Social identity switching: an investigation of non-demographic identities with computational-linguistic and self-report measures

Anna Kristina Zinn, Aureliu Lavric, Elahe Naserianhanzaei, Miriam Koschate

Abstract

Recent research has shown that people can switch between demographic social identities seamlessly. The current studies advance social identity switching research by (1) moving beyond demographic identities to identities that are not perceptually distinguishable; (2) developing a new identity switching paradigm based on an implicit computational linguistic style measure of salience; and (3) including explicit self-report measures of switch effectiveness, task difficulty, and performance. In two within-subjects studies (N = 211 and N = 220), a short writing task was used to prompt a switch from participants' parent identity to their feminist identity or a repetition of the feminist identity. Our findings from the implicit measure revealed no identity activation "cost" in the switch relative to the repetition condition, consistent with the previous findings for demographic identities. In contrast, the self-reported salience of the feminist identity was significantly lower in the identity switch condition than in the repetition condition. Study 2 also

found little-to-no difference in self-rated performance or difficulty of the task between conditions, indicating no switch costs on perceived performance. We discuss possible reasons for the discrepancy between the implicit measure and the explicit salience measure as well as implications of the new paradigm and our findings.

Keywords: Social Identity; Identity Activation Costs; Social Identity Switching; Multiple Identities; Linguistic style

Over 40 years of social identity research has documented the important role social identities play in people's everyday lives. An individual's social identity is derived from the various group and category memberships they identify with (Tajfel & Turner, 1979). The wide range of groups and categories (see e.g., Cork et al., 2023; Deaux et al., 1995; Lickel et al., 2000; Prentice et al., 1994) can be based on demographics (e.g., one's gender identity), personal relationships (e.g., being a parent), organisational memberships (e.g., being an employee in a particular company) or shared values and opinions (e.g., being a feminist). The different social identities have in common that they are a key part of the individual's sense of self and that they can shape one's life as a result (Tajfel & Turner, 1979; Turner et al., 1994).

Social identities are thought to be flexible (Turner et al., 1987), because changes in our environment or the social context can trigger a switch from one salient identity to another (e.g., Oakes, 1987; Turner et al., 1994). For example, a doctor might switch from a customer identity to their work-related identity when exiting the bus and walking into the hospital. While in the hospital, they might receive a text from their child which may elicit a switch to their parent identity. These switches in social identity salience are thought to allow the individual to adapt to their social context and show context-appropriate behaviour.

Investigating the effectiveness of social identity switches

According to self-categorisation theory (SCT) social identity switches occur in a natural and seamless way (e.g., Turner et al., 1994).

Recent evidence indeed suggests that switches between social identities are very effective. Zinn et al. (2022) examined social identity switches in a design modelled on the task-switching paradigm (e.g., Kiesel et al., 2010; Meiran, 1996; Monsell, 2003; 2015; Rogers & Monsell, 1995). Task-switching studies directly compare performance during task switches (e.g., between identifying the colour of an object to identifying its shape; e.g., Lavric et al., 2008; Monsell & Mizon, 2006) vs. task repetitions. This comparison has revealed the task "switch cost" – longer response times and error rates on the switch trials (Rogers & Monsell, 1995).

Building on the background of task switching research, Zinn et al.'s (2022) studies on the effectiveness of identity switching investigated whether an identity switch leads to an *identity activation cost* – "a delayed or weaker activation of the switched-to identity" (Zinn et al., 2022, p.1). As in task-switching studies, social identity switches and repetitions were directly compared in a within-subject design. However, in task switching, this comparison focuses on immediate performance measures (reaction time and accuracy), whereas in identity switching the focus is on identity salience measures derived from an identity-based Implicit Association Test (IAT; Greenwald et al., 1998; Pinter & Greenwald, 2010; see Zinn et al., 2022, for further discussion of similarities and differences between the task-switching and identity-switching paradigms).

The above-mentioned studies by Zinn et al. (2022) revealed no significant differences in identity salience between identity switches and identity repetitions – and hence no detectable identity activation costs. In the first study, this was shown for switches between well-established demographic identities (age identity and race identity). The second study showed similar results for switches between well-established demographic groups (national identity and age identity) and for switches from a newly acquired minimal group to a well-established demographic group. In short, participants switched identities without incurring delays in activating the switched-to identity.

While this research on social identity switching provided intriguing initial evidence that social identity switches are highly effective, some key knowledge gaps remain – in what follows, we outline these gaps and how the present study aims to address them.

Social identity switching between non-demographic groups

Social identities derive from many different kinds of groups and categories: ascribed or self-chosen, socially accepted or stigmatised, common bond versus common identities, etc. (e.g., Deaux et al., 1995; Prentice et al. 1994). In order to study how group characteristics affect intra- and intergroup relations, several researchers have proposed clusters (types) of groups and social identities, with demographic categories forming only one of many types of group memberships (Cork et al., 2023; Deaux et al., 1995; Lickel et al., 2000).

An important limitation of the findings of Zinn et al. (2022) is that their research focused predominantly on demographic groups. In their first study, they examined switches among participants' age identity, their national identity, and a minimal group identity. It remains unclear whether their conclusion that identity switches are highly effective generalises to other types of identity. For instance, according to ratings obtained by Lickel et al. (2000), demographic ('social') categories are lower in entitativity, personal importance, and levels of member interactions than 'intimacy' and 'task-based' groups, but higher in durability and size. Cork et al. (2023) found that demographic groups are particularly high in conformity, universalism and self-direction compared to (a)vocational, relationship and stigmatised groups that were defined more by achievement and benevolence, respectively. Thus, Zinn and colleagues' findings above may not hold true for switches between non-demographic groups. The first aim of the current study is therefore to examine the effectiveness of identity switching for social identity switches between two non-demographic groups.

Implicit assessment of salience for groups that do not differ in physical appearance

In their first study on social identity switching, Zinn et al. (2022) inferred identity salience from in-group favouritism (e.g., Otten & Moskowitz, 2000) assessed with an adapted version of the Implicit Association Test (IAT; Greenwald et al., 1998). In their second study, they replaced the IAT with an identification IAT (e.g., Pinter & Greenwald,

2010) to assess the association between the self and the in-group more directly. However, when the aim is to move beyond the assessment of demographic groups, the approach of measuring salience based on IAT performance might not be the most optimal as neither the original IAT nor the identification IAT were created or validated to assess salience directly. Furthermore, an implicit salience measure based on the IAT may not be applicable to all types of identities. For example, perceptual categorisations, such as the face categorisation used in Zinn and colleagues' (2022) study of switching between demographic identities, are harder to apply to identities that cannot be distinguished by physical appearance, e.g. parent identity or feminist identity. They addressed this challenge by using identification IATs (e.g., Pinter & Greenwald, 2010) and by requiring participants to learn - prior to the IATs - the faces of in-group members. However, these extra aspects of the design substantially lengthen the experimental session because the pre-exposure would have to be done for each additional investigated social identity that cannot be distinguished by physical appearance.

A fundamentally different implicit measure, which may overcome the above-mentioned drawbacks of using IATs for measuring identity salience, is the Automated Social Identity Assessment (ASIA), recently developed by Koschate et al. (2021), measures relative social identity salience based on the linguistic style of participants' writing. ASIA uses linguistic style to distinguish between the salience of two social identities. Koschate et al. demonstrated that a trained classifier was able

to determine which of two identities was salient (e.g., feminist vs. parent) with relatively high accuracy (AUC: .72 - .75). The classifier retained its accuracy in an experimental design in which participants who hold both identities were randomly assigned to conditions in which only one of the two identities was made salient, whilst keeping constant over conditions the writing topics and the audience. ASIA's input is a minimum of 25 words converted to linguistic style indicators (e.g., percentage of pronouns, long words, positive emotion words). The pre-trained and validated model can then be used to provide probability scores that indicate which of the two identities was more likely to be salient when the participant wrote the text.

The parent-feminist ASIA model has already been successfully used to measure identity salience in an experiment that examined whether participants could intentionally prevent an identity switch (Zinn et al., 2023). Self-report measures indicated that participants thought they had remained in their parent identity as instructed, yet the implicit salience measure revealed a switch from the parent to the externally activated feminist identity. Interestingly, the result was not affected by differences in the use of relevant content words: participants asked to stay in their parent identity used more family words (e.g., daughter, son) than participants who did not receive this instruction, but there was no detectable difference between the two groups in the ASIA's linguistic style measure when they wrote about a feminist topic, indicating a lack of control over the switch. Importantly, the ASIA measure was sensitive to

the salience of the parent and feminist identity as it showed that a parent identity was more likely to be salient directly after participants were asked to think of themselves as parents and before the switch to a feminist identity was prompted by the feminist topic.

Thus, ASIA allows the direct measurement of the relative salience of specific identities irrespective of physical appearance. Furthermore, once the classifier is trained, tested, and validated (prior to the experiment) for the identities of interest, the only requirement during the experiment is that participants write a piece of joined text (prose) of at least 25 words.

Subjective experience of social identity switches

Implicit measures may reveal endogenous processes into which people have limited insight/introspection. They can also help to overcome strategies that participants may adopt with explicit measures, in particular, demand characteristics (Koschate et al. 2021). Hence, the above-mentioned research on social identity switching focused on measures of identity switching derived from implicit measures of identity salience (Zinn et al., 2022, 2023). However, such measures do not capture how participants experience the switches. To capture both the cognitive processes underlying social identity switching, as well as the experience of the switching process, implicit measures should be complemented by explicit self-report measures of salience.

In task switching research, there has been interest in people’s awareness of the task switch cost. The presence of such awareness is

suggested by the finding that participants show a bias towards repeating the same task when given the opportunity to decide whether to switch or repeat a task (e.g., Mittelstädt et al., 2018). Research on the level of introspection has revealed a high correlation between self-reported response times and actual response times in single-task contexts (Corallo et al., 2008). By extrapolation, one may expect that people's experience of identity switching might be closely aligned with the effectiveness assessed via implicit measures. However, this has not been tested thus far, except for the above-mentioned study by Zinn et al. (2023), which provided initial evidence for a potential discrepancy between the implicitly measured activation costs of social identity switching and the self-reported experience of controlling a switch. There, participants reported being able to prevent an identity switch, whereas the implicit measure showed the contrary – that an external prompt resulted in an identity switch. However, this research focused on controlling identity switches rather than on the effectiveness of switches when participants are instructed to switch. Thus, the third aim of the present research is to include an explicit self-report measure of identity salience for assessing the experienced effectiveness of switching identities.

The fourth aim of the present research - which we address in our second study – is to investigate the effect of identity switching on perceived performance and difficulty. Past research on social identity switching (Zinn et al., 2022, 2023), as well as Study 1, focus exclusively on whether people incur identity activation costs – a delay of activating

the switched-to identity. To better understand wider consequences of social identity switching on identity-related tasks, as well as the extent to which social identity switching relates to the subjective experience of switching identities, we will ask participants directly after the task about their perceived performance and the difficulty of writing after completing an identity switch or after staying in the same identity.

Current Research

The research by Zinn et al. (2022) discussed above provided the first empirical evidence that social identity switches are highly effective. The following two pre-registered studies extend this research by attempting to (1) examine whether the key finding generalises to identities that are not based on demographic and/or perceptually distinguishable categories; (2) use a different implicit measure of identity salience; (3) additionally assess the subjective experience of switching effectiveness. The social identities of being a parent and being a feminist were chosen for the current study because members of these groups are not perceptually distinguishable, both identities relate to groups that are not based on demographics, they can be held independently of each other but can also be held by the same individual, and they are meaningful to a substantial number of people. Although feminism is often associated with the female gender, people of other genders including men identify themselves as feminists (e.g, Silver et al., 2019). Similarly, parenting is often associated with the female gender due to the gendered nature of social roles in many societies, but it is evident that people of

other genders also identify as parents. An ASIA classifier has been previously trained and extensively validated for these identities (Koschate et al., 2021), making them an optimal choice for the purposes of this research.

The present studies consist of two experimental conditions – identity repetition and identity switch - both of which were completed by all participants at least one week apart. Each condition included two writing tasks with the writing topic used as a prompt to make either the parent or feminist identity salient (see e.g., Zinn et al., 2023). In the repetition condition, participants remained in the same identity, hence they wrote about a topic relevant to their feminist identity in both writing tasks. In the switch condition, participants were prompted to switch from a parent identity to a feminist identity. Hence, they were first asked to write about a topic relevant to their parent identity and then about a topic related to their feminist identity. Accordingly, the key difference between the switch and repeat condition was the social identity activated in the first writing task, allowing for a direct comparison of identity switches and identity repetitions, as in task switching research (e.g., Meiran, 1996; Rogers & Monsell, 1995) and as in the previous study on the effectiveness of social identity switching (Zinn et al., 2022).

Hypotheses

If social identity switches are costly - leading to a delay in the activation of the subsequently prompted identity - a stronger feminist (rather than parent) linguistic style is expected in the feminist identity

repeat condition as compared to the parent-to-feminist switch condition. This means that it should be more difficult for the parent-feminist ASIA model to distinguish between the two identities after a switch than after a repeat of the same social identity. However, based on previous research (Zinn et al., 2022), in which no social identity activation costs were found, the following null hypothesis was tested for the implicit salience measure:

H1 (null hypothesis): If social identity switches are effective, no significant difference in the implicit salience measure of the switched-to identity is expected between the identity switch vs repeat condition.

If switches are perceived as costly, a higher self-reported salience for the feminist identity in the repeat condition compared with the switch condition is expected. While there is no prior research on the level of introspection people have about social identity switches, we had no reason to believe that participants would perceive a switch as costly if the cognitive process is highly effective. Therefore, we did not expect to find perceived costs of identity switches, resulting in the second null hypothesis:

H2 (null hypothesis): If social identity switches are perceived to be effective (no perceived identity activation cost), no significant difference is expected in self-reported salience of the switched-to identity between the identity switch vs repeat condition.

Additionally, in Study 2, we tested whether social identity switching affected the perceived performance in the specific study task

and difficulty ratings. We tested for the null hypotheses that switching the identity does not impact task performance ratings (H3) or difficulty ratings of the writing task (H4) compared with repeating the identity.

Study 1

Participants and Design

Sample size calculations were based on Brysbaert (2019). We aimed to test for a statistical power of .80 for a small to medium effect size of Cohen's $d = 0.40$ in a within-subject design. A paired-samples t-test requires 215 participants to test the null hypothesis under these requirements for H1 and H2.

Participants were recruited through the online Platform Prolific Academic. To take part in the study, they had to be a parent and consider themselves to be a feminist, be aged 18 or above, and have English as their mother tongue. Only participants who had not taken part in any of our studies on social identity switching on Prolific Academic and had completed at least five previous studies on the platform were invited to the study (the latter requirement ensured that participants used the recruitment platform regularly and were therefore likely to return to complete the second part of the study).

From the total of $N = 258$ participants who completed the first part of the study, eight did not meet the inclusion criteria ($n = 2$ were not parents; $n = 6$ did not list English as a mother tongue). This resulted in $N = 250$ participants being invited to the second part of the study. A total of $N = 227$ of them completed the second part of the study. However, $n =$

16 had to be excluded, with n = 15 for writing less than 25 words in one of the main texts, and n = 1 who did not indicate their first language. This resulted in a final sample size of N = 211 (153 women (72.5%), 57 men (27.0%), 1 non-binary), which was close to our target of N = 215. Participants were, on average, 40.53 years old (SD = 10.04, Min = 23, Max = 65). All participants spoke English as one of their first languages, with n = 24 (11.4 %) participants being bi- or multi-lingual. Study 1 included participants from 12 different nationalities with the majority of participants from the United Kingdom (57.3%), followed by South Africa (12.3%) and the United States of America (11.4%). Most participants (76.3%) indicated White as their race, followed by Black, Caribbean or African (14.2%), Asian or East Asian (4.3%), and Mixed or Multiple groups (3.8%), with three other or missing responses (1.5%; see Appendix A for a full list of nationalities and additional demographics).

The pre-registered study has a within-subjects design with switching (identity switch vs repeat) as the independent variable and social identity salience as the dependent variable. Social identity salience was assessed both with an implicit measure (ASIA) and an explicit measure. A specific social identity was made salient by the topic participants were asked to write about. The order of the two feminist writing topics for the main writing task and whether participants started with an identity switch or repeat were counterbalanced. This resulted in four balancing conditions: switch and topic A first (n = 52); switch and topic B first (n = 55); repeat and topic A first (n = 52); repeat and topic B

first (n = 52).[1] The study received approval from the [blinded for review] departmental ethics committee.

Materials and Procedure

Participants provided informed consent to take part in the study, which was run online on Qualtrics. The study needed to be completed on a PC to avoid automatic sentence completion or notifications. Participants were told that the study consisted of two parts, each taking about 12 min, to be completed at least one week apart. They were paid £1.50 for the first and second part of the study, respectively, plus a £1 bonus for completing both parts. Each participant completed the switch from the parent identity to the feminist identity and the repetition of the feminist identity in two separate Qualtrics surveys one week apart, with half of participants starting with the switch condition and the other half with the repeat condition. The main procedure of the study is summarised in Figure 1. Participants were either debriefed after the second part of the study or sent the debrief form via Prolific.

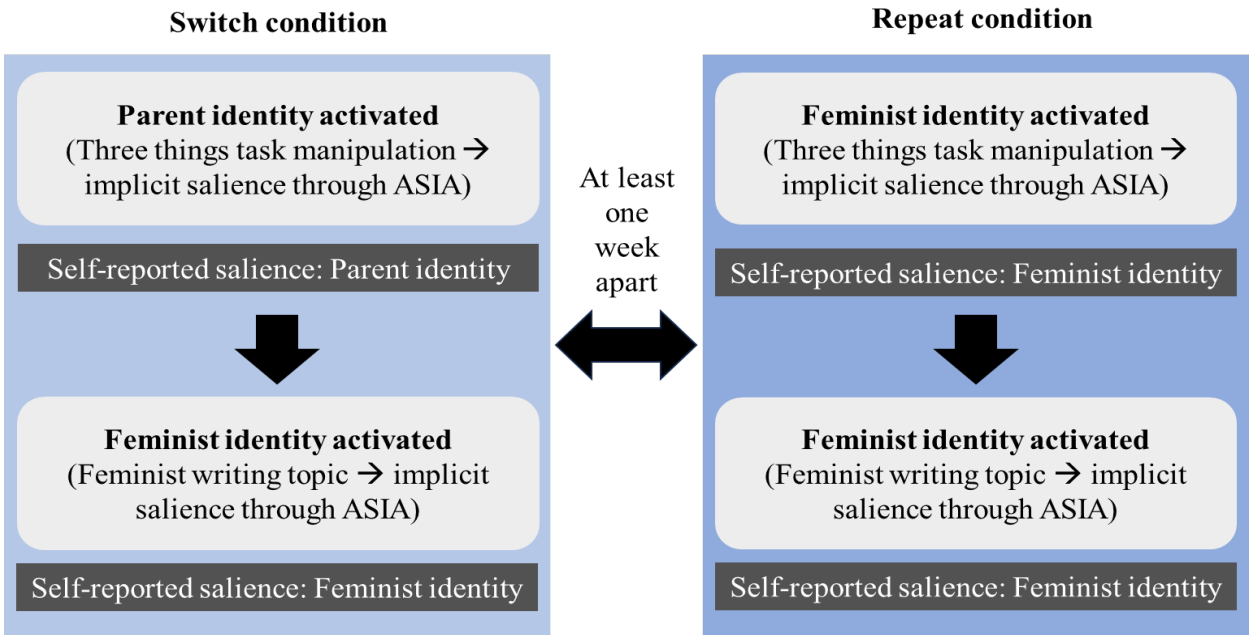
Salience manipulation of the first identity

The first writing task functioned as a social identity salience manipulation where either a parent identity in the switch condition or a feminist identity in the repeat condition was made salient. The analysis of the written answer served as a manipulation check. For this writing task, we adapted the three things manipulation by Haslam et al. (1999). Participants were asked to write at least 4-5 sentences (25 words) about

[1] The conditions were balanced slightly imperfectly due to exclusions.

the parent[/feminist] social identity by describing things that they and other parents[/feminists] do often, rarely, well, and badly.

Figure 1



Study Procedure

Note. The order of the repeat and switch condition and that of the feminist writing topics were jointly counterbalanced over participants.

Salience of the second identity

The second writing task required participants in both conditions to write about one of two feminist topics (one topic per session): Topic A "Women are still treated like sex objects." and Topic B "Women are still treated as the "weak gender" in the workplace." A similar topic to Topic A has previously been found to successfully elicit a switch from the parent to the feminist identity (Zinn et al., 2023). We chose different

topics related to feminist concerns in order to avoid effects from participants trying to recall their answer to the first writing task in the second part of the study.

Implicit salience measure

A pre-trained parent-feminist ASIA classifier (Koschate et al., 2021) was used for obtaining an implicit salience measure by determining the relative probability of a feminist identity versus a parent identity. In order to analyse writing style with ASIA, the Linguistic Inquiry and Word Count (LIWC) software (Pennebaker et al., 2007) was used to convert the four texts written by participants in response to the manipulation of the first identity and to topic A and B into normalised frequencies of 41 stylistic indicators. As recommended by Koschate et al. (2021), we used domain adaptation (DA; e.g., Fernando et al., 2013) to account for differences in the distribution of the online data that the classifier was originally trained on and data collected in our experiment. It adjusted the classifier based on a combination of the initial forum posts used by Koschate et al. (2021) and the text provided as part of the three things manipulation writing task in the present experiment as this task provides us with some "ground truth" as to which identity should be salient. The adjusted classifier was then applied to text that participants wrote in response to the manipulation as well as to the feminist topics. The classifier provides the probability that a feminist rather than a parent identity was salient when the text was written, with 0 (= *highest probability that a parent rather than feminist identity is salient*) and 1 (=

highest probability that a feminist rather than parent identity is salient), with 0.5 showing that the text could not be classified into either category.

Explicit salience measure

Directly after each writing task (for the three things manipulation and for the feminist topics) we assessed self-reported salience. Participants answered the self-report item “I am thinking of myself as a feminist[/parent] right now” (based on Verkuyten & Hagendoorn, 1998) on a 7-point Likert scale ranging from 1 (= *strongly disagree*) to 7 (= *strongly agree*). The identity that was asked about only related to the identity that had been manipulated as we did not wish to inadvertently make the other identity salient.

Demographic questionnaire

After the first survey, participants completed a demographic questionnaire which included questions about their age, first language, gender, nationality, ethnicity, SES (Adler et al., 2000), number of children, age of oldest child, and whether they currently have children living with them.

Task and identity questionnaire

At the end of the second survey, participants completed a task and identity questionnaire, which included items about the specific tasks in the two surveys and the identities included. It was administered after the second survey to ensure that these questions did not influence participants’ responses throughout the study. First, participants were asked questions about the two writing topics: “The topic ["Women are

still treated like sex objects"/ "Women are still treated as the "weak gender" in the workplace"] is typical for:" on a 7-point Likert scale from 1 (= *parent identity*) to 7 (= *feminist identity*). This item allowed us to determine whether there are differences in the extent to which the two topics relate to the feminist identity. The questionnaire also included exploratory items that assessed the strength of identification with each identity (based on Doosje et al., 1995; Haslam et al., 1999) and one item assessing the compatibility of the two identities (based on Benet-Martínez & Haritatos, 2005).[2]

Results

IBM SPSS Statistics (IBM Corp, 2021) was used for all analyses including the calculation of Bayes factors (*BF*). Non-informative priors were selected for the Bayes analysis due to this study focusing on types of identities for which the effectiveness of identity switching has not been investigated before. We report the Bayes Factor as BF_{01} (testing for evidence in favour of the null hypothesis) with scores larger than 1 being considered as evidence for the null hypothesis and scores below 1 as evidence for the alternative hypothesis (for interpretation of scores please see Lee & Wagenmakers, 2014).

Preliminary analyses

Manipulation check

Prior to testing the main hypotheses, we ran a manipulation check on whether the three things manipulation activated the parent identity in

[2] These items were included for exploratory purposes only and will therefore not be reported in the results section.

the switch condition and the feminist identity in the repeat condition.

We found that participants' linguistic style differed significantly between the two conditions in the text written as part of the three things manipulation ($t(193) = 11.02$, $p < .001$, $d = 0.79$). As shown in Figure 2, participants showed a more feminist than parent linguistic style when writing about their feminist identity and a more parent than feminist linguistic style when writing about their parent identity ($M_{Diff} = 0.33$, $SE = 0.03$). Similarly, the explicit salience measure directly after the manipulation task showed scores above the mid-point of the scale for the manipulated social identity (feminist identity manipulation: $M = 5.89$, $SD = 1.11$; $t(210) = 24.66$, $p < .001$, $d = 1.70$; parent identity manipulation: $M = 6.71$, $SD = 0.54$; $t(210) = 72.47$, $p < .001$, $d = 4.99$), suggesting that social identities have been made salient as intended and that participants are to at least some extent aware of this.

Feminist topics

As expected, participants rated both feminist writing topics as more typical for feminists than parents with scores significantly above the mid-point of the scale for both topics (Topic A: $M = 5.64$, $SD = 1.38$, $t(210) = 17.35$, $p < .001$, $d = 1.19$; Topic B: $M = 5.28$, $SD = 1.57$, $t(209) = 11.86$, $p < .001$, $d = 0.82$). A paired samples t-test showed that participants more strongly associated writing topic A "Women are still treated like sex objects" with the feminist identity as compared to writing topic B "Women are still treated as the "weak gender" in the workplace" ($M_{Diff} = 0.36$, $SE = 0.11$; $t(209) = 3.32$, $p = .001$, $d = 0.23$). However, the

feminist writing topics were counterbalanced across conditions and time points and further analyses showed no influence of writing topic (see Appendix B).

Hypothesis 1 – Implicit salience measure

We conducted a paired-samples t-test comparing the linguistic style in the texts written in response to the feminist topics between the switch and repeat condition to test for social identity activation costs. Consistent with H1 (the null hypothesis), no significant difference was found in the probability of the feminist versus parent identity being salient ($t(210) = 0.24$, $p = .812$, $d = 0.02$) between the switch and repeat condition ($M_{Diff} = 0.01$, $SE = 0.02$), with average probabilities indicating a feminist writing style in response to the feminist topic, regardless of whether a switch or repeat of the feminist identity had occurred. Bayesian analysis revealed strong evidence for the null hypothesis, $BF_{01} = 17.78$ (see "Main text" panel in Figure 2[3]). Since participants started with different social identities being salient in the switch vs repeat condition (see "3 things manipulation" panel in Figure 2), this indicates that participants switched from their parent to their feminist identity without incurring social identity activation costs (in line with H1).

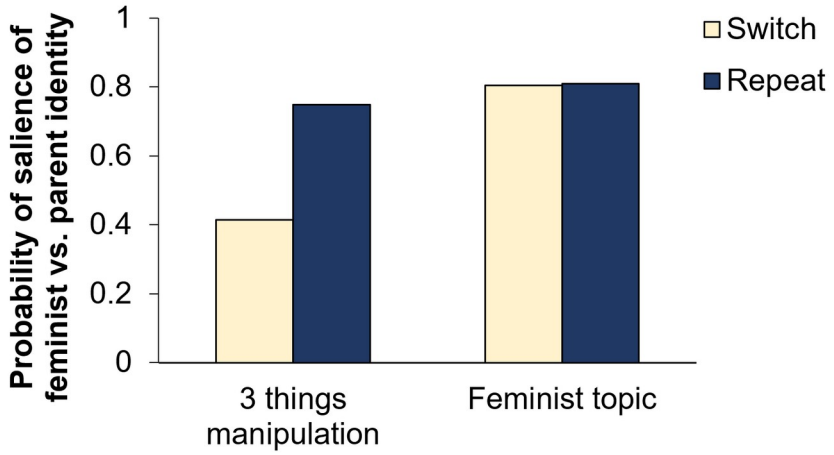
In addition, we ran an exploratory repeated measures ANOVA to test for an interaction between time (three things manipulation vs.

[3] Since the present studies have within-subject designs, the SEs of individual means are not informative regarding the variability of the contrasts of interest (e.g., the difference between congruent and incongruent trials). Therefore, they are not provided in the text or in the figures. We report, however, the SEs of the contrasts.

feminist topic) and condition (repeat vs switch) on the implicit salience measure (see Table 1). We found significant main effects of time and condition as well as a significant interaction between time and condition, reflecting a significant difference in the relative salience of the feminist versus parent identities after the three things manipulation (M_{Diff} = 0.41, SE = 0.03) but a non-significant difference for the feminist topic (M_{Diff} = 0.07, SE = 0.03). In line with the expectation that social identity switches are effective, this suggests little persistence (inertia) in the activation of the parent identity after the switch to the feminist identity.

Figure 2

Salience of feminist vs parent identity by condition – Study 1



Note. A score of 0 indicates that a parent identity rather than a feminist identity is salient, a score of 0.5 indicates that it is not possible to classify the text one way or the other, and a score of 1 indicates that a feminist identity rather than parent identity is salient.

Table 1

2 (time) x 2 (condition) ANOVA results – Study 1

Effect	*F*	*df*	*p*	η_p^2

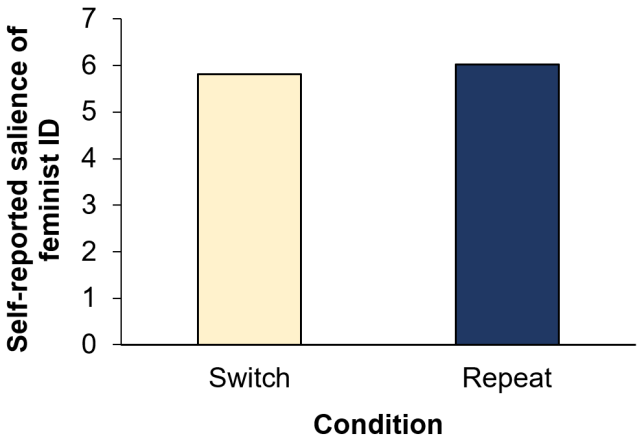
Time	144.33	1, 208	<.001	.410
Condition	86.61	1, 208	<.001	.294
Time x Condition	91.83	1, 208	<.001	.306

Hypothesis 2 – explicit salience measure

We also expected to find no differences between the switch and repeat condition in the self-reported salience measure (H2). A paired-samples t-test was run to compare the two conditions on the self-report item after the second identity (i.e., feminist identity in both conditions) had been made salient. Contrary to H2 and the finding for the implicit measure, a significant difference in the self-reported salience scores between the switch and repeat conditions was obtained, with $t(210) = 2.43$, $p = .016$, $d = 0.17$. In line with the alternative hypothesis, the self-reported salience scores for the feminist identity were significantly higher in the repeat than in the switch condition ($M_{Diff} = 0.20$, $SE = 0.08$; see Figure 3). However, this relatively small effect was not upheld by the Bayesian analysis, with anecdotal evidence for the null hypothesis, $BF_{01} = 1.01$.

Figure 3

Self-reported salience of feminist identity by condition – Study 1



Additional exploratory analyses[4]

Change in self-reported salience score

A comparison of the self-report item for the feminist condition after the three things task (first identity manipulation) and the feminist writing topic (second identity manipulation) is possible for the repeat condition. A paired-samples t-test showed a significant increase in self-reported salience scores for the feminist identity, with $t(210) = 3.33$, $p = .001$, $d = 0.23$ ($M_{\text{first}} = 5.89$, $M_{\text{second}} = 6.02$, $M_{\text{Diff}} = 0.13$, $SE = 0.04$). This indicates that the significant difference between the switch and repeat condition (as found in line with H2) is not entirely driven by a reduction in salience in the switch condition, as would be expected for identity activation costs, but is instead more likely to be due to an increase in salience of the feminist identity in the repeat condition.

Study 2

In Study 2, we aim to replicate the findings of Study 1 with a more diverse sample and to extend the measures from the subjective

[4] Additional exploratory analyses can be found in Appendix D

experience of identity salience itself to also include the subjective experience of switching on one's own performance and perceived difficulty of the task. .

Participants and Design

We aimed to recruit at least 215 participants (see sample size calculations for Study 1). We recruited participants on Prolific Academic who: were aged 18 or above; are biological or adoptive parents of at least one child; fluent in English; had not taken part in Study 1 or any other social identity switching studies conducted by us; and had completed at least five previous studies on Prolific. A total of 289 participants completed part 1 of the study. Of these participants, 38 (13%) were not invited to the second part because they had (1) written fewer than 25 words in at least one of the two writing tasks (n = 28, 10%) , (2) answered that they do not support equal gender opportunity and would not consider themselves a feminist (n = 7, 2%), or (3) submitted texts with severe spelling/grammar errors (n = 3, 1%). Out of these 251 participants, 239 (95%) completed the second part of the study. Of these,29 (12%) participants were excluded from the final analyses due to insufficient word count (< 25 words) in at least one of the two writing tasks in the second part of the study, and two further participants (0.8%) were excluded due to incomplete data.

Of the final N = 220 participants, 150 identified as women (68.2%), 69 as men (31.4%; 0.5% selected "other"). The average age of participants was 37.71 years (SD = 10.25, Min = 18, Max = 72). All

participants were fluent in English, but we widened the inclusion criteria from Study 1 to non-native English speakers. In total, 176 participants (80%) were native English speakers (of which 69 participants were bi- or multi-lingual). 41 participants (18.7%) were nonnative English speakers [of which five were bi- or multi-lingual; missing responses: 3 (1.4%)]. Study 2 included participants of 27 nationalities with the majority from South Africa (46.4%) and the United Kingdom (18.6%). Most participants indicated their ethnicity as either Black, Caribbean or African (46.8%) or White (43.2%), but the sample also included Asian or East Asian participants (4.1%) and those with Mixed or Multiple ethnicity (3.2%) as well as other or those who prefer not to say (2.8%; see Appendix C for a full list of nationalities and additional demographics).

The pre-registered study follows the same within-subject design as Study 1. The independent variable was identity switching (identity switch vs, repetition). The dependent variables were social identity salience (implicit ASIA measure and explicit self-report measure) and - in addition to the variables from Study 1 - the perceived performance in the writing task and its perceived difficulty. The four balancing conditions and writing topics were the same as in Study 1. In Study 2, 56 participants started with the switch condition and Topic A (“Women are still treated like sex objects”); 53 with the switch condition and Topic B (“Women are still treated as the "weak gender" in the workplace.”), 57 with the repeat condition and Topic A, 54 with the repeat condition and Topic B.[5] The

[5] The conditions were balanced slightly imperfectly due to exclusions.

study received ethics approval from the [blinded for review] departmental ethics committee.

Materials and Procedure

The study followed the same procedure and design as Study 1. Participants could only complete the survey on a computer (to avoid sentence completion and pop-up messages) and we also disabled copy-pasting of text into Qualtrics to prevent the use of AI generated text. We used the same materials as in Study 1 with the following additions and alterations:

Implicit salience measure

We used the same parent-feminist ASIA classifier (Koschate et al., 2021) as in Study 1 that had undergone domain adaptation based on text from the three things task of Study 1. Hence, the ASIA classifier was not trained or adapted based on Study 2 data; it was identical to the classifier used in Study 1.

Explicit salience measure

In Study 2, participants were asked about the salience of both their parent and feminist identity (in randomised order) using the same item as in Study 1, but only after the main writing task. This change relative to Study 1, where after the main writing task participants self-reported only the salience of the feminist identity, allowed us to obtain a self-reported salience score for each identity in each condition without affecting the salience of identities before the main writing task

Performance and difficulty measures

In Study 2, we also included items to assess the perceived performance in the writing task and its perceived difficulty. Participants completed these measures after the main writing task. They saw the following instructions: “Please answer a few questions about the second writing task you completed. The topic was: [display topic A/B]”. We then asked participants to rate how compelling they found their own text (1 = *not compelling at all* to 7 = *very compelling*) and how good the quality of their text was (1 = *far below average* to 5 = *far above average*). These two items were combined into a performance scale (r = .58). We assessed the difficulty of the writing task with three items (Example item: “The topic was easy to write about"). A scale with adequate reliability could be formed (with cronbach's α = .79) if the item “I felt distracted during the writing process” (reverse coded) was excluded. We further assessed the difficulty of moving between the writing topics (“It was easy for me to move on from the first writing task to the second writing task") and between the two identities (“It was challenging to move from thinking of myself as a parent to this writing task” (reverse scored)) on a scale from 1 = *disagree completely* to 7 = *agree completely.*[6]

Results

Preliminary analyses

Manipulation check

We ran a manipulation check to test whether the three things manipulation indeed activated the target social identities (parent identity

[6] We further included an additional exploratory item assessing emotions which did not form part of the main analyses.

in the switch condition; feminist identity in the repeat condition). The linguistic style of participants differed significantly ($t(219) = 5.10$, $p < .001$, $d = 0.34$; see also Figure 4) with a more feminist than parent linguistic style after the three things manipulation intended to activate the feminist identity and a comparatively more parent linguistic style after the manipulation intended to activate the parent identity ($M_{Diff} = 0.16$, $SE = 0.03$).

Feminist topics

As in Study 1, both writing topics were rated as overall more typical for feminists than for parents with scores significantly higher than the mid-point of the scale (Topic A: $M = 5.58$, $SD = 1.42$, $t(218) = 16.48$, $p < .001$, $d = 1.11$; Topic B: $M = 5.32$, $SD = 1.55$, $t(218) = 12.62$, $p < .001$, $d = 0.85$) with topic A “Women are still treated like sex objects” being associated more strongly with the feminist identity than writing topic B “Women are still treated as the "weak gender" in the workplace” ($M_{Diff} = 0.26$, $SE = 0.12$; $t(218) = 2.23$, $p = .027$, $d = 0.15$). We counterbalanced, as in Study 1, the writing topics over conditions and time points. Further analyses showed no interaction between the first writing topic and condition (see Appendix B).

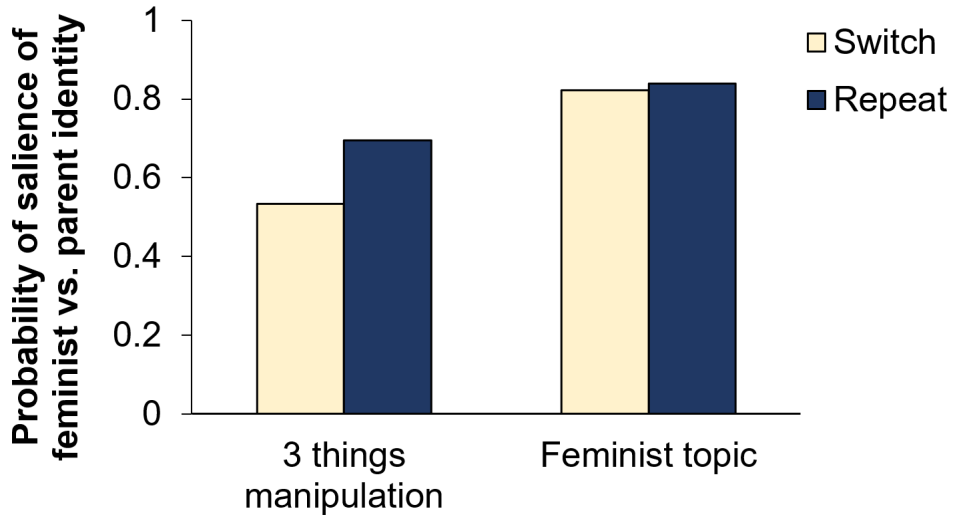
Hypothesis 1 – Implicit salience measure

We found no significant difference in the implicit salience measure ($t(219) = 0.81$, $p = .418$, $d = 0.06$) between the switch and repeat condition ($M_{Diff} = 0.02$, $SE = 0.02$). This finding is consistent with H1 which holds that there are no identity activation costs after a social

identity switch. Bayesian analysis supported this finding with strong evidence for the null hypothesis (BF_{01} = 13.47). As shown in Figure 4, participants started with different identities being salient after the manipulation of the first identity but displayed a more feminist than parent writing style in the main writing task irrespective of whether they had started with a feminist (repeat condition) or parent identity (switch condition).

Figure 4

Salience of feminist vs parent identity by condition – Study 2



Note. A score of 0 indicates that a parent identity rather than a feminist identity is salient, a score of 0.5 indicates that it is not possible to classify the text one way or the other, and a score of 1 indicates that a feminist identity rather than parent identity is salient.

An exploratory repeated measures ANOVA revealed significant main effects of time (3 things manipulation vs feminist writing task; $F(1,219) = 123.73$, $p < .001$, $\eta_p^2 = .361$) and condition (switch vs repeat; $F(1,219) = 21.53$, $p < .001$, $\eta_p^2 = .090$) as well as a significant interaction

effect ($F(1,219) = 15.78$, $p < .001$, $\eta_p^2 = .067$). The difference in salience between the conditions was higher after the three things task (M_{Diff} = -.16, $SE = 0.03$) than after the main writing task ($M_{Diff} = -0.02$, $SE = 0.02$) in line with expectations, supporting an effective social identity switch (H1).[7]

Hypothesis 2 – explicit salience measure

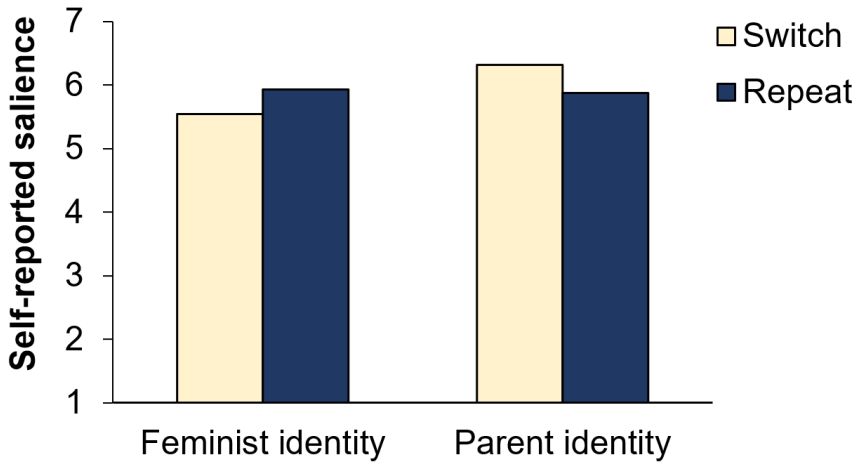
Based on the updated explicit salience measure, we compared both the self-reported salience of the parent identity and that of the feminist identity after the main writing task between the switch and repeat condition (see Figure 5). Both salience measures differed significantly between the two conditions: Participants reported significantly higher salience scores for the feminist identity in the repeat as compared to the switch condition ($M_{Diff} = 0.40$, $SE = 0.09$, $t(219) = 4.19$, $p < .001$, d = 0.28) while the salience scores for the parent identity were significantly lower in the repeat as compared to the switch condition (M_{Diff} = -0.44., $SE = 0.12$, $t(219) = -3.66$, $p < .001$, $d = 0.25$). These results do not support our null hypothesis (H2) but are instead in line with perceived identity activation costs: participants perceived higher levels of parent identity salience and lower levels of feminist identity salience after the feminist writing task when they had switched from a parent identity to a feminist identity compared with a repetition of the feminist identity. In line with this, Bayesian analyses did not support the null hypothesis for

[7] Additional exploratory analyses can be found in Appendix D

the parent identity salience scores (BF_{01} = 0.03) and the feminist identity salience scores (BF_{01} = 0.004).

Figure 5

Self-reported salience of feminist identity by condition



Hypothesis 3 – performance ratings

To test H3, we conducted paired-samples t-tests to examine whether participants' own performance ratings of their texts about two feminist topics differed depending on whether they had written the text after a social identity switch or repeat. We found no significant differences between conditions in scores on the performance scale (M_{repeat}

= 4.67, M_{switch} = 4.70, M_{Diff} = -.04, SE = 0.05, $t(219)$ = -0.85, p = .394, d = 0.06, BF_{01} = 13.00), supporting our null hypothesis.

Hypothesis 4 – difficulty ratings

To test H4 that the task of writing about a feminist topic will be equally easy/difficult after a social identity switch as after a social identity repetition, we conducted a further set of paired samples t-tests. As Table 2 shows, the null hypothesis was supported for ratings of the difficulty of the writing task. Further, the two conditions showed no significant differences in how distracted participants felt and in the self-reported difficulty to move between the identities. However, participants did perceive the move from the first to the second writing topic as slightly easier in the repeat as compared to the switch condition (M_{repeat} = 5.65, M_{switch} = 5.44, M_{Diff} = .21, SE = 0.10). According to Bayesian analysis this results in anecdotal evidence for the null hypothesis for the perception of the change in task and strong evidence for the null hypothesis for the overall difficulty of the task, feeling distracted and the difficulty of moving between identities.

Table 2

Paired sample t-test and Bayesian analyses for difficulty items

Items	*t*	*df*	*p*	η_p^2	BF_{01}
Writing task difficulty (scale)	-0.68	218	.498	.046	14.82
Feeling distracted	0.57	219	.571	.038	15.91
Difficulty to move between writing tasks	2.02	219	.045	.136	2.52
Difficulty to move between identities	-0.95	219	.344	.064	11.95

Discussion

Recent studies have found that people can switch social identities very effectively when the task/activity required such a switch without incurring social identity activation costs (Zinn et al., 2022). In the current studies, our aims were to: (1) test the effectiveness of identity switching for identities which are non-demographic and which are not distinguishable based on physical appearance; (2) use a new implicit measure of social identity salience to obtain converging evidence on the presence or absence of an identity activation costs compared with an IAT assessment; (3) assess the experience of identity switches via self-reports and performance ratings.

To address the first two aims, we tested for identity activation costs in the switch between two non-demographic identities using ASIA as an identity salience measure (Koschate et al., 2021). We compared the implicit salience scores when participants switched between their parent and feminist identity (identity switch) vs. when they remained in their feminist identity (identity repetition). Across both studies, conventional statistical analyses revealed no significant difference in identity activation between the salience scores of the switched-to feminist identity vs. the repeated feminist identity. Bayesian analyses provided strong support for the null hypothesis that there were no identity activation costs associated with an identity switch. These findings are in line with the previous study based on IAT-derived measures of salience

for demographic groups (Zinn et al., 2022), supporting the conclusion of that study, namely that social identity switches are very effective and activation cost-free.

With regard to our first aim, we extend the previous findings based on demographic social identities which tend to have distinct physical appearances (Zinn et al., 2022) to social identities which are not based on demographic groups, and which cannot be distinguished perceptually – and show that social identity switches are also effective for the latter identities. Continuing to examine social identity switching for different types of social identities promises important practical benefits as people need to navigate between different social identities on a daily basis. Similarly to the identity switches triggered in our studies, people are likely to make multiple identity switches even when the environment/context remains the same, for example, when they write a social media post to debate a societal cause on their phone while looking after their children. In line with self-categorisation theory (Turner et al., 1987), our findings suggest that a simple task (e.g., writing a brief opinion on a topic) can rapidly make the task-relevant social identity salient, resulting in an effective/ switch from one salient identity to another. It must be said, however, that in our paradigm, participants did not experience distracting stimuli associated with other identities, as parents do when they perform tasks in the presence of their children. Hence, future research will have to examine how effective the switches are in the face of such distractions by environmental stimuli.

With regard to our second aim of examining a different method to study social identity switching, we have extended the application of ASIA from a recent study which examined whether participants can intentionally prevent an identity switch (Zinn et al., 2023) to the comparison of a social identity switch vs. repetition. In contrast to the IAT-based switching paradigm, ASIA can be applied more easily to social identities that are indistinguishable based on perceptual features. Hence, computational (machine learning) procedures such as natural language processing (NLP) tools are promising for research on social identity switching. In particular, by relying on a relatively brief writing task, ASIA can increase the temporal resolution (precision) of measuring identity salience, whilst also considerably reducing the duration of the key experimental manipulation – the latter can reduce the length of the experiment and/or increases the number of observations and/or conditions during the experiment. However, one characteristic of classifier-based procedures such as ASIA is that the relevant classifier has to be trained and validated prior to the experiment on large amounts of data, and then tested and validated first. This limits the range of social identities to which ASIA can be applied. That said, previously used measures such as the IAT would also require validation of selected stimuli to ensure they are in line with the social identities of interest.

A limitation of our study is that we only included participants who speak English fluently. However, opening our Study from native English speakers (Study 1) to fluent speakers of English (Study 2) allowed us to

recruit a more diverse sample, particularly with regards to ethnicity, with roughly equal numbers of White and Black participants in Study 2, and substantial numbers of participants from the North America, Europe, and Africa. Notably, Study 2 replicated findings from Study 1, even though the particular concerns of being a parent and for achieving equal gender opportunity are likely to differ widely between ethnicities, cultures, and nations. Similarly, the studies included substantial numbers of men and women who identified as both a parent and a feminist/person who supports equal gender opportunities. Our findings speak to the notion that the salience of a widely shared social identity activates core norms and values (Cork et al., 2023) that transcend demographic boundaries and specific concerns, and which form the basis of ASIA as a toolkit (Koschate et al., 2021).

Our third aim was to obtain self-report measures of the experience of identity switching, in addition to the implicit measure. As with the implicit measure, we tested the null hypothesis that there is no significant difference between the self-reported salience during an identity switch vs. repetition. Unexpectedly, participants reported a higher salience of the feminist identity after the main writing task in the repeat condition than in the switch condition in both studies. In Study 2, additional items also revealed higher salience scores of the parent identity after the main writing task in the switch as compared to the repeat condition. These results are in line with a subjective experience of identity activation costs. However, in Study 1, further analyses showed

that the difference was at least partly driven by an increase in feminist identity salience in the repeat condition, which would not be consistent with an interpretation of the difference being due to an identity activation cost in the switch condition. Instead, the increase in feminist identity salience in the repeat condition and higher scores of the parent identity salience in the switch condition could be due to the wording of the self-report item. The question of whether participants thought of themselves as a feminist or parent at that moment may have been interpreted as a response to the length of time that they had spent thinking of themselves as a feminist or parent. As participants in the repeat condition had already thought about their feminist identity in the three things task, and then again as part of writing about a feminist topic, participants may have intended to answer that they had, indeed, thought “more” – in the sense of “longer” – about themselves as a feminist. Future research will need to examine the subjective experience of changes in social identity salience with more carefully worded items.

In Study 2, we also measured participants’ self-reported performance in the main writing task, the perceived difficulty of the writing task and of moving from the first to the second writing task. We added this measure to learn more about potential perceived switch costs. However, we found little-to-no difference in these measures between the switch and control condition. The only item for which we found a weak difference (not supported by Bayesian analyses) asked participants how easy they found it to move from the first to the second writing task.

Participants reported this as significantly more difficult when they completed the switch condition compared with the repeat condition. However, it is interesting to note that the only significant difference was found for an item that referred to a change in task rather than identity. This may point towards a perception of task (theme) switch costs, that is, a perception that a move from writing about being a parent to writing about a feminist topic is a bigger task switch compared with a move from writing about being a feminist to a feminist topic. However, future research is needed to determine with more certainty whether participants might experience effects of an identity switch on perceived, and even actual, performance and the difficulty of the task. In particular, it would be important to understand whether multiple switches in quick succession may affect performance, whether individual differences exist, and the extent to which switching identities affects other outcomes, such as subjective wellbeing.

Among avenues for future research, we would envisage investigating switching between conflicting or even incompatible social identities, and between negatively valued identities. Present and previous studies of social identity switching (Zinn et al., 2022, 2023) focused on positively- or neutrally-valenced identities. Stigmatized groups defined as a separate identity cluster by Deaux et al. (1995; see also Cork et al., 2023) should constitute an important subject for future research into social identity switching. Similarly, understanding whether people with high levels of identity complexity (Roccas & Brewer, 2002) navigate

switches differently to those with low levels of identity complexity may provide important insights into the cognitive underpinnings of social identities.

Conclusion

The current studies directly compared switches between non-demographic identities with repetitions of such identities using: (1) a novel computational-linguistic technique (ASIA) that allows for implicit measurement of the relative salience of social identities, and (2) explicit measures based on self-report. As expected, we found no identity activation costs after a social identity switch when assessed with an implicit measure, and also found no effect of switching on the subjective ratings of own performance or task difficulty. In contrast, explicit measures of identity salience and difficulty of moving between tasks suggested an effect of social identity switching in line with switch costs, albeit with only weak evidence. We conclude that switching between non-demographic identities is highly effective despite participants' somewhat contrary indication through self-report. These findings open up interesting avenues for future research on other non-demographic social identities, including stigmatised identities, and on whether there are other perceived costs associated with the highly effective cognitive process of switching social identities.

Open science practices and data access statement

Our studies have been pre-registered on OSF- including hypotheses and planned analyses:

Study 1: https://osf.io/jmyz6/?view_only=73266e71b0924d4cb212ecbe35aa4a0c

Study 2: https://osf.io/n8spw/?view_only=076347d18fff47f2b3032ffb2a4cbf24

Study materials as well as the data are openly available on OSF:

Study 1 and 2: https://osf.io/sfvjt/?view_only=440c49d9548e4f1e923d3df89a69ffe0

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Appendix

Appendix A. Additional demographics – Study 1

Participants rated their socioeconomic status (SES) at $M = 5.51$ ($SD = 1.76$, min = 0, max = 10) on a scale from 0 (= worst off in society) to 10 (= best off in society). They had, on average, two children ($SD = 0.86$, min = 1, max = 6), with the youngest child being on average 10.22 years old ($SD = 8.53$, min = 0, max = 39); $n = 191$ participants (90.5%) indicated that they currently had children living in their household.

Table A1

Participant's Nationalities – Study 1

Nationality	Frequency	Percentage
United Kingdom	121	57.3
South Africa	26	12.3
United States of America	24	11.4
Canada	9	4.3
Ireland	6	2.8
Australia	4	1.9
Zimbabwe	4	1.9
New Zealand	3	1.4
India	1	0.5
Italy	1	0.5
Jamaica	1	0.5
Sweden	1	0.5
Missing information	10	4.7

Appendix B – Additional analyses for order of writing topics

Study 1

We found no significant interaction between the order of writing topic and the repeat vs switch condition on the linguistic style salience measure ($F(1, 207) = 0.74$, $p = .391$, $\eta_p^2 = 0.004$). Further, there was no main effect of the order of writing topic on the implicit salience measure scores overall ($M_{Diff} = 0.001$, $SE = 0.04$; $F(1, 207) = 0.001$, $p = .979$, $\eta_p^2 < 0.001$). We therefore analysed the data aggregated over the two topics.

Study 2

As in Study 1, we found no significant interaction between the order of writing topic and the repeat vs switch condition on the implicit salience measure ($F(1, 218) = 1.07$, $p = .302$, $\eta_p^2 = 0.005$). However, it should be noted that we did find an overall effect of the order of writing topic on the linguistic style salience measure ($F(1, 218) = 8.16$, $p = .005$, $\eta_p^2 = .036$), with a stronger feminist linguistic style if participants started with topic as compared to topic B ($M_{topicA} = .86$; $M_{topicB} = .80$; $M_{Diff} = 0.07$, $SE = 0.02$). But since this did not affect the two conditions (switch and repeat) differently, we proceeded with our main analyses as pre-registered (analysing the data aggregated over the two topics).

Appendix C. Additional demographics – Study 2

Participants on average scored their SES as $M = 5.81$ ($SD = 1.60$, min = 0, max = 10) and had on average two children ($SD = 0.93$, min = 1, max = 7). Their youngest child was on average 8 years old ($SD = 7.66$,

min = 0, max = 41) and 204 participants (92.7%) currently have children living in their household.

Table A2

Participant's Nationalities – Study 2

Nationality	Frequency	Percentage
South Africa	102	46.4
United Kingdom	41	18.6
Zimbabwe	9	4.1
Portugal	8	3.6
Ireland	6	2.7
Italy	5	2.3
Poland	5	2.3
Hungary	4	1.8
Spain	4	1.8
Australia	3	1.4
Greece	3	1.4
Nigeria	3	1.4
Brazil	2	0.9
Netherlands	2	0.9
Slovenia	2	0.9
Sweden	2	0.9
Turkey	2	0.9
Czech Republic	1	0.5
Denmark	1	0.5
Estonia	1	0.5
Germany	1	0.5
India	1	0.5
Lithuania	1	0.5
New Zealand	1	0.5
Russian Federation	1	0.5
Kingdom of Eswatini	1	0.5
United States of America	1	0.5

Missing information	7	3.2

Appendix D. Additional exploratory analyses

Family-related words – Study 1

We compared the percentage of family-related words that participants used in the texts written about the feminist topics (i.e., the number of family words relative to their total word count) based on the LIWC feature "family". The repeat and switch condition did not differ significantly in the number of family-related words (M_{repeat} = 0.20; M_{switch} = 0.26; M_{Diff} = -0.06, SE = 0.07; $t(210)$ = -0.85, p = .398, d = 0.06, BF = 12.80).

Time spent on writing task – Study 1

Since the writing tasks had no time limit, one alternative explanation for the absence of identity activation costs in the implicit salience measure is that participants in the switch condition might have slowed down the feminist topic writing task which may have allowed enough time to switch over to their feminist identity. To test for this explanation, a paired-samples t-test compared the time participants spent writing in the switch condition to the time spent writing in the repeat condition. The marginally significant difference between the conditions in the time taken ($t(210)$ = 1.84, p = .068, d = 0.13, BF_{01} = 3.46) was in the opposite direction – participants spent marginally more time writing about the feminist topic in the repeat condition than in the switch condition (M_{repeat} = 232.29 secs; M_{switch} = 204.12 secs; M_{Diff} = 28.17 secs, SE = 15.35 secs).

Family-related words – Study 2

As in Study 1, there was no significant difference in the number of family-related words in the main text between the repeat and switch condition (M_{repeat} = 0.30; M_{switch} = 0.33; M_{Diff} = -0.03, SE = 0.08; $t(219)$ = -0.36, p = .717, d = 0.02, BF = 17.49).

Time spent on writing task – Study 2

The repeat (M = 249.46 secs, SD = 129.05 secs) and switch (M = 267.36 secs, SD = 188.15 secs) condition showed no significant difference in the time taken to complete the main writing task (M_{Diff} = -17.90 secs, SE = 11.98 secs; $t(219)$ = -1.49, p = .137, d = 0.10, BF_{01} = 6.18).