***	<0.001***	<0.001***
	Df							0	1022	1022	1022
ejaculation	Correlation								1.0	0.174	0.235
	Sig (2-tailed)								.	<0.001***	<0.001***
	Df								0	1022	1022
menstruation	Correlation									1.0	0.254
	Sig (2-tailed)									.	<0.001***
	Df									0	1022
awkward	Correlation										1.0
	Sig (2-tailed)										.
	Df										0

p < 0.05*, p < 0.01**, p < 0.001***

control variables: answer date/time, country, gender, age, student status

Regression Analysis

Appendix Table 6: Results of Linear Regression Analysis Predicting all ten items Based on Gender (model 1) and Age and Gender (model 2)

Item (dependent variable)	Model	Adj. R-Square	Model sig.	Predictor	Unstandardized B	Std. error	Standardized β	t	p
In a romantic situation, if one person asks the other 'can I kiss you?', that takes away from the romantic mood.	1 (gender only)	0.029	<0.001***	constant	1.86	0.040		46.677	<0.001***
				Men	0.359	0.070	0.159	5.125	<0.001***
				Nonbinary	-0.378	0.202	-0.058	-1.869	0.062
				other	-0.288	0.391	-0.023	-0.736	0.462
				Prefer not to say	0.541	0.463	0.036	1.169	0.243
	2 (gender and age)	0.037	<0.001***	Constant	1.495	0.122		12.287	<0.001***
				Men	0.346	0.070	0.154	4.964	<0.001***
				Nonbinary	-0.390	0.201	-0.060	-1.937	0.053
				other	-0.261	0.390	-0.021	-0.669	0.504
				Prefer not to say	0.473	0.461	0.031	1.026	0.305
Most women have a hard time reaching orgasm.	1 (gender only)	0.043	<0.001***	constant	3.490	0.039		88.578	<0.001***
				Men	-0.475	0.069	-0.211	-6.860	<0.001***
				Nonbinary	-0.379	0.200	-0.058	-1.895	0.058
				Other	-0.633	0.387	-0.033	-1.635	0.102
				Prefer not to say	-0.49	0.457	-0.33	-1.072	0.284
	2 (gender and age)	0.056	<0.001***	constant	3.490	0.039		88.578	<0.001***
				Men	-0.475	0.069	-0.211	-6.860	<0.001***
				Nonbinary	-0.379	0.200	-0.058	-1.895	0.058
				Other	-0.633	0.387	-0.033	-1.635	0.102
				Prefer not to say	-0.49	0.457	-0.33	-1.072	0.284

	2 (gender and age)			Constant	3.930	0.120		32.728	<0.001***
				Men	-0.460	0.069	-0.205	-6.681	<0.001***
				Nonbinary	-0.364	0.199	-0.056	-1.834	0.067
				Other	-0.666	0.385	-0.053	-1.73	0.084
				Prefer not to say	-0.409	0.455	-0.027	-0.899	0.369
				age	-0.017	0.004	-0.118	-3.872	<0.001***
With heterosexual couples, the man is usually on top of the woman during sex.	1 (gender only)	0.002	0.200	constant	2.907	0.040		72.603	<0.001***
				Men	0.121	0.070	0.054	1.717	0.086
				Nonbinary	0.167	0.203	0.026	0.820	0.412
				Other	-0.050	0.394	-0.004	-0.128	0.899
				Prefer not to say	-0.707	0.465	-0.047	-1.521	0.128
	2 (gender and age)	0.016	<0.001***	Constant	3.359	0.122		27.533	<0.001***
				Men	0.136	0.070	0.061	1.944	0.052
				Nonbinary	0.182	0.202	0.028	0.901	0.368
				Other	-0.084	0.391	-0.007	-0.215	0.830
				Prefer not to say	-0.624	0.462	-0.042	-1.349	0.178
				age	-0.018	0.005	-0.122	-3.918	<0.001***
When someone tells me they 'had sex', I usually assume that means penile-vaginal penetration.	1 (gender only)	0.060	<0.001***	constant	3.495	0.045		77.791	<0.001***
				Men	0.406	0.079	0.157	5.140	<0.001***
				Nonbinary	-1.087	0.228	-0.145	-4.767	<0.001***
				Other	-1.379	0.441	-0.093	-3.062	0.002**
				Prefer not to say	-0.895	0.522	-0.052	-1.715	0.087
		0.066	<0.001***						

	2 (gender and age)			Constant	3.862	0.137		28.114	<0.001***
				Men	0.418	0.079	0.162	5.307	<0.001***
				Nonbinary	-1.075	0.227	-0.143	-4.728	<0.001***
				Other	-1.379	0.440	-0.095	-3.134	<0.001***
				Prefer not to say	-0.827	0.520	-0.048	-1.589	0.112
				age	-0.014	0.005	-0.085	-2.827	0.005**
In sex, there is usually a more dominant and a more submissive partner	1 (gender only)	0.011	0.003**	constant	3.030	0.039		76.939	<0.001***
				Men	0.204	0.069	0.92	3.0946	0.003**
				Nonbinary	-0.104	0.200	-0.016	-0.520	0.603
				Other	-0.887	0.387	-0.071	-2.292	0.022
				Prefer not to say	-0.230	0.457	-0.016	-0.503	0.615
	2 (gender and age)	0.019	<0.001***	constant	3.378	0.120		28.071	<0.001***
				Men	0.215	0.069	0.098	3.124	0.002**
				Nonbinary	-0.092	0.199	-0.014	-0.464	0.643
				Other	-0.913	0.386	-0.073	-2.368	0.018
				Prefer not to say	-0.165	0.456	-0.011	-0.363	0.717
				age	-0.014	0.004	-0.095	-3.058	0.002**
It is a biological need for men to release sexual pressure from time to time	1 (gender only)	0.061	<0.001***	constant	2.768	0.045		61.572	<0.001***
				Men	0.593	0.079	0.229	7.511	<0.001***
				Nonbinary	-0.435	0.228	-0.058	-1.906	0.057
				Other	-0.911	0.442	-0.062	-2.062	0.039*
				Prefer not to say	0.432	0.522	0.025	0.827	0.408
		0.063	<0.001**						

	2 (gender and age)			Constant	2.516	0.138		18.267	<0.001***
				Men	0.585	0.079	0.226	7.402	<0.001***
				Nonbinary	-0.443	0.228	-0.059	-1.945	0.052
				Other	-0.892	0.441	-0.061	-2.022	0.043*
				Prefer not to say	0.385	0.522	0.022	0.738	0.461
				age	0.010	0.005	0.059	1.934	0.053*
In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter.	1 (gender only)	0.013	0.002**	constant	2.010	0.039		51.145	<0.001**
				Men	0.123	0.069	0.056	1.789	0.074
				Nonbinary	-0.529	0.200	-0.083	-2.650	0.008**
				Other	-0.868	0.386	-0.070	-2.246	0.025
				Prefer not to say	-0.210	0.456	-0.014	-0.461	0.645
	2 (gender and age)	0.012	0.005**	Constant	1.98	0.121		16.408	<0.001***
				Men	0.122	0.069	0.055	1.770	0.077
				Nonbinary	-0.530	0.200	-0.083	-2.654	0.008**
				Other	-0.865	0.0387	-0.070	-2.238	0.025*
				Prefer not to say	-0.216	0.457	-0.015	-0.473	0.636
				age	0.001	0.004	0.008	0.270	0.787
I usually consider a sexual interaction complete when a man ejaculates.	1 (gender only)	0.016	<0.001***	constant	2.380	0.046		51.669	<0.001***
				Men	-0.255	0.081	-0.098	-3.154	0.002**
				Nonbinary	-0.713	0.234	-0.095	-3.049	0.002**
				Other	-0.951	0.453	-0.065	-2.101	0.036*
				Prefer not to say	-0.180	0.535	-0.010	-0.336	0.737
		0.018	<0.001***						

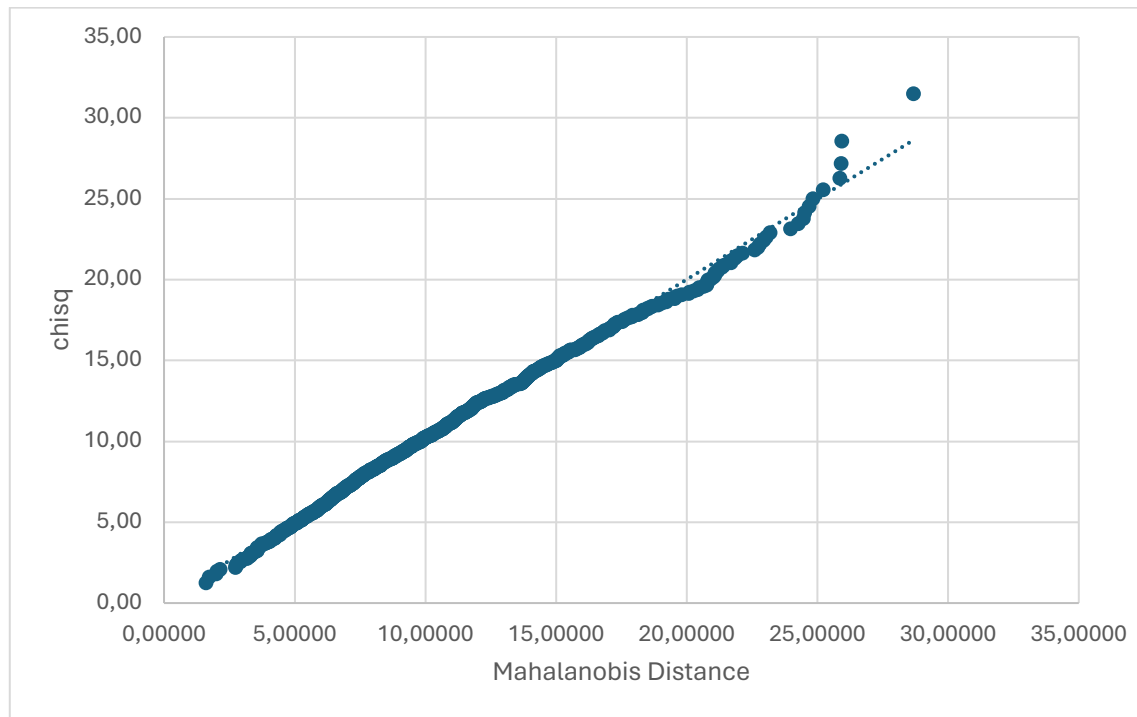
	2 (age and gender)			Constant	2.166	0.141		15.342	<0.001***
				Men	-0.262	0.081	-0.101	-3.240	0.001**
				Nonbinary	-0.720	0.234	-0.096	-3.082	0.002**
				Other	-0.935	0.452	-0.064	-2.067	0.039*
				Prefer not to say	-0.219	0.535	-0.013	-0.410	0.682
				age	0.008	0.005	0.050	1.600	0.110
Having sex during (my or my partner's) menstruation seems off-putting to me.	1 (gender only)	0.001	0.334	constant	2.771	0.048		58.311	<0.001***
				Men	-0.045	0.083	-0.017	-0.544	0.586
				Nonbinary	-0.327	0.241	-0.043	-1.355	0.176
				Other	-0.771	0.467	-0.052	-1.651	0.099
				Prefer not to say	0.029	0.552	0.002	0.052	0.959
	2 (gender and age)	0.000	0.359	Constant	2.639	0.146		18.097	<0.001***
				Men	-0.050	0.084	-0.019	-0.597	0.551
				Nonbinary	-0.331	0.241	-0.043	-1.373	0.170
				Other	-0.761	0.467	-0.051	-1.630	0.103
				Prefer not to say	0.004	0.552	0.000	0.008	0.994
				age	0.005	0.005	0.030	0.961	0.337
It is awkward to talk during sex.	1 (gender only)	0.003	0.128	constant	1.936	0.038		51.161	<0.001***
				Men	0.036	0.066	0.017	0.545	0.586
				Nonbinary	0.064	0.192	0.010	0.335	0.738
				Other	-0.364	0.372	-0.031	-0.980	0.327
				Prefer not to say	1.064	0.439	0.076	2.423	0.016
		0.003	0.174						

2 (gender and age)	Constant	1.855	0.116		15.977	<0.001***
	Men	0.034	0.067	0.016	0.504	0.615
	Nonbinary	0.062	0.192	0.010	0.320	0.749
	Other	-0.358	0.372	-0.030	-0.963	0.336
	Prefer not to say	1.049	0.440	0.074	2.386	0.017
	age	0.003	0.004	0.023	0.735	0.463

p < 0.05*, p < 0.01**, p < 0.001***

Factor Analysis

Appendix Figure 13: Chi2 by Mahalanobis Distance Plot for Multivariate Normality



Full Initial Model (N = 1.029)

Appendix Table 7: Full Initial Factor Model – Total Variance Explained

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings					
	Total	% of Vari- ance	% cum	Total	% of variance	% cum	Total	% of variance	% cum
1	2.815	28.152	28.152	2.111	21.113	21.113	1.077	10.771	10.771
2	1.104	11.044	39.196	0.425	4.245	25.358	1.009	10.091	20.862
3	1.044	10.436	49.633	0.325	3.254	28.612	0.775	7.750	28.612
4	0.921	9.213	58.846						
5	0.793	7.934	66.781						
6	0.753	7.534	74.315						
7	0.690	6.897	81.212						
8	0.670	6.697	87.908						
9	0.656	6.557	94.466						
10	0.553	5.534	100.000						

Extraction Method: Maximum Likelihood

Appendix Table 8: Full Initial Factor Model – Rotated Factor Matrix

Rotated Factor Matrix (initial full model)	Factor		
	1	2	3
With heterosexual couples, the man is usually on top of the woman during sex.	0.539	0.100	0.129
In sex, there is usually a more dominant partner and a more submissive partner.	0.499	0.279	0.119
Most women have a hard time reaching orgasm.	0.410	0.075	0.088
In a heterosexual scenario, I would expect the man to determine the pace of a sexual encounter.	0.355	0.355	0.244
It is a biological need for men to release sexual pressure from time to time.	0.151	0.534	0.053
In a romantic situation between two people, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.	0.055	0.432	0.192
When someone tells me they “had sex”, I usually assume that means penile-vaginal penetration.	0.360	0.432	0.085
I usually consider a sexual interaction complete when a man ejaculates.	0.246	0.317	0.298
It is awkward to talk during sex.	0.102	0.070	0.642
Having sex during (my or my partner’s) menstruation seems off-putting to me.	0.131	0.158	0.358

Extraction Method: Maximum Likelihood

Rotation Method: Varimax Rotation with Kaiser Normalization, converged in 4 iterations

Appendix Figure 14: Initial Full Factor Model – Scree Plot



Gendered Model 1: Women (N = 669)

Appendix Table 9: Gendered Factor Model 1 – Total Variance Explained

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings					
	Total	% of Vari- ance	% cum	Total	% of variance	% cum	Total	% of variance	% cum
1	2.811	28.112	28.112	1.365	13.648	13.648	1.146	11.458	11.458
2	1.125	11.249	39.361	1.619	16.190	29.838	1.114	11.138	22.596
3	1.090	10.903	50.264	0.374	3.737	33.575	1.098	10.979	33.575
4	0.903	9.032	59.297						
5	0.825	8.250	67.547						
6	0.773	7.731	75.278						
7	0.678	6.782	82.059						
8	0.644	6.439	88.499						
9	0.603	6.026	94.525						
10	0.548	5.475	100.000						

Extraction Method: Maximum Likelihood

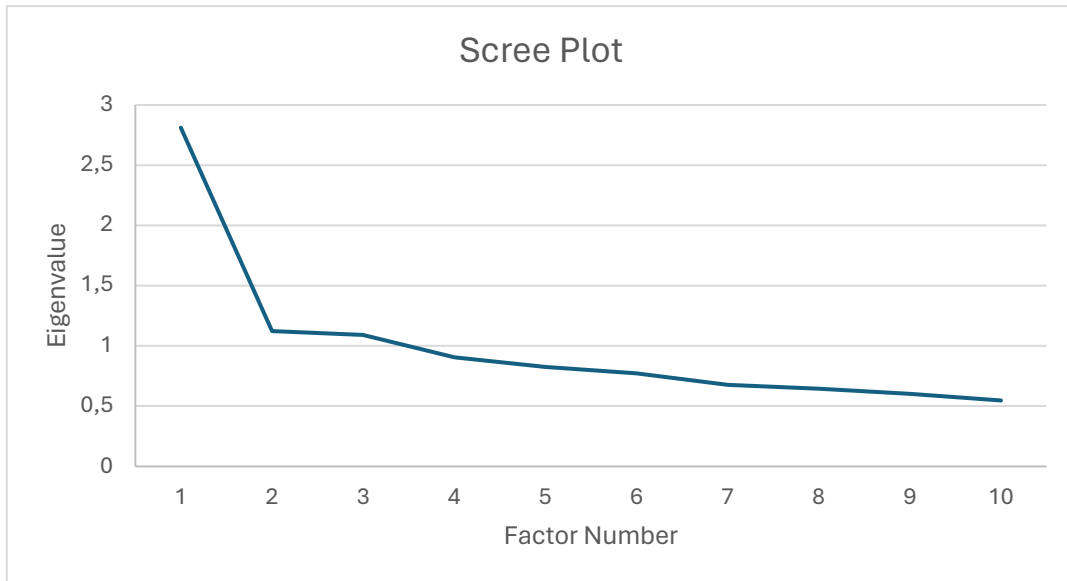
Appendix Table 10: Gendered Factor Model 1 – Rotated Factor Matrix

Rotated Factor Matrix (women only)	Factor		
	1	2	3
In sex, there is usually a more dominant and a more submissive partner.	0.577	0.232	0.078
With heterosexual couples, the man is usually on top of the woman during sex.	0.559	0.060	0.103
In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter.	0.424	0.287	0.160
I usually consider a sexual interaction complete when a man ejaculates.	0.186	0.509	0.178
When someone tells me they “had sex”, I assume that means penile-vaginal penetration.	0.309	0.473	0.046
In a romantic situation between two people, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.	-0.006	0.426	0.154
It is a biological need for men to release sexual pressure from time to time.	0.225	0.418	-0.017
Most women have a hard time reaching orgasm.	0.302	0.322	0.060
It is awkward to talk during sex.	0.100	0.131	0.965
Having sex during (my or my partner’s) menstruation seems off-putting to me.	0.199	0.118	0.252

Extraction Method: Maximum Likelihood

Rotation Method: Varimax Rotation with Kaiser Normalization, converged in 6 iterations

Appendix Figure 15: Gendered Factor Model 1 – Scree Plot



Gendered Model 2: Men (N = 321)

Appendix Table 11: Gendered Factor Model 2 – Total Variance Explained

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings					
	Total	% of Vari- ance	% cum	Total	% of variance	% cum	Total	% of variance	% cum
1	2.803	28.034	28.034	2.081	20.810	20.810	1.409	14.089	14.089
2	1.191	11.912	39.946	0.644	6.442	27.252	0.952	9.518	23.607
3	1.067	10.672	50.618	0.422	4.215	31.467	0.786	7.860	31.467
4	0.836	8.360	58.978						
5	0.792	7.917	66.895						
6	0.758	7.577	74.472						
7	0.715	7.154	81.627						
8	0.658	6.579	88.205						
9	0.653	6.529	94.734						
10	0.527	5.266	100.000						

Extraction Method: Maximum Likelihood

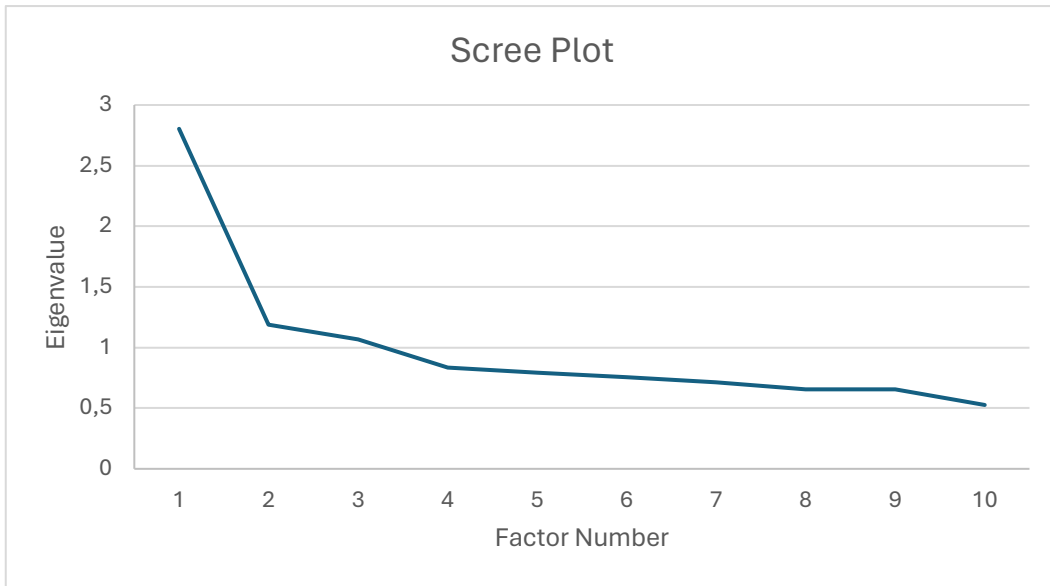
Appendix Table 12: Gendered Factor Model 2 – Rotated Factor Matrix

Rotated Factor Matrix (men only)	Factor		
	1	2	3
In a heterosexual scenario, I would expect the man to determine the pace of sexual encounter.	0.604	0.045	0.087
With heterosexual couples, the man is usually on top of the woman during sex.	0.492	0.358	0.079
When someone tells me they “had sex”, I usually assume that means penile-vaginal penetration.	0.460	0.089	0.336
I usually consider a sexual interaction complete when a man ejaculates.	0.445	0.153	0.174
In sex, there is usually a more dominant and a more submissive partner.	0.418	0.221	-0.022
In a romantic situation between two people, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.	0.348	0.281	-0.002
It is a biological need for men to release sexual pressure from time to time.	0.234	0.471	0.181
Having sex during (my or my partner’s) menstruation seems off-putting to me.	0.171	0.470	-0.023
Most women have a hard time reaching orgasm.	0.043	0.466	0.067
It is awkward to talk during sex.	0.102	0.083	0.769

Extraction Method: Maximum Likelihood

Rotation Method: Varimax Rotation with Kaiser Normalization, converged in 5 iterations

Appendix Figure 16: Gendered Factor Model 2 – Scree Plot



Binary Weighted Model (N = 642)

Appendix Table 13: Binary Weighted Factor Model – Total Variance Explained

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings					
	Total	% of Vari- ance	% cum	Total	% of variance	% cum	Total	% of variance	% cum
1	2.834	28.344	28.344	1.240	12.400	12.400	1.459	14.587	14.587
2	1.136	11.356	39.700	1.828	18.278	30.678	1.061	10.606	25.193
3	1.015	10.151	49.851	0.378	3.776	34.453	0.926	9.261	34.453
4	0.952	9.521	59.371						
5	0.793	7.933	67.305						
6	0.754	7.543	74.848						
7	0.688	6.883	81.731						
8	0.680	6.796	88.527						
9	0.618	6.178	94.705						
10	0.529	5.295	100.000						

Extraction Method: Maximum Likelihood

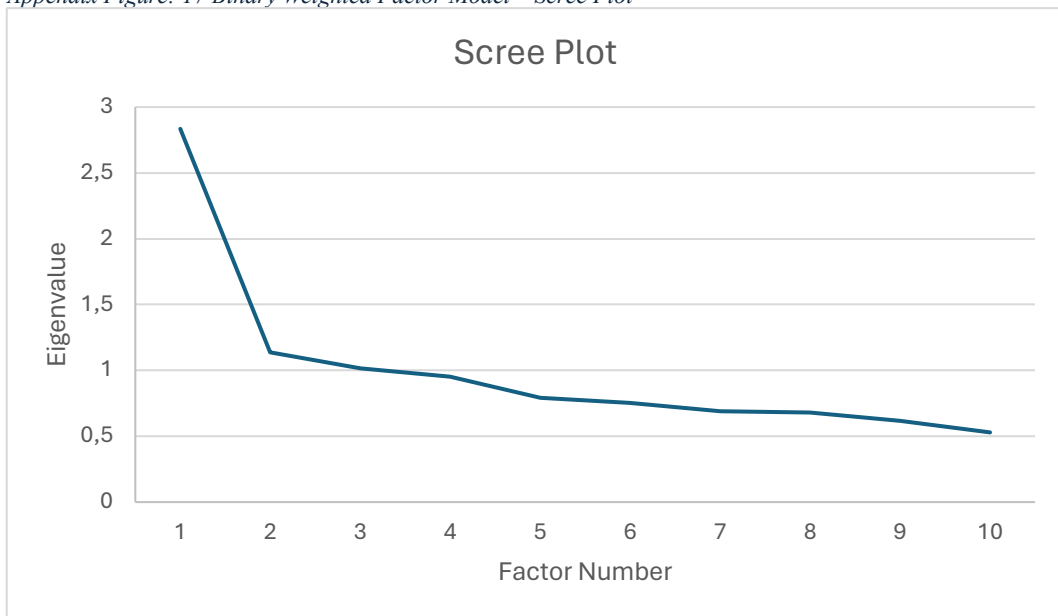
Appendix Table 14: Binary Weighted Factor Model – Rotated Factor Matrix

Rotated Factor Matrix (full weighted model)	Factor		
	1	2	3
In sex, there is usually a more dominant and a more submissive partner.	0.529	0.110	0.120
In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter.	0.513	0.032	0.307
When someone tells me they “had sex”, I assume that means penile-vaginal penetration.	0.512	0.095	0.146
With heterosexual couples, the man is usually on top of the woman during sex.	0.468	0.143	0.092
It is a biological need for men to release sexual pressure from time to time.	0.445	-0.035	0.223
In a romantic situation between two people, if one person asks the other “can I kiss you?” that takes away from the romantic mood.	0.300	0.025	0.292
Most women have a hard time reaching orgasm.	0.168	0.984	0.055
It is awkward to talk during sex.	0.075	0.060	0.579
Having sex during (my or my partner’s) menstruation seems off-putting to me.	0.200	-0.046	0.404
I usually consider a sexual interaction complete when a man ejaculates.	0.270	0.207	0.388

Extraction Method: Maximum Likelihood

Rotation Method: Varimax Rotation with Kaiser Normalization, converged in 5 iterations

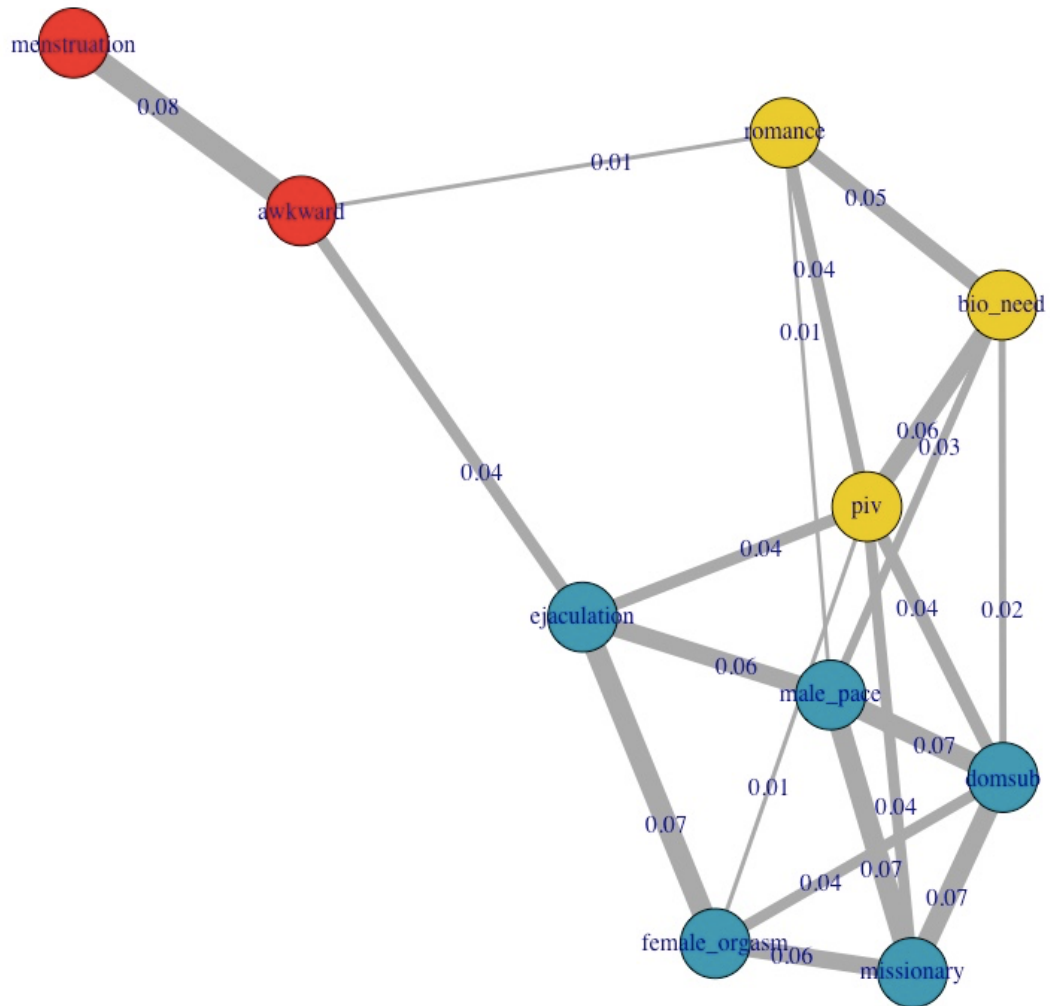
Appendix Figure: 17 Binary Weighted Factor Model – Scree Plot



Network Analysis

Appendix Figure 18: Initial Full Network Model – Network Graph

Initial Full Model (N = 1.029)



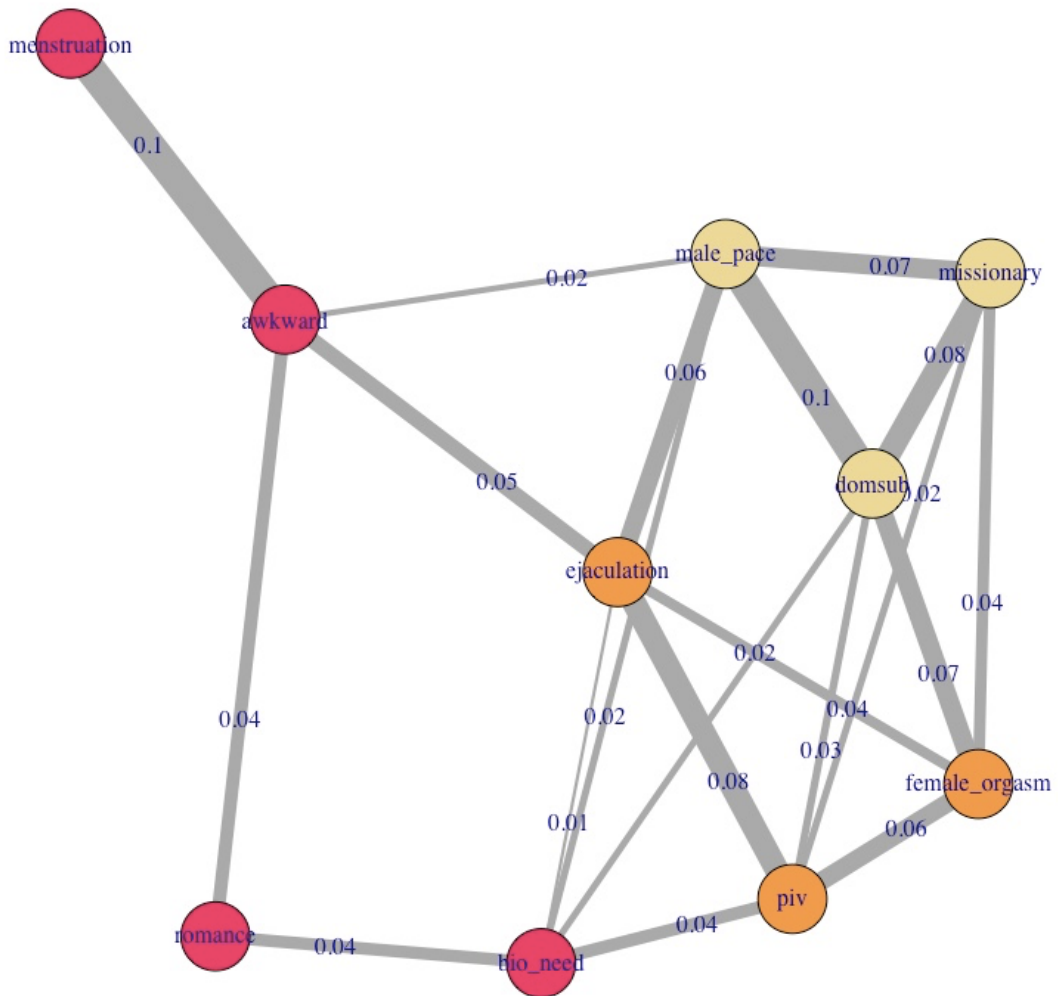
Appendix Table 15: Initial Full Network Model –Community Structure

Cluster 1	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
Cluster 2	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
Cluster 3	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>awkward</i>	“It is awkward to talk during sex.”

Extraction: fast greedy modularity optimization algorithm

Gendered Model 1: Women (N = 669)

Appendix Figure 19: Gendered Network Model 1 – Network Graph



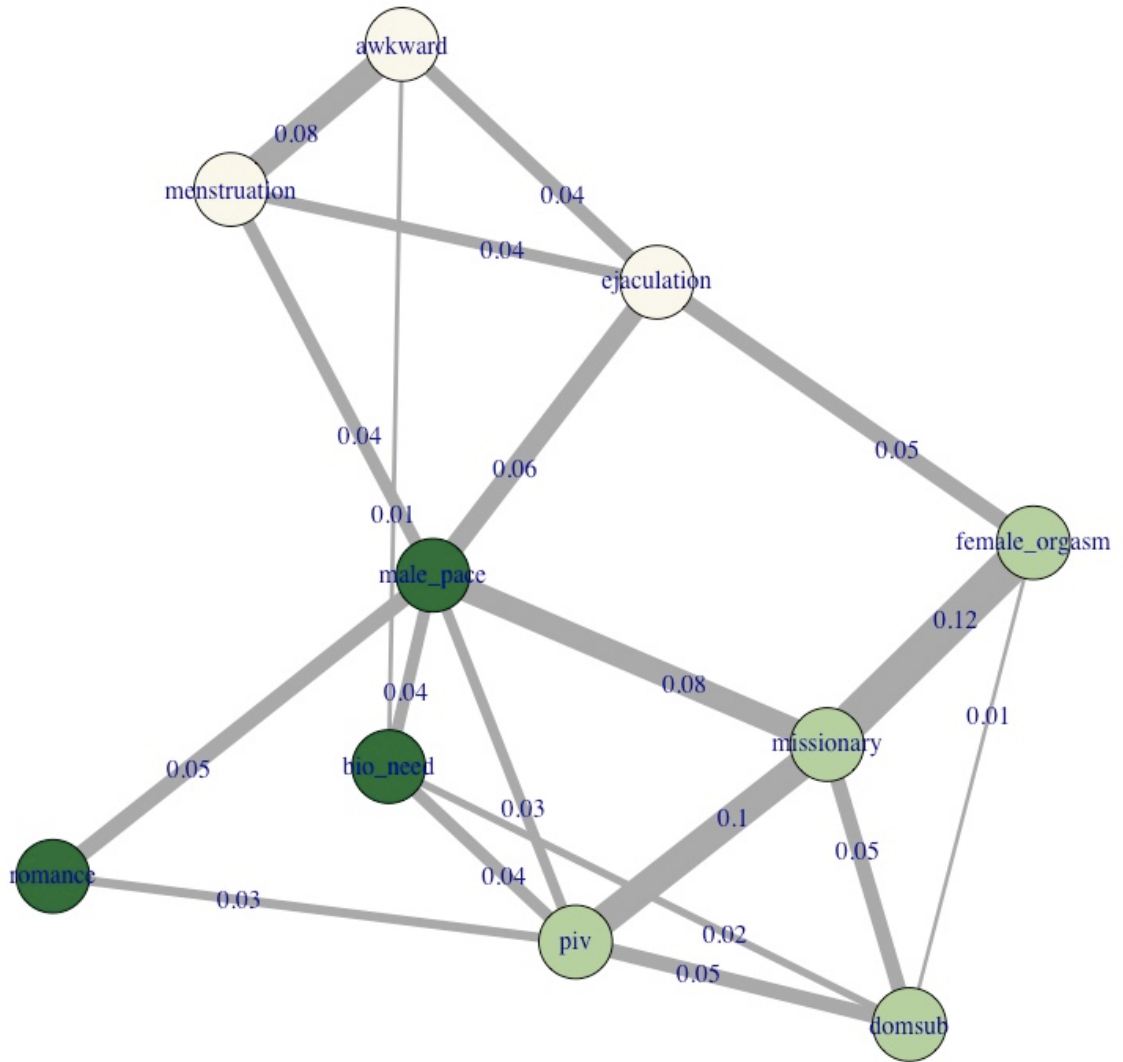
Appendix Table 16: Gendered Network Model 1 – Community Structure

Cluster 1	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>awkward</i>	“It is awkward to talk during sex.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
Cluster 2	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
Cluster 3	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”

Extraction: fast greedy modularity optimization algorithm

Gendered Model 2: Men (N = 321)

Appendix Figure 20: Gendered Network Model 2 – Network Graph



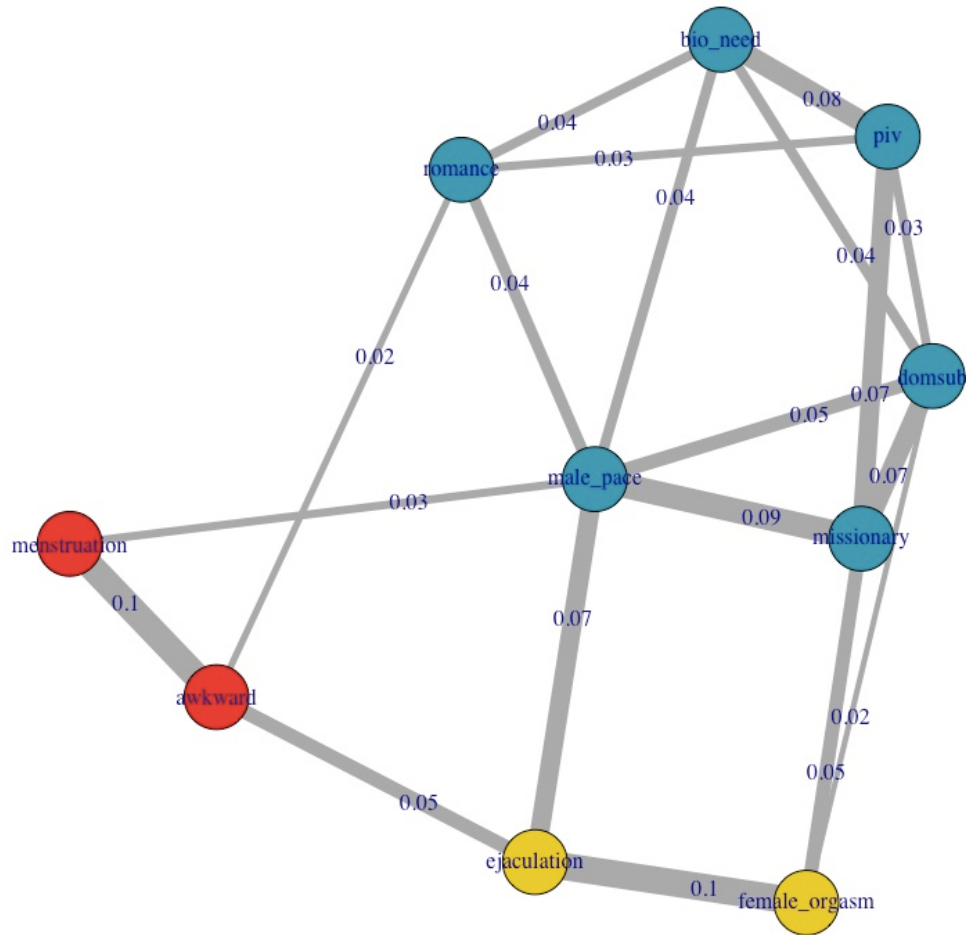
Appendix Table 17: Gendered Network Model 2 – Community Structure

Cluster 1	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
Cluster 2	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
Cluster 3	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”
	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>awkward</i>	“It is awkward to talk during sex.”

Extraction: fast greedy modularity optimization algorithm

Binary Weighted Model (N = 642)

Appendix Figure 21: Binary Weighted Network Model – Network Graph



Appendix Table 18: Binary Weighted Network Model – Community Structure

Cluster 1	<i>romance</i>	“In a romantic situation, if one person asks the other “can I kiss you?”, that takes away from the romantic mood.”
	<i>bio_need</i>	“It is a biological need for men to release sexual pressure from time to time.”
	<i>piv</i>	“When someone tells me they ‘had sex’, I usually assume that means penile-vaginal penetration.”
	<i>domsub</i>	“In sex, there is usually a more dominant and a more submissive partner.”
	<i>male_pace</i>	“In a heterosexual scenario, I would expect the man to determine the pace of the sexual encounter (for example, I expect the man to introduce tongue into kissing).”
	<i>missionary</i>	“In heterosexual couples, the man is usually on top of the woman during sex.”
Cluster 2	<i>ejaculation</i>	“I usually consider a sexual interaction complete when a man ejaculates.”
	<i>female_orgasm</i>	“Most women have a hard time reaching orgasm.”
Cluster 3	<i>awkward</i>	“It is awkward to talk during sex.”
	<i>menstruation</i>	“Having sex during (my or my partner’s) menstruation seems off-putting to me.”

Extraction: fast greedy modularity optimization algorithm

Network Model Comparison

Appendix Table 19: Network Model Comparison

	Initial full model			Women only			Men only			Weighted full model		
Sample size	1.029			669			321			642		
Density	46.67%			51.11%			51.11%			46.67%		
Clustering coefficient	0.45			0.554			0.467			0.411		
BIC	167.63			171.77			154.85			157.9		
Item centrality	Degree centrality	Close-ness centrality	Between-ness centrality	Degree centrality	Close-ness centrality	Between-ness centrality	Degree centrality	Close-ness centrality	Between-ness centrality	Degree centrality	Close-ness centrality	Between-ness centrality
romance	4	0.0196	0	2	0.021	2	2	0.025	0	4	0.027	0
Female_orgasm	4	0.027	0	4	0.029	2	3	0.034	3	3	0.031	0
Missionary	4	0.028	0	4	0.025	0	4	0.039	14	4	0.038	8
PIV	6	0.03	10	5	0.033	3	5	0.033	2	4	0.029	2
Domsub	5	0.028	1	5	0.03	1	4	0.024	0	5	0.029	0
Bio_need	4	0.023	1	5	0.025	2	4	0.244	0	4	0.027	0
Male_pace	5	0.031	6	5	0.033	9	6	0.042	16	6	0.042	16
Ejaculation	4	0.034	16	5	0.038	14	4	0.033	2	3	0.036	9
Menstruation	1	0.018	0	1	0.024	0	3	0.026	6	2	0.024	0
awkward	3	0.022	8	4	0.03	12	3	0.022	0	3	0.026	3