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10-year Systematic Literature Review of Social Penetration in Online Communication

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Abstract

Altman and Taylor's (1973) Social Penetration Theory (SPT) suggests that in any relationship or communication pathway, each participant makes a conscious decision to either increase or decrease the level of self-information disclosure based on an evaluation of the advantages and disadvantages of maintaining the relationship over an unspecified period. An examination of the literature on the effect of online communication on the theory indicates that significant alterations have happened in the social penetration theory, altering the communication process and, therefore, the sorts of connections resulting from computer-mediated platforms. After extensive screening and assessment, 18 articles were selected via a review of the available literature. Subsequently, a thematic analysis of the literature revealed the following primary themes: motives and expectations, privacy, audience, interaction, audience, and adjustments. The review encountered obstacles, such as the small selection of published materials. This article focuses on SPT in digital communication, with most literature focusing on online social networks. Recommendations were made that the very dynamic and ever-changing character of social penetration in online communication should be based on conversation and interactions rather than theory.

Keywords: Systematic Literature Review, Social Penetration, Onion Model, Online Communication, Computer Mediated Communication, Social Media, Social Network

Background Study

Since the creation of the internet, academics have meticulously documented the immense capacity of social media networks to develop, nurture, preserve, and, more often than we would like to acknowledge, may potentially destroy social ties among humans. (Craig & White, 2012; Pennington, 2020; Orben & Dunbar, 2017). Facebook relationships have been the most explored social media-mediated relationship subject, according to Johnson and Becker (2011). Among the most widely examined topics are personal disclosure, social pivoting, and capital, strengthening the intimacy of connections created on this social media platform (Burke & Kraut, 2014; High & Buehler, 2019; Rozzell et al., 2014; Ellison et al. 2014).

In the twentieth and twenty-first centuries, social networking services such as Facebook, Twitter, Instagram, Snap Chat, and TikTok, to name a few, grew exponentially. Statistics indicating that as of January 2021, more than (4.2 billion) of the world's population was engaged on social media strongly corroborate this statement. (2021, The Star Malaysia). However, online communication is not limited to social media networks; it also includes dating services. Analysis of research demonstrating the breadth of social media interactions in connections between various individuals has generated the widespread belief that the assessment of multiple online relationships should be multimodal, as mentioned by Hall (2020).

Hall (2020); Mason & Carr (2021) have elaborated on applying interpersonal theories to assess social media networks' vital role in daily interactions and relationships. This advocacy stems from the fact that previous researchers and evaluators have made a number of theoretical assumptions. For example, Altman and Taylor's social penetration theory, presented in 1973, has functioned as an indispensable instrument for assessing and analyzing communication and connections created via social media. This discovery is primarily the result of the theory's capacity to emphasize mediated online communication, which is often characterized as disclosure and the preservation of socially-forged proximity across numerous online communication platforms (Mason & Carr, 2021).

Social penetration theory posits that in each human connection or communication channel, deliberate choices are made by each participant to raise or reduce the amount of self-disclosure based on an assessment of the advantages and drawbacks of maintaining the relationship over an indefinite length of time according to the authors Altman and Taylor (1973). The idea further classifies the capacity for in-depth and breadth of self-disclosure.

According to the social penetration theory, Depth in self-disclosure refers to the degree of closeness in a particular divulgence. Likewise, breadth is the variety of knowledge that may be shared. Both entities are classified into categories, with Depth including surface-domain details all the way to the most intimate core information. According to Altman and Taylor, a lower cost of disclosure is directly related to a greater number of disclosures that result in the formation of a connection. However, the length, intensity, and breadth of this stage are heavily influenced by an individual's evaluation of potential benefits.

According to the social penetration theory, four elements influence the formation of relationships. The majority of experts depict this process as an "onion model" that illustrates how each layer must be peeled away to reveal what is underneath. Initially, the orientation phase is the most public and shortest stage, according to (Altman and Taylor, 1973). The orientation phase is then followed by the effective exchange exploration phase. The effective exploratory phase is mostly characterized by a feeling of ease and confidence. It is the most important aspect in deciding whether to end or preserve a relationship (Altman & Taylor, 1973).

The effective exchange stage follows the successful completion of the exploratory affective exchange stage. The third stage is defined by an increase in the breadth of information supplied with the Depth of disclosure that is almost thought to reach the core disclosure layer. As neither party is a complete stranger nor a close friend, this phase entails a degree of

danger. The steady exchange phase, the fourth and final stage, is distinguished by substantial Depth and breadth. However, few relationships reach this stage, according to (Altman and Taylor, 1973).

Social penetration theory is founded on the premise that the capacity and depth of social disclosure and communication are the most important factors in establishing and sustaining healthy social relationships. The absence of those factors destroys these bonds between connections (Altman & Taylor, 1973). In the social penetration theory, Altman and Taylor described self-disclosure as a progressive situation governed by a series of successive phases, the first of which is penetration and the second being de-penetration, or a decrease in the amount of intimacy.

According to the research, effective penetration was responsible for establishing, growing, and sustaining online interactions and connections. Moreover, a decline in proximity may result in the destruction or collapse of these relationships and communication patterns. Time is a fundamental component of the social penetration theory. The first two stages of self-disclosure occur swiftly and often, with the apparent effect being the development of superficial knowledge and disclosure. However, the latter two phases are marked by a slower rate of disclosure and a substantial period of time, according to (Altman and Taylor, 1973).

According to the social penetration theory, self-disclosure happens individually, and the quantity and kind of information provided are directly related to the potential communication partner. The idea also emphasized the importance of the environment in forming relationships. According to Altman and Taylor, the greater the physical closeness, the greater the likelihood of building a connection, which creates a larger possibility for self-disclosure.

Problem Statement

Social Penetration Theory (SPT) was invented in 1973 by Altman & Taylor to measure self-disclosure in interpersonal communication. Many other theories have spun out of this original theory, such as the Uncertainty Reduction Theory and The Social Exchange Theory.

Online Communication and Relationship Development through Online Communication

These social media platforms and dating websites, according to Burke & Kraut (2014); Bryant et al (2011), provide a vast potential for building partnerships. Mark Zuckerberg founded Facebook in 2004 as a subsidiary of the Meta Platforms Inc. group (Forbes, 2022). Several insights about the social penetration theory, communication, and the capacity to create relationships have been made in Facebook research.

According to a research conducted by Fox et al (2013), a significant portion of the population following an offline interaction would result in social media networks obtaining further information about the person. In the case of complete strangers, communication is essential to establishing any connection. Furthermore, effective communication facilitates a relationship with a potential romantic partner. In other words, how a person presents themselves in each social contact influences how the other party perceives them.

Following successful online contact, "following" or "friending" takes place. According to Bryant et al (2011), these acts provide new opportunities for self-disclosure, developing connections, and even reconnecting with old friends or sustaining relationships. Likewise, Sosik and Bazarova (2014) observed that self-disclosure and conversation mediated by social media were directly connected with a greater degree of closeness and a feeling of connection between the users.

In a 2014 research conducted by Burke and Kraut, successful online communication was shown to be connected with a higher degree of closeness. The research also indicated that personal stories were more likely to result in a relationship than "liking" or "clicking." However, general public broadcasting or "sharing" or "group posting" garnered less appreciation for developing a quantifiable relationship among social media users (McEwan, 2013). This insight provides a basis for a critical evaluation since it seemed generic and ignored the breadth and depth of public disclosure.

The majority of social networks and dating services, including Facebook, Instagram, Pinterest, and Tinder, among others, provide a landing page for an individual's information, interests, tweets, and follows. Multiple studies demonstrate that this website, as a form of online contact with potential partners, plays a crucial role in the formation of partnerships (Constine, 2012). This role relates to an individual's tastes and preferences, which are directly related to the potential relationship's breadth with the number of interactions, as stated on the page collaborating the social penetration theory, which states that the amount and frequency of communication are directly related to closeness or intimacy (Altman & Taylor, 1973).

This discovery also confirms the multimodal character of relationships, as proposed by Hall (2020); Parks (2017), namely that connections may be maintained across several social platforms. Additionally, social penetration theory defines social media and online-based communications. However, several reasons, as proposed by Mason and Carr (2021), hinder the applicability of the social penetration theory to online communication as a result of the continual changes that occur across several social platforms. Pennington (2020) and Tang & Walther (2011) refute this notion and argue that the formation of interactions via social media-mediated networks is often desirable.

Research Gap

A study of the literature regarding the use of the social penetration theory reveals a common pattern in the majority of research. Initially, the majority of the gathered material and data focused on a single social media network, "Facebook," despite the fact that, as of 2022, new online platforms are created virtually every day. Second, the bulk of the literature around the study issue does not address the creation and growth of social media-mediated relationships with reciprocity that is undefined or offers little information.

Aim of Research

This paper investigates if SPT, a 49-year-old theory, is still relevant in today's modern interpersonal relationships. Hence, this paper will study if SPT has been used in recent publications in the past ten years (2012 to 2022). This research will also focus on research in the past ten years on SPT, specifically in computer-mediated-communication (CMC) and social media.

Methodology

This systematic literature review on the function of social penetration theory adheres to ROSES, the standard technique for systematic literature reviews. Adherence to the established parameters guaranteed that the study provided the best quality data and evidence taken from the literature on social penetration theory in online communication.

The researchers prepared a suitable study topic in response to the review's requirements. First, a description of the search technique is divided into three primary sub-categories, including identifying valid data and filtering the obtained data using eligibility criteria. The researchers next performed a quality assessment of the discovered data on the retrieved literature in an effort to include only the most important material in the literature review. Lastly, a flow diagram was used to depict an explanation of the data collection, an abstraction of the analysis, and the validation of the data.

Search Strategy

The method of conducting a systematic literature review (SLR) on the Social Penetration Theory (SPT) is presented in this research, and the studies are also categorized into themes. SLR is a method that makes it possible to attempt to identify data about a specific subject that met the pre-established eligibility requirements and provides a solution to the research questions that had been posed. Data from many types of research on the subject of interest are compiled into themes through thematic analysis. Both qualitative and quantitative knowledge can be obtained using the methodologies from several investigations.

The SLR typical approach consists of four fundamental steps

- Search (defining the search string and types of databases)
- appraisal (pre-defined literature inclusion and exclusion and quality assessment criteria)
- synthesis (extracting and categorizing the data)
- analysis (narrating the result and finally reaching into conclusion)

However, this work added two steps: research protocol (ROSES protocol) and reporting results (stating the procedure followed and communicating the result to the public). The last step follows themes.

The researchers devised keywords based on the developed study questions in order to extract useful material from online article databases. This research used the following keywords: social penetration theory, online communication, social media, and social dating sites. Running the synonyms through several internet databases helped to provide more feasible possibilities for things that were present in the databases.

The keywords for the research were derived from a Scopus Journals website, online dictionary, or thesaurus recommendation, previously used search terms by relevant studies, and search phrases given by sociology experts. In addition, using the Boolean operator, phrase, searching, truncation, wildcard, and field code functions, the researchers created a potential search string consisting of exploratory phrases combined with the previously selected keywords.

The key search databases were Scopus online journals database and the Emerald online information database. Numerous systematic literature review researchers selected the two databases primarily due to the enduring benefits derived from searching those two databases. In addition, the availability of a vast and in-depth collection of peer-reviewed published literature, along with the general simplicity of search tools, was carefully considered.

In addition, Google scholar was emphasized as an extra resource for obtaining the most reliable data on social in online communication. This update was included based on the evidence offered by Haddaway et al (2015) about the advantages of the Google Scholar database for research materials for use in systematic literature reviews. As shown by Gusenbauer (2019), the Google Scholar database yielded a large number of results, with millions of accessible documents, as Orduna-Malea et al. found in 2017. Nonetheless, the search query was only shown for the two key research databases. The databases generated three hundred possible pieces of literature for inclusion in the review.

Table 1

Search string

Database	Search String
Scopus	(TITLE-ABS-KEY (social AND penetration) OR TITLE-ABS-KEY (social AND penetration AND theory) OR TITLE-ABS-KEY (onion AND theory) OR TITLE-ABS-KEY (onion AND model)) AND NOT TITLE-ABS-KEY (computing) AND TITLE-ABS-KEY (online AND communication) OR TITLE-ABS-KEY (online AND connect*) OR TITLE-ABS-KEY (computer AND mediated AND communication) OR TITLE-ABS-KEY (social AND media) OR TITLE-ABS-KEY (social AND network*))
Emerald	(content-type:article) AND (social penetration OR (social penetration theory) OR (onion theory) OR (onion model) - (computing) AND (online communication) OR (online connect*) OR (computer mediated communication) OR (social media) OR (social network))

Inclusion and Exclusion Criteria

The articles identified from the database search were subjected to inclusion criteria, to assess if they were eligible for inclusion in the review. Table 2 shows the inclusion and exclusion criteria used.

Table 2

Eligibility criteria

Criterion	Eligibility	Exclusion
Literature type	Indexed Journal (research articles)	Non-indexed journals, systematic reviews, chapters in a book, conference proceedings
Language	English, Malay	Non-English articles (except Malay)
Publication timeline	Between 2012-2022	Earlier than 2012
Indexes applied	Social Science, Arts and Humanities, Psychology	Non-Social Science, Arts and Humanities, Psychology

Assessment of Quality

All three hundred prospective literature and data produced from running the keywords on the specified databases were evaluated using inclusion and exclusion criteria to get the most accurate and relevant data for inclusion in the review. The inclusion and exclusion criteria, as proposed by Kitchenham and Charters (2007), were derived purely from the study questions posed by the researchers. As proposed by Okoli in 2015, a chronological filter was then used to further stratify the generated data. Based on Higgins and Green's (2011) discussion of the sensitivity of the research period, the literature evaluation includes studies from 2012 to 2022.

Evidence obtained from a search of the information mentioned above sources indicates that the most relevant data on the ever-evolving area of internet communication is limited to years after 2011. Thus, the inclusion and exclusion criteria inferred a definite chronological filter. In addition, the majority of the recognized research listed in these databases was not included in the systematic literature review. Consequently, this resulted in eliminating 99 research and an additional 35 studies deemed duplicates.

In accordance with the inclusion and exclusion criteria, a careful examination of the abstracts and full texts acquired from various online resources yielded the most accurate, well-informed, retrospective, and prospective studies for the review. Therefore, one hundred forty-eight further studies were removed.

The remaining eighteen studies were then evaluated for quality by two reviewers. The researchers evaluated the risk associated with each article and categorized each derivation as either high, moderate, or low. Only low- and moderate-risk information was included in the review. The quality evaluation led to the elimination of forty more papers.

The evaluation relied only on an integrative review pattern that permitted the incorporation of several study designs. Then, data abstraction was undertaken in accordance with the study questions, embracing any literature that comprehensively addressed the research issues. Braun and Clark (2006) stated that a thematic analysis of the available material was done to identify themes and sub-themes in the collected literature.

Results

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Search Results

The search for articles yielded 18 articles. The article selection process is illustrated in Figure 1.

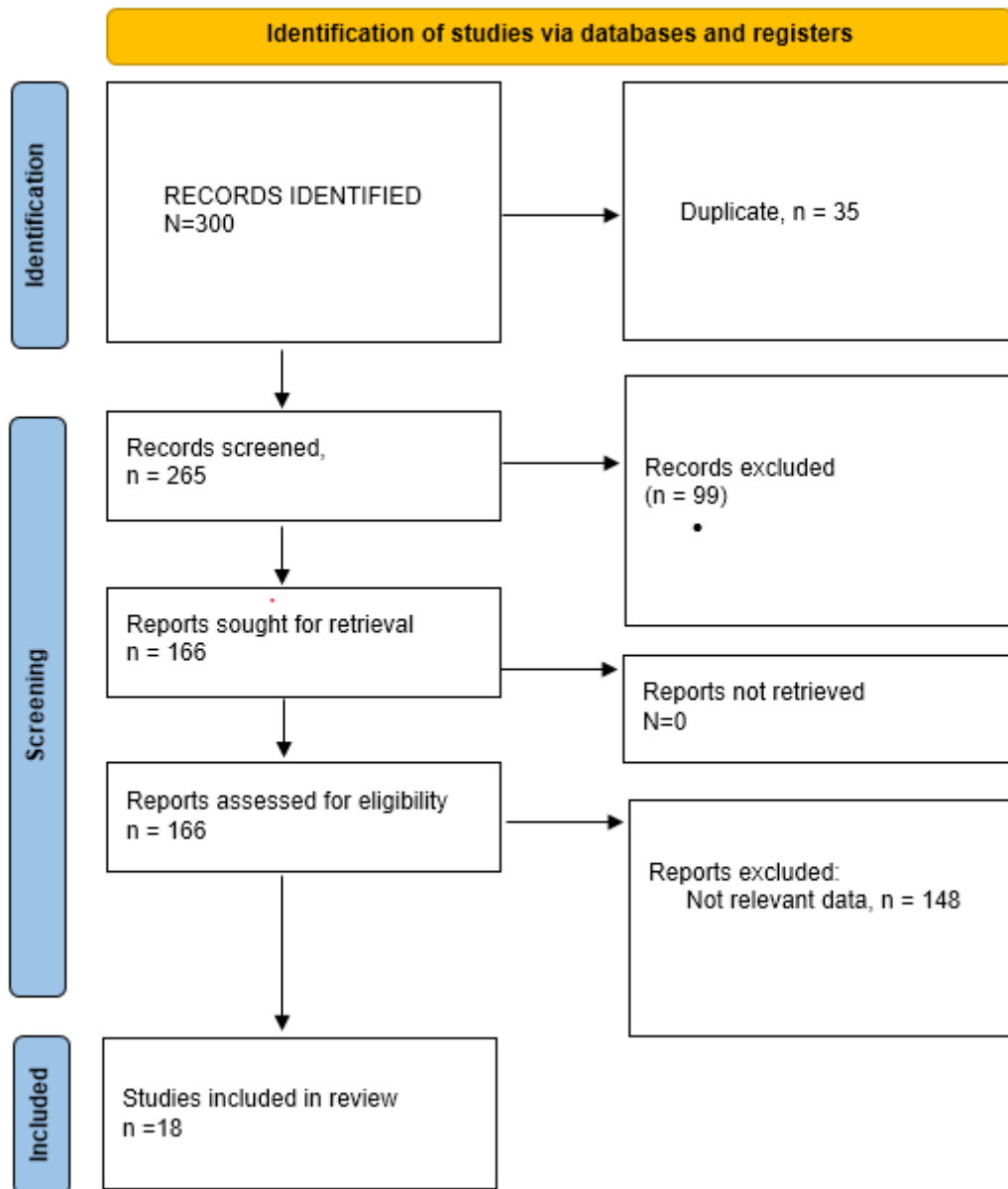


Figure 1: ROSES flow diagram for study selection

Study characteristics – Themes & Sub-themes

Motives and Expectations

The first theme emphasizes the motivation of establishing a presence on any social networking site. Initial research and investigation of a person's presence on a social platform revealed that building such a presence was mainly a personal achievement arising from the "courage" to do so. Specific aspects of conventional communication are included in the design of every social presence. The design of these platforms was heavily influenced by privacy and safeguards for personal data. In recent years, however, these concerns have shifted from insecurity to a sense of familiarity and nativity, a change attributed to the increased time spent on these platforms.

There is a strong correlation between familiarity with online social communication settings and greater sentiments of safety and familiarity in any online connection. Due to the ever-changing nature of these communication platforms, self-disclosure has become a daily

occurrence, including social presence. Over time, experience with social networks has led to a shift from restrained self-disclosure, as demonstrated by an examination of various online communication platforms.

Audience

Because of the idea that online communication and presence on any social platform is founded on a communication request from all parties, the audience through which self-disclosure is imagined might be either fictitious, visible, or invisible. A research question derived from Goffman's (1959) findings on the intended prospective communication participants and the perspectives generated by both sides regarding this communication request.

According to research, numerous social media users are unsure of the audience they are likely to meet via their online social interactions. Nonetheless, fundamental advances in the internet communication industry have permitted individuals to choose whomever they want to include in their communication channels. This modification has allowed measurable interactions on various platforms, transforming the audience from invisible and nonspecific to very visible yet anonymous.

Interaction

Interaction as a theme concern in online communication supported by social penetration theory addresses concerns arising from the method of online social address, how these communications are perceived, and the complexity of the internet as a communication medium. For example, research indicates that only interested prospective communication partners contact the owner of a personal page on any social media platform, despite the fact that these communication channels are presently being transformed by more complex and multidimensional interactions. Notable are the "social duties," "pressure," and "saturation" topics that emerge from the necessity to maintain online networks.

Privacy

This topic examines the distinctions between private and public self-disclosure. In online communication forums, connecting any personal data or materials creates tangible proof and verifies the person's identity. In online communication, privacy has been a contentious and essential subject. Initially, the disclosure of private materials and sensitive private data was seen as a very worrisome precedent; however, this element has been significantly lessened. Previously private data and information are now exposed to the public via broad sharing initiatives on social networks.

Adjustments

Adjustments include the tactical and strategic modification of the material presented on an online social network in response to interactions experienced and attained. Due to the ever-changing nature of internet communication platforms, it has been determined that updates are essential.

Study characteristics

Table 3

Study characteristics (Table of Findings)

Author, year and country	Study Design	Main subject of the study	Study participants	Objective statement
Aghazadeh (2022) USA	Survey	The Effects of a Client's Social Media Disclosure and Audience Engagement on Auditor Judgment: A Social Penetration Theory Perspective	25 participant who uses Twitter and are Auditors with CPA qualification.	To investigate how a client's initial disclosure via Twitter (versus private disclosure) and audience engagement of the client's tweet (e.g., number of "likes," "comments," and "retweets") affects auditors' perception of the auditor-client relationship and their evaluation of the client-provided information.
Bazarova & Choi (2014) United States	Qualitative Content Analysis	Uses of functional model of self-disclosure on social networking sites.	81 undergraduate university students in US	To examine self-disclosure motivations and characteristics in Facebook status updates, wall posts, and private messaging.
Bolong & Waheed (2017) Malaysia	Survey & Interview	Level of interpersonal relationship in Computer Mediated Communication by IRC members.	1025 survey respondents, 4 interview participants	To answer whether or not differences exist in the utilisation of strategies in the form of online interpersonal relationships for chat partners of the same gender.
Lei et. al (2022) China	Content analysis	Self-disclosure, social support and postpartum depressive mood in online social networks: a social penetration theory perspective. <i>Information Technology & People.</i>	835 postpartum mothers' social media posts	To investigate how postpartum mothers conduct self-disclosure on social media may obtain social support and therefore improve their depressive mood.
Lee & Lin (2017) Taiwan	Literature Review Analysis	Exploring horizontal communication of matrix-structured organization with social penetration theory	Investigate project communication of project members through IM (numbers unavailable)	to investigate project communication of project members through IM during the operation of art, entertainment and recreation business.

Maheshwari & Mukherjee (2020) India	Survey	How Strong are our Weak Ties? Examining the Usefulness of Facebook Friendship in Youths' Life from the Social Penetration Theory	253 undergraduate student	To study the social penetration theory in exploring the differences in the formation of Facebook and face-to-face friendships and their patterns of support access.
Mohamed & Draz (2020) Egypt	Focus Group Interview	Social Penetration of Egyptian Youth on Social Networking Sites between Conscious and Unconscious	n/a	To test whether those SNS can penetrate their users unconsciously and with their agreement at the same time or not.
Olson (2013) United States	Survey & Focus Group	Relationship between Social Penetration Theory in Facebook and how it can increase self-esteem	15 Focus Group participant	To test hypothesized relationships between individuals that use Facebook to build relationships through self-disclosure and how this positively affects their self-esteem.
Orben and Dunbar (2017) United Kingdom	Longitudinal experimental study	Effects of passive media consumption (new mode of interaction) that alters human psychology.	243 participants	To investigate how reading online 'posts' affects relationship development.
Osatuyi (2015) USA	Survey	Is lurking an anxiety-masking strategy on social media sites? The effects of lurking and computer anxiety on explaining information privacy concern on social media platforms	250 Social Media Users	explores the role of lurking, a common social media participation strategy, and computer anxiety in explaining concern for information privacy (CFMIP)
Park et al (2011) United States	Survey	Association of need for affiliation and the motivations for relationship maintenance and initiation from self-disclosure perspective.	249 university students	To examine the association between self-disclosure and intimacy in the context of Facebook.
Pennington (2015)	Survey, Quantitative	Presentation of Social Penetration	103 Facebook profile, 26 Focus	To test the major assumptions of the

United States	Content Analysis, Focus Group	Theory (SPT) beyond face-to-face (FtF) relational development.	group participation, 312 Survey respondents.	theory regarding relational development and self-disclosure.
Pennington (2020) United States	Survey & Multi-Level Modeling	Reasons how relationships are potentially dissolved through social networking sites (SNSs) Study	312 respondents & 3062 cases	To explore how relational transgressions can affect the maintenance of various ties within one's social network.
Pennington (2021) USA	Survey and content analysis	Extending social penetration theory to Facebook	103 friendships on Facebook	To assess the extension of core interpersonal theories within online contexts
Perbawaningsih (2016) Indonesia	Quantitative Content Analysis	Reasons why social media changes the way we communicate and build interpersonal relation	Participation-observation by researchers (undisclosed number)	To investigation the online social penetration process between Indonesian Women and their interaction with Online Foreign Partners.
Pu et al (2022) India and USA	Pilot test survey	To Disclose or Not to Disclose: An Evaluation of the Effects of Information Control and Social Network Transparency	289 students (2 Pilot test)	To study, one critical characteristic of SNS platform, SNS transparency, and investigate its impact (direct and indirect via Information Control) on individuals' self-disclosure intention and the moderating role of privacy disposition.
Rozzell et. al (2014) United States	Survey	Uses of Computer-mediated communication which alters the availability of relationally nonclose with others.	88 college students	To study relational closeness and social support among college students on Facebook
Tang & Wang (2012) Taiwan	Online Survey	Presentation of how bloggers reveal themselves online in nine topics or areas.	1027 Taiwanese bloggers	To explore the topics that bloggers disclose on their blogs, and in the real world

Critical appraisal -Themes & Sub-themes

Table 4

Quality assessment table

STUDY AUTHOR & YEAR	THEMATIC DERIVATIONS				
	Motives and expectations	Audience	Interaction	Privacy	Adjustments
Orben and Dunbar,(2017)		✓	✓		✓
Olson (2013)	✓	✓		✓	
Perbawaningsih (2016)	✓		✓		✓
Bolong & Waheed (2017)		✓	✓	✓	
Tang & Wang (2012)		✓	✓	✓	
Park et al (2011)	✓	✓	✓	✓	
Pennington (2021, 2020, 2015)	✓	✓	✓	✓	✓
Rozzell et. al (2014)			✓		✓
Bazarova & Choi (2014)	✓	✓	✓		
Aghazadeh (2022)		✓	✓		
Pu et al (2022)	✓	✓	✓	✓	
Maheshwari & Mukherjee (2020)			✓		
Mohamed & Draz (2020)				✓	
Osatuyi (2015)	✓	✓	✓	✓	
Lee & Lin (2017)			✓		
Lei et. al (2022)		✓	✓		✓

Discussion

The critical appraisal or thematic analysis (Table 4: Quality assessment table) is grouped into repeated themes in the journal or publication, which includes motives and expectations, audience, interaction, privacy, and adjustments.

A thematic analysis of the eighteen included research demonstrates important shifts in the area of online social communication. These changes are mostly attributable to the many comprehensive technological developments and transformations that are presently relocating the user of these online social networks to the center of all conversations and replacing the whole communication medium. The Internet has become an easily accessible technology, available worldwide and serving as a conduit for several everyday communication activities and discussion forums.

As proposed by Altman and Taylor in 1973, the social penetration method is primarily concerned with comprehending and investigating the stages of a relationship's growth, with exceptions for computer-mediated communicative, transactive, and boundary-crossing interactions.

According to Altman and Taylor's "onion model," illustrating the phases of any human relationship, internet communication has significantly influenced all levels of relationship formation. The laws and principles governing self-disclosure have been significantly altered by the differences resulting from the online communication platforms' environments. For example, self-identification has shifted from the development of a likable social persona to performance, or how actively an individual participates in the communication network.

Second, the levels described in the social penetration theory are not strict, with online communication platforms increasing their permeability. This definition of interaction levels is susceptible to change and makes it simple for a connection to cross from one level to another randomly.

Conclusions

The overall purpose of the systematic literature review was to evaluate the social penetration theory's impact on online communication going back ten years. The analysis of relevant data reveals a major change in the communication and relationship-building paradigm since Altman and Taylor's 1973 predictions. Unfortunately, the research procedure was significantly hindered by the paucity of literature containing comparative study data. This systematic literature analysis suggests using an objective communication-based model with a foundation derived from the social penetration model in order to quantify the effect of online communication through computer-mediated platforms. This approach will assist in addressing the communicative and transactional components of all interpersonal contacts created and mediated through an online presence. Adoption of this paradigm reflects a transition from a social and philosophical perspective to a more current communication interaction perspective in computer-mediated communication.

Limitations and Recommendations for Future Studies

There are a few limitations of this current work. First, the sample size may be too spread out and not specific to a country or a particular culture; hence, it is difficult to observe if culture plays a role and if there are differences in Social Penetration Theory (SPT) in a different culture. Second, this study only looks at SPT in online environments such as Instant Messengers and Social Networking Sites (SNS) versus face-to-face (ftf) communication and may be viewed as a limitation in terms of the generalizability of the findings. However, the population in this research is a representative sample of the Internet and social media users.

We encourage scholars to replicate the findings with a larger, more diverse sample and explore additional variables that affect different generations or age groups. Future research can therefore replicate the study with other user populations to confirm findings from this study.

We also recommend additional inquiries into the personal characteristics that elicit disclosure. SPT indicates that the personal characteristics of both parties affect relationships

(Altman & Taylor, 1973). The current findings suggest that there may be other explanatory mechanisms for the effects of disclosure.

Other individual and group-level behavioral characteristics in online groups more representative of that user population may explain the variance in the Social Penetration Theory (SPT) construct. As such, future studies that explore the role of online group dynamics and personality traits in the context of social media will help extend our understanding of SPT in social media research and practice. This article, therefore, echoes the call for research to understand individual-level factors such as personality traits as antecedents for SPT in the context of social media.

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