I Met Myself on Social Media: A Quantitative Analysis of Relationship between Online Echo Chambers and Development of Self-Identity in Youth

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Abstract

Over the past few years, the use of interactive media has witnessed a marked increase particularly among young people (Kelly et al., 2018; Sert & Başkale, 2022) fuelling a radical transformation of socialization and self-perception practices among them. A key factor in this regard has been the formation of echo chambers, or silos of like-minded individuals, on Social Networking Sites (SNS) that not only shape individuals' understanding of social reality but also play an important role in the formation of their self-identity. This study investigates the correlation between social media echo chambers and the development of self-identity among young people in Pakistan. The research explores how these online bubbles serve as safe spaces for socially marginalized youth to find their self-expression and coherent identity. Drawing upon the framework of the Social Identity and Selective Exposure theories, a sample of 100 young people, aged 18-25 — based on Arnett's (2000) definition of emerging adults — with diverse ethnic, religious, gender, and socio-political backgrounds, was surveyed using a five-point Likert scale questionnaire. The findings of the study indicate that contrary to popular belief, individuals act as active agents in selecting online communities they engage with while bubbles of these communities, and their respective collective presentation impact the individual's perception of her self-identity. Moreover, it was revealed that as socially isolated individuals form discrete personal identities through supportive online spaces, the lack of acceptance in their offline lives increases their attitude of resentment toward their positioning in society.

Keywords: *Echo chambers effect, identity formation, social media bubbles, internet-mediated identity, selective exposure*

Introduction

Social media has become a 'primary form of communication' among late teens and early adults throughout the world (Kelly et al., 2018; Sert & Başkale, 2022). Social networking sites, like Instagram and Facebook, have enabled billions of young people from across the globe to connect online. And yet, they have also contributed to the formation of echo chambers, or silos of like-minded individuals, on social media news feeds. Echo chambers refer to the tendency for individuals to surround themselves with like-minded individuals online, resulting in the reinforcement of preexisting beliefs and identities (Pariser, 2011). Due to the algorithmic design of social networking sites like X (formerly Twitter), Instagram, Facebook, etc., users are exposed to content that relates closely to what they have previously liked, shared or spent more time on. This results in the distortion of information and the creation of narrow bubbles (Sunstein, 2017), as connections form within an invisible boundary.

Much has been written and said about the phenomenon of echo chambers in social media in recent years corresponding to the rise of the digital age. Many

studies have explored how these virtual spaces can contribute to the reinforcement of existing opinions, leading to a polarization of attitudes and beliefs. Del Vicario et al. (2016), for instance, argue in their study that users on social media sites tend to cluster in homogeneous groups, which have similar political philosophies and a great degree of like-mindedness. This leads to a situation wherein individuals are exposed primarily to information that aligns with their predisposed views, leading to the cementing of these opinions and a reduction in the diversity of perspectives they encounter. Similarly, a study by Bakshy et al. (2015) demonstrated how the algorithms used by social media platforms can further amplify the effects of echo chambers by curating content that is deemed most relevant to the interests and behaviors of users.

However, despite the growing body of literature on the negative impact of echo chambers, the potential for these spaces to amplify the voices v of dissent has often been overlooked. While echo chambers have the potential to reinforce dominant viewpoints, they can also give marginalized groups a forum to unite and promote their values. In their collective study, Howard and Hussain (2013) showed that echo chambers played a central role in promoting political mobilization and civic engagement, particularly among historically marginalized communities. A litany of studies has been conducted to evaluate and record the experiences of marginalized communities in online spaces. Yet, a limited number of these studies are placed within a Pakistani context conceptualizing against its unique cultural and historical indicators of marginalization.

The present study aims to fill this lacuna in research by inquiring about the relationship between online echo-chambered identity formations and marginalization. The marginalization in a specific Pakistani context is based on differences in religion, ethnicity, gender, sexual orientation, political beliefs, and social behavior. The present research, therefore, stems from a need for a nuanced understanding of the impact of echo chambers on identity formation and expression for marginalized communities in politically conservative/orthodox societies like Pakistan.

Based on Arnett's (2000) conception of 'emerging adults', the study takes as sample young people between 18 to 25 years of age, which is the time frame Keum et al., (2023) contend is the site of continuation and development of personality. Identity creation is a complex process that is impacted by a range of elements, such as individual personality traits, cultural and societal influences, and personal experiences (Erikson, 1968). The internet-mediated environment of social media allows the creation and reinforcement of collective identities (Tajfel & Turner, 1979) and the echo chamber effect plays a key role in this process. Humans are considered to be aware of themselves and develop distinct personhood only in relation to others i.e. through interfacing or 'peopling'. 'We infect each other with personhood' (Simler, 2014) and form individual self-identities against wider collective identities. It can be said that there exists a dialectical relationship between the self and society.

The formation of internet-mediated identities is not solely influenced by echo chambers, though. There are many other factors at play here, including personal experiences, cultural and societal influences, and individual personality traits (Erikson, 1968). It would also be an injustice to exclude the role of agency in identity formation, as individuals can shape and redefine their identities over time (Côté & Levine, 2002), albeit by engagement with their environment. Similarly, cultural and societal norms influence the formation of internet-mediated identities, as individuals seek to align their online persona with culturally and socially acceptable values (Marwick & Boyd, 2011). Additionally, research has shown that how individuals present themselves online can also be influenced by their perceived audience (Dijck, 2013). This can be understood by Nunn's (2019) application of Debord's conception of the 'spectacle' whereby people turn their lives to be viewed by an invisible audience, altering lived experiences during the process.

Statement of Purpose

The present study builds on the limited discussion on the potential benefits of echo chambers in identity formation. It examines the proactive role young people play in seeking online communities of family and friends, a possibility often absent offline where traditional social structures predetermine identity and its presentation. The study aims to explore how echo-chamber-mediated interactions on social media are impacting the development and perception of self-identity in Pakistani youth, especially those who have been socially isolated or ghettoized. The agency of young people in forming collective identities through online communal engagement is another focal point of this inquiry.

Research Questions

Following are the research questions addressed in the study:

1. How does echo-chamber-based interaction on social media help individuals form their self-identities?

2. Are users who have marginalized identities in the real world more prone to finding self-expression through social media bubbles?

3. Is there a correlation between introversion and identity formation in social media echo chambers?

4. Does social media echo-chambered interaction lead to more resentment with offline self-identity and community?

Self-image and Identity Formation

'Identity is created in part by the self and in part by relation to group membership' (Martin & Nakayama, 1997). It has been noted that regular social media usage among youth assists them in crafting personal and social identities for

themselves in the virtual world (Jehanthi, 2022). Jehanthi in his study thus asserts that social media is a potent tool when it comes to modifying how people perceive themselves and others. Individuals, he posits, after successfully identifying themselves yearn for 'sameness' in others. This need is fulfilled, to a major extent, through social media. Generation Z (born 1997 onwards) is accused of socializing primarily through social media. Gorea (2021), in his study, investigates the transition of an individual's visual self through the mediation of social media. Findings reveal that youth's visual self-identities transform owing in part to social networking sites to provide tools for imploring who an individual is and what he/she aspires to be. Moreover, Gorea notes that increased expectations and stereotyping in online spaces also have a profound impact on the development of the visual self-image of an individual.

Young consumers of social media have been shown to employ a host of intentional strategies to present themselves in digital spaces, in a bid to justify their perceived versions of themselves (Doster, 2013). This is found to be supplemented by an insatiable need for social interaction with peers having the same 'aesthetic' self-images and likings. Drawing on theorizations of impression management, self-identity, and self-presentation, Doster (2013) has suggested the outsize role symbolism plays in the identity construction of youngsters on social networking sites. Brunker and Deitelhoff (2019), however, believe that studies employing identity theory in social media have till now missed the inter- and intra-group dynamics as well as an array of inter-group dynamics that play out during the formations of social movements. They then move on to fill the gap by considering a sub-theory of Social Identity Theory, the Collective Identity Theory. It investigated how social action was facilitated by group identity formation through social media. It was found that instead of solidarity, group cohesion, and emotional attachment play a dominant role in forming collective identity and motivating people to pursue social action in online spaces.

Echo chambers, Homophily, and Collective Identities

Based on the social concept of homophily, communication between similar people happens more frequently than with different people since people's networks tend to be more homogeneous than heterogeneous (McPherson et al., 2001). This need to connect with like-minded individuals resulting in the formation of distinct groups manifests itself excessively on digital social networking sites as well, as proved through numerous studies. The need for control over relationships and content, as well as the construction of social reality along the 'idealization-normalization continuum', as argued by Throuval and Griffiths (2019), is partially reflected in the interactions formed through social networks.

A study by Kaakinen and Sirola (2020) found that shared identities and social homophily are reinforced inside 'identity bubbles' formed on social media

and that the design of social media plays an active role in the formation of such bubbles. As users prefer to operate inside groups, they adopt shared identities that align with their pre-existing tendencies and rely more on information shared within such secluded spaces. Zollo and Bessie (2016) opine that social media segregates people into secluded 'echo chambers' based on similar likes and dislikes. This results in the formation of silos that make social media into a 'tribal system' rather than a globalized network of social interaction. It was noted that this loophole in social media's design as well as the general tendency of individuals to align themselves in collectives results in the formation of generalized, collective narratives and worldviews that are less nuanced than individual perceptions.

Social media groupings more or less work in the same way as physical networking, providing a distinct identity for the group that is shared by its members, argue Lehdonvirta and Rasanan (2010) in their study on the behavior of young people towards such internet-mediated networks. The researchers also found that online gaming served an important role in the identification and socialization experiences of young people. Following in their footsteps, Gillani and Yuan (2018) researched a sample of X (formerly Twitter) users with previous political discourse history, to investigate how awareness related to differing political narratives might affect users' ideas of political homogeneity and their respective political echo chambers. They argued that even after showing them the extent of their political bubble on X (formerly Twitter), the average political alignment of participants did not change, although their belief in political homogeneity began to falter and their connections became diverse.

It has been demonstrated by numerous studies that social networking sites create polarization in society. A recent research, for instance, conducted by Tayler and Mantzaris (2018) has investigated how the social separation between groups is amplified if they are formed by individuals seeking ideological homophily. The good news, it proposed, is that more cross-group exchanges in digital spaces might lead to ideological consensus in the long run. Studies indicate that social media has the potential to offer a feeling of support and connection to people who might otherwise feel alone or ostracized. This is especially relevant for members of underrepresented groups, such as those based on race, gender, sexuality, or religion. A study conducted in 2010 by Papacharissi discovered that social media can provide a secure space where marginalized people can voice their concerns and interact with others who have gone through similar things. People who may not have had a voice in offline settings may feel more empowered and develop a sense of collective identity (Baumeister & Leary, 1995) due to these encouraging online spaces.

Similarly, a more recent study by Leanna Lucero in 2017 has concluded that social media is an important aspect of LGBTQ+ individuals' lives. It was found that LGBTQ youth from multiple minority backgrounds now feel safest using social media to discuss gender and sexuality-related concerns (Lucero,

2017). In a country like Pakistan where gender minorities are routinely persecuted and violence towards the transgender community is rampant, it is of paramount importance to investigate how individuals with minority and forcibly minoritized gender and sexual orientations view social media for their identity development and whether these platforms empower marginalized identities. Thomas et al. (2017), however, demonstrated that the social media community identification process encounters limitations during the intersection of offline and online individual transitions (whereby users let go of previous online communities and look for new collective identities to adopt based on their offline positioning). During this, they go through processes of affirmation, assimilation, and integration.

Some scholars have, however, started to diverge from this hyper-focus on filter bubbles on social media (Arguedas et al., 2017). They believe that the deterministic approach towards the existence of highly polarized echo chambers on social media is misleading and contrary to research findings (Dutton et al., 2017; Gentzkow & Shapiro, 2011). Dutton et al. (2017) in their social mapping of internet users, contended that users in fact consciously exposed themselves to a diversity of views on social media while choosing from a pool of media sources. Following similar conclusions, Dubois and Blank (2018) argue that in a multi-media scenario, users exercise more power to wriggle out of algorithmic filter bubbles through conscious engagement.

Conceptual Framework & Methodology

The ideas from the theories of 'Social Identity Formation' and 'Selective Exposure' as well as the concept of the 'Echo Chamber Effect' are employed in this study to understand the relationship between collective identity formation on social media and the agency of individuals in mediating the process. This study falls under the discipline of 'Media Psychology'. SIT is a psychological paradigm that is frequently used in communication studies. Social identity is an idea that Tajfel (1978) introduced, and his colleagues expanded upon.

It has been demonstrated by multiple studies that social media users gravitate toward content that supports their opinions, and associate with communities that are built around a common story, or 'echo chambers' (Cinelli et al., 2021). The fundamental tenet is that social media users rarely see the opposing viewpoints that comprise the agonistic public sphere because they choose to interact with ideologically aligned content and like-minded people (Sunstein, 2001), referred to as 'echo-chambers' while the phenomenon is dubbed the 'Echo-chambers Effect.' The Selective Exposure Theory is the third theory applied to the investigation. In general, behaviors that are intentionally carried out to try to bring communication information within one's sensory apparatus are referred to as selective exposure (Zillmann & Bryant 1985). As used in this study, the theory guides how people create social groups by restricting their interactions to those that support their

preconceived notions and beliefs and intentionally avoiding relationships that challenge those beliefs.

Research Design

  For this study, the Quantitative research method has been used. The researcher has used the Survey method by developing a 54-question-long questionnaire, consisting of five sections: demographics, personality assessment, exposure to social media echo chambers, nature of echo-chamber-mediated interaction, and the development of self-identity in the offline world. The respondents answered with a five-point Likert scale.

Research Population

  The research population concerned is any youth between 18-25 years of age, but due to the limitation of geography, the accurate population to which the findings of the study can be extended would be Pakistani youth (18-25).

Sample Size and Specifications

  A sample of 100 young people (aged 18-25) was approached with the questionnaire through non-probability purposive sampling. The researcher, for the requirement of the study, actively chose ethnically, sexually, and religiously diverse individuals. Following is a breakdown of the sample according to these indicators.
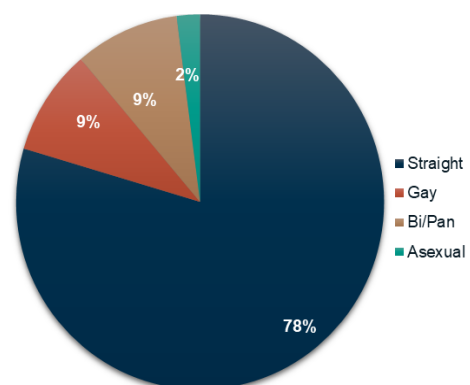
Table 1
Percentage Frequency of Participants based on reported Gender Identity

Gender	Percentage Frequency
Male	50 %
Female	38 %
Trans	5 %
Non-Binary	5 %
Gender Fluid	2 %

Figure 1
Percentage Frequency of Participants based on reported Sexual Orientation

The study includes about 12% gender-diverse individuals. Gender is categorized different to sex, for the purpose of this research, based on the UN Women Training Centre's (2021) definition of the term which puts gender identity as 'someone's personal and deeply felt internal sense of the self, which may or may not correspond with the person's physiology or designated sex at birth'. Participants were therefore asked to mark their sex (male/female) and gender identity (self-reported) separately. 50% of the participants identified themselves as male, 38% as female, 5% as trans, 5% as non-binary and 2% said they were gender-fluid.

Sexual Orientation is taken as a marker of an individual's sexual attraction, or its lack thereof, to people of the same and/or opposite sex. 78% of the people in the study reported that they were straight/heterosexual (attracted to opposite sex); 9% identified themselves as gay/homosexual (attracted to same sex), 9% as bi/pan (attracted to both/all genders) and 2% as asexual (not sexually attracted to others).
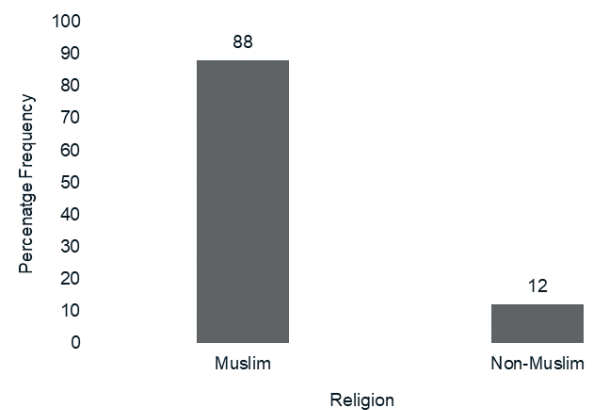
Table 2

Percentage Frequency of Participants based on Ethnicity

Ethnicity	Percentage Frequency
Punjabi	68 %
Kashmiri	11 %
Chitrali	8 %
Sindhi	6 %
Pashtun	3 %
Saraiki	2 %

Figure 2

Percentage Frequency of Participants based on Religion

8% of social media users of Chitrali ethnic origin, 11% Kashmiri, 6% Sindhi, 3% Pashtun, 2% Saraiki, and 2% mixed ethnic individuals participated in the study along with 68% Punjabis. About 12% of the respondents were non-Muslim while 88% were Muslims.

Variables and Measurements

Based on research questions, variables were determined, and following hypotheses were laid out:

H1. There is a significant correlation between social media echo chamber-based interaction and the formation of clear self-identity in youth.

H2. There is a significant correlation between individuals having marginalized identities and reliance on social media for self-expression.

H3. There is a significant correlation between introversion in offline spaces and the susceptibility to social media-mediated self-identity development.

H4. There exists a significant correlation between the formation of discrete identities through social media by individuals and resentment in offline lives.

Most variables like Extent of clarity in self-identity through social media (V4), Extent of reliance on social media for self-expression (V2), Extent of introversion in

personality (V3), and Extent of resentment in offline lives (V5) were measured solely based on five-pointer responses to self-evident statements. Two variables, namely Extent of online echo-chambered interaction (V0) and Extent of marginalization (V1) were measured through a combination of Likert-scale based questions, open-ended questions (like 'What is your ethnicity?' etc.) and option-based questions.

Table 3

Variables and (two examples each from) their Indicator Statements

Variables	Indicator Statements (2 Examples)
Extent of online echo-chambered interaction (V0)	I tend to follow people/groups/topics on social media that resonate with my views and beliefs. I am likely to unfollow groups/people that my views/ideas do not match with.
Extent of clarity in self-identity through social media (V4)	Social media has helped me identify my personality type and understand/place myself better. I can define my identity, personality, personal preferences, likes and dislikes more easily than before.
Extent of marginalization (V1)	I consider myself a minority with respect to my beliefs and views. I feel like my identity is suppressed by those with dominant identities
Extent of reliance on social media for self-expression/Identity Formation through social media (V2)	I know who I am and what I want better due to my social media experience. I feel more confident in self-expression towards my collective identity.
Extent of introversion in personality (V3)	I am usually shy at expressing myself. I don't talk a lot and respond only when asked to
Extent of resentment in offline lives (V5)	I feel happier during social media exchange with likeminded people than interacting with those around me in real world. I feel frustrated around real-world people who do not share my views and are unwelcoming of my identity.

The extent of online echo-chambered interaction, for instance, was measured by indicators of both the frequency of social media usage (numerical value assigned in ascending order of usage hours) and self-reported presence of homophily in online experience. Participants were asked questions like how often they check social media, time they spend on social media daily, if they tend to follow like-minded groups or people online, if they are suggested similar groups/profiles by their preferred social media sites and if they tend to accept these suggestions (see Table 3).

The extent of marginalization was determined based on ethnicity, religion, gender identity, sexual orientation, and introversion in personality. A numerical value corresponding to the intensity of marginalization (higher number for more, a lower for less marginalized identities) was assigned to responses. For religion, extent

of marginalization was valued at 0 for Muslims, 1 for non-Muslims; for ethnicity, 0 was assigned to Punjabi and 1 to the rest; 0 was assigned to male gender identity, 1 to female and 2 to the rest, and similarly for sexual orientation, straight was assigned 0 while the rest were assigned 1. The extent of introversion in personality was measured though five-pointer responses.

Results and Findings

31% of the respondents agreed, while 25% strongly agreed when asked if they considered themselves a minority with respect to their ideas, beliefs, and placement in society. 42% agreed when asked if they felt different from those around them in the offline world. It was noticed that the majority of participants used Instagram (43%) and Facebook (29%). 84% reported checking social media more than thrice while 48% said they spend more than three hours on social media daily.

The existence of echo chambers was confirmed when participants responded to the questions asking if they were often suggested like-minded profiles/topics on social media and whether they were likely to follow these suggestions. When asked the former question, 53% agreed while 13% strongly agreed. 40% reported that they tend to follow these suggested profiles and groups while 40% found these suggestions helpful. It is however noteworthy that 59% agreed when asked whether they actively look up to like-minded people/groups on social media. This indicates that apart from the algorithmic design of social media, individuals 'choose' to form silos on social media, exposing themselves to like-minded preferred individuals and groups, thereby actively participating in their identity formation. This is directly in line with the theory of selective exposure that suggests that individuals actively choose to seek out information and individuals that align with their preexisting beliefs and identities, further reinforcing the echo chamber effect (Nickerson, 1998). 51% agreed while 16% strongly agreed when asked if they sought supportive communities online (see Table 4). This reflects the individual's need to 'control content and relationships' on social media as pointed out by Throuval and Griffiths (2019).

Table 4

Distribution of Participants' Responses for Selective Exposure Behavior on Social Media

	SA	A	D	SD
I actively look up /search for people/topics/groups/spaces that align with my ideas or interests.	11%	59%	11%	9%
I mostly follow people who use political/ideological symbols that I approve of	6%	35%	4%	25%
I seek a safe place on social media with a supportive community of friends.	16%	51%	14%	4%

I feel happier and gratified around people with similar identities (ethnic, gender/sexual, ideological) on social media.	13%	50%	9%	6%

Note. SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree

In the study, 54% of respondents agreed with the statement that they could express themselves freely with their social media communities. When asked if they believe that social media has helped them identify their personality type and understand themselves better, 18% strongly disagree, 26% disagree, 19% agree and 15% strongly agree. Upon asking if they prefer dressing up/appearing the same way as their social media identity that they believe is their true self-expression, 9% strongly disagree, 16% disagree, 39% agree and 14% strongly agree. 22% remain neutral. It follows that echo chambers also offer a sense of belonging and support to people who might otherwise feel excluded or disadvantaged in offline settings (Kaakinen & Sirola, 2020). The bubble thus becomes a celebration of identity.

Upon asking if they tend to seek out ideologically compatible and like-minded individuals in the real world as well, 7% strongly disagree, 2% disagree, 44% agree and 27% strongly agree. 20% remain neutral. When asked if they felt more confident in self-expression towards their collective identity because of their social media experience, 61% agreed while 16% strongly agreed. Similarly, a majority of 36% agreed to the statement that they knew themselves better through their social media experience. This confirms that individuals seek homophily in their relationships and tend to lower dissonance when forming identities (McPherson, Smith-Lovin, & Cook, 2001).

To check the level of resentment in individuals due to their echo-chamber-mediated interaction on social media, they were asked if they often wished to have the same supportive communities offline that they interact with on the internet. It was noted that 27% agreed while surprisingly 29% disagreed with the statement.

Table 5

Distribution of Participants' Responses for Resentment in Real Life

	SA	A	D	SD
I feel frustrated around real-world people who do not share my views and are unwelcoming of my identity	14%	36%	23%	9%
I feel lonely and bitter not to have like-minded or preferred people around me in real world	8%	32%	32%	13%
I feel that I have no patience left to deal with those of opposing views	5%	12%	46%	18%
I am constantly looking for people in the real world who share my sense of identity and views/ideas	12%	48%	21%	4%

I often feel depressed in real world meetings/gatherings	7%	30%	30%	14%

Note. SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree

A similar pattern was observed when participants were asked if they felt bitter about their offline communities where 32% agreed and another 32% disagreed. (see Table 5). The responses seemed to be divided about the resentment in offline lives. Hypothesis testing was therefore carried out to understand the relationship between echo-chamber-mediated identity construction and level of dissatisfaction with real world communities.

In the final stage of research, correlation tests were carried out for H1, H2, H3 and H4. Spearman's correlation was used in SPSS to study the significance of correlation between specified variables.

Table 6

Correlation between Echo-Chamber-based-Interaction and Clarity in Self-Identity

			V4	V0
Spearman's rho	V4	Correlation Coefficient	1.000	.502**
		Sig. (2-tailed)	.	.000
		N	100	100
	V0	Correlation Coefficient	.502**	1.000
		Sig. (2-tailed)	.000	.
		N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

The findings of statistical tests demonstrate that a strong significant correlation exists between the Echo-Chamber-based-Interaction (V0) and Clarity in Self-Identity (V4) and since the value of P is 0.000 which is less than 0.05, the hypothesis, H1, stands proven. The findings therefore suggest that the researcher's prior assumption that more is the echo-chambered interaction on social media, clearer would be the self-perception of identity in individuals.

Table 7

Correlation between Marginalized Identity and Reliance on Social Media

			V1	V2
Spearman's rho	V1	Correlation Coefficient	1.000	.222*
		Sig. (2-tailed)	.	.026
		N	100	100
	V2	Correlation Coefficient	.222*	1.000
		Sig. (2-tailed)	.026	.
		N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

H2 stands proven as well. The findings of statistical tests indicate that between individuals having marginalized identities (V1) and reliance on social media for self-expression (V2), a significant correlation exists since the value of P is 0.026 which is less than 0.05. A positive value of the correlation coefficient suggests that a positive correlation exists between individuals having marginalized identities and reliance on social media for self-expression.

Table 8

Correlation between Offline Introversion and Social Media-mediated-Identity Development

			V4	V3
Spearman's rho	V4	Correlation Coefficient	1.000	.259**
		Sig. (2-tailed)	.	.009
		N	100	100
	V3	Correlation Coefficient	.259**	1.000
		Sig. (2-tailed)	.009	.
		N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8 suggests that a significant correlation exists between the offline introversion (V3) and social media mediated identity development (V4) and since the value of P is 0.009 which is less than 0.05, the hypothesis (H3) stands proven.

Table 9

Correlation between Identity Formation through Social Media and Offline Resentment

			V2	V5
Spearman's rho	V2	Correlation Coefficient	1.000	.472**
		Sig. (2-tailed)	.	.000
		N	100	100
	V5	Correlation Coefficient	.472**	1.000
		Sig. (2-tailed)	.000	.
		N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

The value of Spearman's correlation i.e. P=0.000 between the formation of discrete identities through social media by individuals (V2) and resentment with offline lives (V5) indicates that a strong significant correlation exists between the two stated variables. A positive value of the correlation coefficient suggests that a positive correlation exists between individuals who form discrete identities through social media and resentment of offline lives. The findings prove the researcher's prior assumption that individuals who form conscious discrete identities through social media grow resentful toward the lack of like-mindedness and acceptance in their offline lives. This runs in tandem with previous research findings that establish

that echo chambers might lead to polarization and cognitive dissonance (Thomas et al., 2017). It indicates that individuals wish to bring resonance with their online and offline communities.

Discussion and Conclusion

Social media's impact on self-identity formation has been the subject of debate in media scholarship for some years now, with academics and practitioners alike seeking to understand how social media use affects young people's sense of self. Research has shown that social media can provide a space for marginalized groups to express their identities without fear of discrimination or prejudice (Nadkarni & Hofmann, 2012). It must be noted, however, that while social media can provide a platform for marginalized voices, it often does not transform into offline acceptance in society. This interpretation is supported by one of the findings of this study that individuals hold great resentment with their offline lives which are contradictory and hostile to their internet-mediated self-identities. The finding that individuals who form discrete identities through social media can become resentful towards the lack of like-mindedness and acceptance in their offline lives has significant implications for mental health too. Research has amply shown that the use of social media can be a risk factor for the development of depression and anxiety (Twenge & Campbell, 2009). Social media can, thus, create a divide between an individual's online and offline identities, leading to tension and conflict.

This study's key finding—that introverted people are more vulnerable to social media-mediated self-identity development—is in line with current research in the field that introverts are more prone to using social media for self-expression (Amichai-Hamburger & Vinitzky, 2010. Differences in individual personalities dictate how people engage with social media and these patterns of engagement can impact their self-identity formation. This can also mean that social media can provide a space for introverts to express their identities in a way that may not be possible in offline spaces. And yet, this proposition is subject to the same limitation of the rift between the online and the offline, as studied in H4.

The overall results suggest that social media can provide a space for self-expression and validation, particularly for marginalized groups and introverted individuals. The youth of today, rush to social media, not to isolate themselves or fuel their individualistic and anti-social tendencies, but to choose their handpicked family and friends and redefine themselves concerning their new self-imposed positionality. Echo chambers might not be stifling diversity as suggested by a growing body of research. On the contrary, echo spaces might be safe spaces for the socially ghettoized. However, the researcher stresses the need to recognize and acknowledge the limitations of social media in addressing systemic inequalities in offline spheres and the potential risks to mental health associated with the incompatibility of online and offline self-identities. Further research is needed to

fully understand the role of social media in shaping our self-identities and the implications this has for our offline lives.

Limitations and Scope

The present study employs an extremely short sample of the population. Better research built upon this should have a larger sample size and incorporate more diversity to test hypotheses three and four. Moreover, using a qualitative method such as in-depth interviews might provide a more accurate understanding of individual psychology when forming identities online. There is a need for further research on the relationship between social media echo chambers and the construction of internet-mediated identities, as this area is still relatively new and not fully understood. By examining the impact of echo chambers on the formation of identities, we can gain a better understanding of the role of social media in shaping the way individuals perceive themselves and their social realities. This understanding can inform the development of strategies for promoting critical thinking and exposure to diverse viewpoints in online environments, while also pushing experts and SNS engineers to reconsider the role of community-focused echo chambers in preserving marginalized identities and discourses.

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