**PROGRAM ON DATA SCIENCE
FOR PUBLIC POLICY**

Understanding Pakikipagkapwa Through Analytics

Exploring Filipino Relational Communication in Online Spaces

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Cristabel Tiangco, Purisima Panlilio, Ph.D., Remi De Leon,
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Executive Summary

Pakikipagkapwa (shared inner self and shared identity) is a key concept in Filipino psychology. Pakikipagkapwa is an important value embedded in the socialization process of Filipinos, in which one veers away from self-centeredness. This concept extends beyond Filipino attitudes, practices, and interactions; it is also crucial in developing policies that are culturally sensitive and human-centered. Numerous investigations unravel its nature, antecedents, and manifestations. However, most studies rely on qualitative approaches. Although available literature has its merits, it suffers from several limitations, such as a small sample size, difficulty in soliciting honest and reliable responses, and the lack of standardized instruments for measuring the concept. Qualitative studies take time to complete and are cross-sectional; by the time the results are presented, they might have become outdated. Dynamic and complex, culture is shaped by various societal, political, environmental, and technological forces. Pakikipagkapwa, which is central to Filipino culture, must be continually investigated, since it may change in subtle yet tangible ways.

Social media in the Philippines has provided an opportunity to study this concept using digital data. Since Filipinos are heavy users of social networking platforms, they often foster lively interactions. Such interactions produce digital information that can be used to study Filipino cultures. Researchers have demonstrated the advantages of using social media data. These platforms are a data-rich reservoir. Interactions in social networking sites are also non-elicited and unaffected by the actions of the researcher. Users are free to interact, which leads to a more realistic, authentic, and engaging presentation of beliefs, attitudes, power, and values.

Few studies have used social media data to analyze values and cultural concepts in the Philippines. In this policy discussion paper, we explore the potential of social media as an alternative source of data for studying pakikipagkapwa through text mining. We collected data from popular platforms, such as X (previously Twitter), Reddit, and other online fora. We utilized web scraping, which is a cheap and automated way to collect data online.

The extracted data were preprocessed and analyzed using the topic modelling technique.[7] Data analysis showed that the identified themes can be categorized into distinct clusters, based on their connection to the concept of pakikipagkapwa. These clusters are the following: manifestations, mediums, enablers, and moderators. We then compared the concepts extracted from social media with those discussed in the published studies. There are substantial overlaps, but there are also differences. This demonstrates the complementary role of text mining in elucidating "pakikipagkapwa." Therefore, we recommend social media data analysis through text mining, which may be a viable research tool. Due to its relevance to Filipino culture, findings could be used as an input to policymaking to produce socially inclusive, culturally sensitive, and human-centered policies.

Introduction

Pakikipagkapwa is a component of Dr. Virgilio Enriquez's *Kapwa Model Value Structure* (1992, 75), as well as Clemente et al.'s *Reformulated Value System of the Filipino Adolescent* (2008, 25). The limited number of empirical studies on "pakikipagkapwa" is perhaps due to the difficult and laborious process of collecting data that permits thorough investigations. Typically, information is collected from volunteer respondents who accomplish a Likert-type questionnaire,[8] or through interviews. Various challenges also reduce the generalizability and validity of studies about pakikipagkapwa, including: difficulty in recruiting respondents; ensuring adequate sample size and the resulting representativeness; questionnaire reliability and validity; obtaining honest responses (people may say one thing but do the opposite thing); and consistent participation of respondents (who may later opt out of the study). In fact, the study of Clemente et al. (2008, 25) proposed alternative methods to test the kapwa theory,[9] but they suffer from two major drawbacks. First, only

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[7]   Topic modelling is a common approach in text mining which surfaces semantic patterns in a body of data and points out the topics within it.

[8]   A Likert-type questionnaire is usually a five-point scale where a respondent expresses agreement or disagreement on a particular question.

[9]   According to Clemente et al., the kapwa model "is a theory regarding Filipino social interaction."

university students were included in the study; results may not be relevant to non-students. Second, further investigations are needed to validate results, especially the claim that Filipino values can be differentiated based on two dimensions (*Sarili–Lipunan*[10] and *Ibang Tao–Hindi Ibang Tao*[11]).

Presently, researchers are turning to online data to study people's values, behaviors, and preferences. These studies are encompassed in new fields, such as digital humanities, culturomics, or cultural analytics. The idea is to use big data analytics to mine digital traces of human activity or interaction that manifest the thoughts and behavior of people. Filipinos are among the heaviest online users and consumers. They use the digital space to interact, voice opinions, and support various advocacies. Due to the prevalent use of digital technologies among Filipinos, there is now an abundance of data. These data further explicate the concept of pakikipagkapwa, following the approach of culturomics.[12] This also opens the possibility of applying data science methods to study Filipino culture, values, and traditions.

Clemente et al. (2008, 2) highlighted that pakikipagkapwa can be interpreted as an act of communication. They implied this when they discussed the kapwa model theory. Enriquez's kapwa model corresponds easily with the structural model of communication. Behavioral manifestations of pakikipagkapwa include the process of finding "the unity of the self in the other" and "mutual understanding." This is expressed in various models, such as Rogers and Kinkaid's Convergence Model[13] (De Leon 2005, 25). More broadly, pakikipagkapwa also relates to the etymological connections between "communication" and

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[10]   The "sarili" dimension consists of values that pertain to an individual and do not involve interactions with others. In contrast, the "lipunan" dimension encompasses values that are important for guiding actions relevant to a broader community.

[11]   It is a recognition of a shared identity with others—regardless if one is an "outsider" (*ibang tao*) or "one of us" (*hindi ibang tao*)—and overlooks disparities in social markers such as status, occupation, and wealth.

[12]   Culturomics studies human language, cultures, and behavior within a given set of digital texts. It is used to deduce emerging cultural phenomena from large bodies of online data.

[13]   The Convergence Model is an interactional model that shows how communication between two parties (sender and receiver) is not merely an event, but a whole process. This involves sharing and creating knowledge between each other.

"communion," both as a behavior and as a value or aspiration. Using Enriquez's model to examine pakikipagkapwa as a behavior is functionally the same as using a kapwa model of communication. This further supports the use of online data in the study.

Digital developments and the increasing utility of data analytics in the years since Enriquez's and Clemente et al.'s studies present new opportunities for exploring Filipino values in relation to pakikipagkapwa, and for triangulating and validating their earlier findings. While Clemente et al. examined Enriquez's assertions using data from a sample size of 136 respondents, this study analyzed online data from selected platforms. Such analysis offers several advantages, such as greater flexibility and enhanced generality. As such, analysis can be dynamic, in contrast with examining static survey data. Results also have high ecological validity; users are relatively free to interact and voice opinions in less restrictive, realistic, and engaging platforms. Online data provide comprehensive description of events and contexts, offer authentic roles, and reflect external factors and realities.

For this paper, we addressed the following questions:

■   How is pakikipagkapwa expressed online (e.g., social media)? Specifically, the study examined selected threads from five popular platforms where Filipinos have unfettered discussions: YouTube, X (formerly Twitter), PinoyExchange, Facebook, and Reddit.

■   How does the online expression of pakikipagkapwa compare with the findings of earlier studies?

■   What recommendations can be drawn from the findings to develop policies which would promote pakikipagkapwa?

Hence, the study aims to: first, analyze social media data to shed light on Filipino culture, specifically on pakikipagkapwa, through online interactions; and second, triangulate the result of our approach with existing theories about pakikipagkapwa and related concepts. The first objective was addressed by applying web scraping, text mining, topic modeling, and developing semantic networks. The second objective reflected our approach's validity, as well as its strengths and limitations.

This new approach could generate insights on how pakikipagkapwa has evolved in the three decades since Enriquez's (1992, 75) kapwa model, and about fifteen years since Clemente et al.'s (2008) revised version. This work may influence the theoretical underpinnings of future research on Filipino culture, which has been predominantly reliant on the theories and methods of Sikolohiyang Pilipino. Likewise, results of this study could inform policies and guidelines that aim to better communicate social and political issues on digital spaces, and implement programs that adopt a human-centric approach. Additionally, it could improve public service through a management system that is culturally sensitive and attuned to the thoughts and behaviors of Filipinos. From a technological perspective, most Artificial Intelligence (AI) models are trained from online content. By understanding Filipino values online, we are in a better position to examine possible sources of bias and make AI models reflect the culture of Filipinos.

Literature Review

Kapwa Theory

Kapwa, or shared identity, is at the heart of Sikolohiyang Pilipino. It is regarded as a stable construct integral to the social interactions among Filipinos. Often, it is perceived as a value. Values are internalized cognitive structures from which people draw for decision-making. These reflect one's basic principles of morality (i.e., right versus wrong) and sense of priorities (e.g., whether to forgive a transgressor or not) (Oyserman 2015, 36). Additionally, values can be studied either on the individual level, or on the group/societal level through norms, priorities, and guidelines.

In the Philippines, discussions on Filipino values initially revolved around *utang na loob* (gratitude), *hiya* (shame), and *pakikisama* (yielding to the leader or majority). These discussions were based on studies in the 1960s by Racelis and Lynch, among others. However, Virgilio Enriquez, known as the father of Sikolohiyang Pilipino, contends that utang na loob, hiya, and pakikisama are merely colonial/accommodative surface values, with *kapwa* being the core value.

Enriquez partly objects to the use of an outsider's point-of-view (i.e., research by non-Filipino, usually Western, academics) in analyzing and identifying Filipino

values without contextual information that an insider may have. Meanwhile, Mendoza and Perkinson (2003, 291) describe kapwa as:

> A clear instance of a core value of a non-Western people locked inside its own culture in titanic struggle, with an invasive counter-value that does not submit readily to its own ethic of reciprocity ... The surface perception of Filipino culture as smooth-seeking and serenity-entreating, in this particular case, is not merely Western mis-reading, but also protective Filipino mis-leading, safe-guarding a secret strength that offers its code only to a particular mode of participation.

The proposed value structure can be seen in Figure 1, which is classified into four major categories: (a) surface (colonial/accommodative and confrontative) values; (b) pivotal interpersonal value; (c) core value; and (d) foundation of human values (linking socio-personal and associated societal values). *Pakiramdam* (capacity to feel) functions as the processor from which the core value of kapwa spins off toward the surface values; it is the pivotal value of shared inner perception (Enriquez 1992, 75–6). Should pakiramdam be absent, "kapwa, in all its manifestations, becomes inoperative since it ceases to have a means of expression or communication" (Mendoza and Perkinson 2003, 289).

Colonial/Accommodative Surface Value	*hiya* (propriety/ dignity)	*utang na loob* (gratitude/ solidarity)	*pakikisama* (companion- ship/esteem)
Confrontative Surface Value	*bahala na* (determination)	*sama/lakas ng loob* (resent-	*pakikibaka* (resistance) ment/guts)
Pivotal Interpersonal Value	*Pakiramdam (pakikipagkapwa-tao)* (shared inner perception)		
CORE VALUE	**KAPWA (Pagkatao)** (shared identity)		
Linking Socio-Personal Values	*Kagandahang-loob (Pagkamakatao)* (shared humanity)		
Associated Societal values	*karangalan* (dignity)	*katarungan* (justice)	*kalayaan* (freedom)

■ **Figure 1.** Behavior, Patterns and Value Structure: Surface, Core, and Societal (reproduced from Enriquez 1992, 93).

Analyses of social interaction using the Filipino language yielded eight levels and modes of behavior. These are the following: *pakikitungo* (level of amenities/civility); *pakikisalamuha* (level of "mixing"); *pakikilahok* (level of joining/participating); *pakikibagay* (level of conforming); *pakikisama* (level of adjusting); *pakikipag-palagayang loob* (level of mutual trust/rapport); *pakikisangkot* (level of getting involved); and *pakikiisa* (level of fusion, oneness, and full trust) (Santiago and Enriquez 1976, as mentioned in Enriquez 1992, 49–51).

The different levels of interpersonal relations have different behavioral manifestations. For example, pakikitungo, pakikisalamuha, pakikilahok, pakikibagay, and pakikisama typically describe how one relates to others as an outsider, or as *ibang tao* (literally, another person). Meanwhile, pakikipag-palagayang loob, pakikisangkot, and pakikiisa are typical of interactions with those in the one-of-us category, or *hindi ibang tao* (not another person). Kapwa is a superordinate concept that embraces both categories of outsider and one-of-us. Meanwhile, pakikipagkapwa embraces all levels of both categories (Enriquez 2018, 289).

The levels imply that pakikipagkapwa is not simply about engaging in social interaction. Before being treated as an equal, or hindi ibang tao, one needs to interact first as ibang tao; the process goes from pakikitungo to pakikisalamuha, then pakikilahok to pakikibagay, and lastly to pakikisama, which is the final level of social interaction before one gets considered in the hindi ibang tao category. Thus, pakikipagkapwa requires interpersonal skills in dealing with others, whether ibang tao or hindi ibang tao.

The spirit of *alay kapwa* (alay means offer or offering) was concretized by the emergence of community pantries during the COVID-19 pandemic. Despite several restrictions, people contributed food to communities, which supplemented the diminishing supply of government relief. Community pantries were driven by a spirit of fraternal charity and a sense of social responsibility for the suffering of others. Organizers and contributors recognized that people in need are fellow humans, whose "existence is closely [tied] to their own existence, and the humanity of the needy is the same humanity of those who are giving" (Canete, Rocha, and Dolosa 2022, e296).

Recent empirical investigations on kapwa attempted to address the conceptual and operational ambiguity of the term and the lack of evidence to of its being a
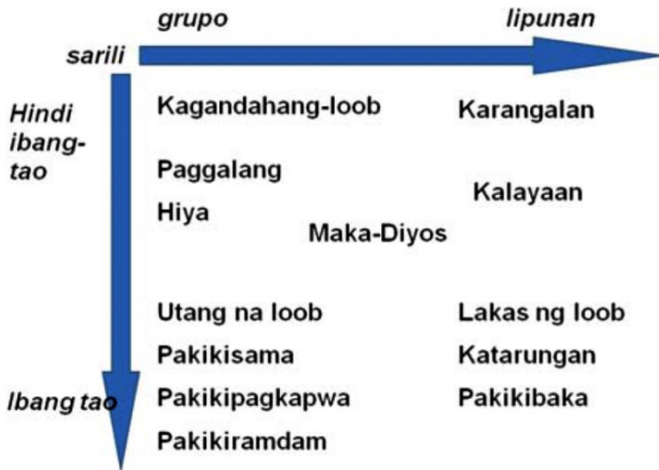
core value. Labor and Gastardo-Conaco (2021, 16) utilized a bottom-up approach through language and argued for a more nuanced definition of kapwa: a "view of a highly positive social other to which one has strong connections and interactions." This was seen as an empirical support to the notion of kapwa as a social relational construct rather than as a value. A separate social category for *di-kapwa* was also found, in contrast to Enriquez's model where everyone is considered as kapwa, even outsiders. People in the di-kapwa category are described as having negative characteristics and engaging in undesirable behaviors. Since they are outside the kapwa boundaries, the acceptable modes of social interactions may differ, in which an individual may display unpleasant behavior towards a di-kapwa.

In another study, Clemente et al. (2008, 20) asked 47 students enrolled in a course, Introductory Psychology, to create a diagram/map showing links among the thirteen values identified in their updated kapwa value list. Included here are:

- *Maka-Diyos* (Godly/religious)

- *Pakikibaka* (struggling for a cause)

- *Lakas ng loob* (inner strength, bravery, willful)

- *Katarungan* (justice)

- *Kalayaan* (freedom)

- *Karangalan* (honor)

- Pakikipagkapwa

- Pakikiramdam

- Pakikisama

- Utang na loob

- *Paggalang* (respect)

- *Kagandahang-loob* (virtue) and

- Hiya.

From the original values proposed by Enriquez, *bahala na* was endorsed the least and was replaced with "maka-Diyos" and "paggalang." The data from the multidimensional scaling (MDS) analysis[14] did not conform to the *a priori* categories by Enriquez. No core value emerged. The MDS also derived distinct dimensions (instead of categories), including hindi ibang tao to ibang tao, and *sarili* (self) to *grupo* (group) to *lipunan* (society) (Figure 2).

- **Figure 2.** Reformulated Value System of the Filipino Adolescent (reproduced from Clemente et al., 2008, 25).

Like Labor and Gastardo-Conaco (2021) and Clemente et al. (2008), Bernardo, Clemente, and Liem (2014) did not find kapwa as a core value. In a study with an etic approach, 752 students from two secondary schools and one university

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14   Multidimensional scaling (MDS) is a statistical technique used for visualizing the similarity or dissimilarity of data.

in Metro Manila accomplished the Portrait Values Questionnaire (PVQ).[15] The results showed that "benevolence" received a high ranking (Bernardo, Clemente, and Liem 2014, 6), which is consistent with the kapwa model. Additionally, priority was given to "universalism," which is also consistent with the shared identity model. Moreover, there were other values that were reported by the Filipino adolescent participants to be more salient, including "self-direction," which ranked the highest.

Meanwhile, the findings of Yacat (2017, 18) imply that the hierarchy of values proposed by Enriquez applies only to the ibang tao category and not to the hindi ibang tao category. In his study, actions that go against *pakikipagkapwa-tao* were considered more serious. They could terminate a relationship if the transgressor is considered as ibang tao, and not hindi ibang tao.

Existing Methods to Study Pakikipagkapwa

Most empirical studies on the kapwa theory use a survey-based strategy and interview method. They rarely use online data. Table 1 presents the methodological approaches by various researchers on social behavior and value systems. Most of these research projects have a small sample size. Quantitative studies also generally use Likert-type questionnaires. Out of more than forty studies, only two used archival online data. These instances are shown below.

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[15] A Portrait Values Questionnaire (PVQ) is a personality evaluation where respondents assess themselves based on how similar or different they are to a short description or portrait of a value. The answers may range from "very much like me" to "not like me."

TABLE 1. METHODOLOGICAL APPROACHES BY VARIOUS RESEARCHERS ON SOCIAL BEHAVIOR AND VALUE SYSTEMS

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
FACTORS AFFECTING PAKIKIPAG-KAPWA: PSYCHOSOCIAL FACTORS								
SPECIFIC CONCEPT: SOCIAL INTEREST								
Merza et al. 2022	Qualitative	Survey (semi-structured interview)	9	Purposive	College student leaders	Philippines	Visual methodology (photo-elicitation) and questionnaire	Framework analysis
Lanaca, Albor, and Recto 2022	Mixed-methods	Survey	131	Purposive	Volunteers of UPLB – Ugnayan ng Pahinungod	Philippines	Questionnaire and interview	Statistical summaries and thematic analysis
Saeri et al. 2017	Quantitative	Archival	21,227	National survey	New Zealand attitudes and value survey	New Zealand	Questionnaire (longitudinal national survey)	Cross-lagged panel analysis
Clary et al. 1998	Quantitative	Instrument development	467	Purposive	Volunteers	Minneapolis and St. Paul, USA	Development of Volunteer Functions Inventory Instrument	Factor analysis
Fernan 2002	Quantitative	Survey	8243	Purposive	Households	Philippines	Questionnaire	Statistical summaries
Barrameda and Barrameda 2011	Qualitative	Survey	42	Multistage cluster sampling	Households	Albay, Philippines	Focused group discussions	Analytic induction

| STUDY | METHODOLOGICAL CHOICE | RESEARCH STRATEGY | SAMPLING | | | COUNTRY | DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT | ANALYSIS METHOD |
			SIZE	METHOD	SOURCE			
			SPECIFIC CONCEPT: EMPATHY					
Gülseven et al. 2020	Quantitative	Survey	257	Purposive	College students	Ankara, Turkey and Quezon City, Philippines	Questionnaire	Path analyses and multigroup analyses
Pang, Song, and Ma 2022	Quantitative	Survey	1037	Purposive	College students	Xinjiang, China	Questionnaire	Correlation and mediation analyses
Khan et al. 2022	Quantitative	Survey	200	Purposive	Health professional	Pakistan	Questionnaire	Correlation analysis
Ma et al. 2021	Quantitative	Experiment (Mixed design of 2 by 2)	67	Purposive	College students	China	Implicit association test and questionnaire	Two-factor analysis of variance
Maner et al. 2002	Quantitative	Experiment (3 by 2)	169	Purposive; assignment to conditions is random	Under-graduate students	USA	Questionnaire	One-way ANOVA analysis and structural equation modeling
Bohns and Flynn 2021	Quantitative	Survey	Study 1: 207 Study 2: 404	Purposive	Recruited through Amazon Mechanical Turk	USA	Questionnaire	Exploratory factor analysis

| STUDY | METHODOLOGICAL CHOICE | RESEARCH STRATEGY | SAMPLING | | | COUNTRY | DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT | ANALYSIS METHOD |
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: PARASOCIALITY								
Centeno 2016	Qualitative	Survey and archival	Focus group: 18	Purposive	Individuals	Philippines	Focus group and Social media archive	Thematic analysis (Hermeneutical framework of interpretation)
Schramm and Wirth 2010	Quantitative	Survey	Study 1: 236 Study 2: 192 Study 3: 61	Purposive	Theater visitors, Swiss public university students, TV viewers	Switzerland	Questionnaire	Regression analysis
SPECIFIC CONCEPT: POWER DISTANCE AND ACCEPTANCE OF HIERARCHY								
Acuña and Rodriguez 1995	Quantitative	Survey	3418	Purposive	Community respondents (belong to 4–6th classes)	Philippines	Questionnaire	Multiple step-wise regression analysis and three-factor ANOVA
SPECIFIC CONCEPT: RELIGIOUS PRIMING								
Batara et al. 2016 Saroglou, 2013	Quantitative	Experimental	173	Purposive; random assignment to experimental conditions	Undergraduate students of the University of San Carlos - Talamban campus	Philippines	Video clips and coupons	Two-way ANOVA
Van Cappellen, Saroglou, and Toth-Gauthier 2016	Quantitative	Survey	548	Purposive	Churchgoers	Belgium	Questionnaire	Mediator models

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: NEED TO DEVELOP INTERPERSONAL SKILLS, BETTER SOCIAL CONNECTIONS/NETWORK								
Valdez 2014	Qualitative	Survey	9	Purposive	Gawad Kalinga employees	Philippines	Open-ended interviews	Content analysis and narrative analysis
SPECIFIC CONCEPT: FAMILY								
Cleofas and Oducado 2022	Quantitative	Survey	1665	Purposive	Undergraduate students in a state college in Visayas	Philippines	Questionnaire	Multivariate linear regression
Muddiman et al. 2019	Quantitative	Survey	976	Purposive	Students	United Kingdom	Questionnaire	Binary logistic regression
Grimm et al. 2005	Quantitative	Survey	3178	Purposive	American youth aged 12–18	USA	Questionnaire	Statistical summaries
SPECIFIC CONCEPT: SMART SHAMING								
Rodriguez 2017	Study 1: Qualitative Study 2: Quantitative	Survey	Study 1: 8 Study 2: 127	Snowball and purposive		Philippines	Study 1: Semi-structured and unstructured interviews Study 2: Questionnaire	Study 1: Thematic analysis Study 2: Correlation analysis

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: SOCIAL DOMINANCE ORIENTATION								
Bernardo, Clemente, and Liem 2014								
Katz and Hass 1988	Study 1: Qualitative Study 2: Quantitative	Survey	Study 1: 84 Study 2: 122	Purposive	College students	USA	Questionnaire	Study 1: Content analysis Study 2: ANOVA
Levy et al. 2006	Quantitative	Survey	105	Purposive	College students	USA	Questionnaire	Statistical summaries
SPECIFIC CONCEPT: SOCIAL PREJUDICE								
Monteith and Walters 1998	Quantitative	Experiment	244	Purposive	Psychology students	USA	Questionnaire	Principal component analysis and regression analysis
Perkins 1992	Quantitative	Survey	2299	Purposive	College students	England and USA	Questionnaire	Multivariate regression
Cozzarelli, Wilkinson, and Tagler 2001	Quantitative	Survey	209	Purposive	College students	USA	Questionnaire	Hierarchical regression analysis

FACTORS AFFECTING PAKIKIPAG-KAPWA: INSTITUTIONAL FACTORS

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: GOVERNMENT PERFORMANCE								
Lavides 2020	Qualitative	Indigenous	10 (and 16 community participants)	Purposive	Biracial children	Philippines	Semi-structured interviews	Thematic analysis
SPECIFIC CONCEPT: MASS MEDIA								
Miles and Morse 2007	Quantitative	Archival	Media outlets	Purposive		USA	Media outlets (newspaper and television) / Opinion polls	Content analysis (keyword)
SPECIFIC CONCEPT: EDUCATION								
Arienda et al., n.d.	Qualitative	Survey	8	Purposive	High school students	Philippines	Interview	Interpretative phenomenology analysis
Abacioglu et al. 2023	Quantitative	Survey	742	Purposive	Primary school teachers and students	Netherlands	Questionnaire	Structural equation models

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: LEARNING SPACES								
Moradi, Faghiharam, and Ghasempour 2018	Quantitative	Survey	316	Simple random sampling	Pre-university students	Iran	Questionnaire	Structural equation analysis
Han and Son 2020	Quantitative	Survey	16	Purposive	Students	South Korea	Questionnaire	Paired sample t-test
Khodijah, Suharno, and Triyanto 2018	Quantitative	Quasi-experiment	60	Purposive	Primary school students	Indonesia	Tests, interviews, observations	T-test
SPECIFIC CONCEPT: SUPPORTIVE ECOSYSTEM								
Barragán Martín et al. 2021	Quantitative	Survey	1287	Random cluster	High school students	Spain	Questionnaire	Multivariate Analysis of Variance (MANOVA)
SPECIFIC CONCEPT: FUNCTIONALITY								
Liu 2009	Quantitative	Archival	408	Purposive	Facilities	Scotland	Questionnaire	ANOVA
SPECIFIC CONCEPT: SAFE ENVIRONMENT								
Lenhart et al. 2017	Quantitative	Survey	4020	Two-stage cluster sampling	High school students	USA	Questionnaire	Logistic regression models

STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	*METHOD*	*SOURCE*			
SPECIFIC CONCEPT: EFFECT OF CRISIS								
Herrmann, Nielsen, and Aguilar-Raab 2021	Mixed methods	Survey	11 (face-to-face) 80 (online)	Purposive	School professionals	Germany	Questionnaire and interview	Thematic analysis and one-way ANOVA
FACTORS AFFECTING PAKIKIPAG-KAPWA: ECONOMIC FACTORS								
SPECIFIC CONCEPT: POVERTY								
Vermeersch and Vandenbroucke 2014	Mixed methods	Case study, survey and archival	31	Purposive	Social welfare employees	Belgium	Interview	Statistical summaries and discourse analysis
SPECIFIC CONCEPT: TECHNOLOGY								
Moawad and Ebrahem 2016	Quantitative	Survey	230	Purposive	Preparatory and secondary school students	Egypt	Questionnaire	Correlation analysis

FACTORS AFFECTING PAKIKIPAG-KAPWA: ENVIRONMENTAL FACTORS

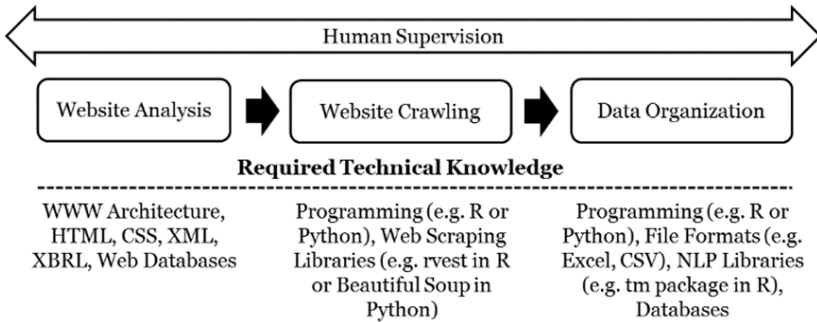| STUDY	METHODOLOGICAL CHOICE	RESEARCH STRATEGY	SAMPLING			COUNTRY	DATA COLLECTION METHOD OR DATA COLLECTION INSTRUMENT	ANALYSIS METHOD
			SIZE	METHOD	SOURCE			
SPECIFIC CONCEPT: WEATHER CONDITIONS								
Phithakkitnukoon et al. 2012	Quantitative	Archival	22,696		Mobile phone users	Portugal	Call detail records and historic record of weather conditions	Probability distribution analysis and correlation analysis
SPECIFIC CONCEPT: WEATHER CONDITIONS								
Lee and Fraser 2019	Quantitative	Archival	2335	Two-stage stratified random sampling	Respondents of the Japanese General Social Survey	Japan	National survey data	Logistic regression and negative binomial regression models
Calo-Blanco et al. 2017	Quantitative	Archival	Not mentioned		Respondents of national surveys	Chile	National survey data and seismic data	Fixed effects regression and principal component analysis

Methodology

To address the limitations of empirical research on Enriquez's kapwa model, and to examine the initial assertions of Clemente et al., this study applied data analytics techniques to answer its research questions. These techniques include web scraping, text mining process (e.g., topic modeling), and developing semantic networks.

Web Scraping

The data are from popular social media platforms, namely YouTube, X (formerly Twitter) and various Philippine forums (see column labels of Table 2). They consist of social media posts, comments and tweets. Data were collected through web scraping. Web scraping, also known as screen scraping, web data extraction, or web harvesting, automatically extracts or retrieves data from the World Wide Web (WWW), as opposed to manually copying and saving them to a file or database (Singrodia et al. 2019; Zhao 2017). The method uses various technologies and tools to automate collection and organization, such as programming languages (e.g., R or Python) and software libraries (e.g., Selenium, Beautifulsoup, Snscrape, etc.). This involves three phases: website analysis, website crawling, and data organization as shown in Figure 3 (Krotov and Silva 2018).

Website analysis involves basic understanding of HTTP (hypertext transfer protocol) and HTML (hypertext mark-up language). The structure of a website must be examined first to understand how the data are embedded and how to scrape them. Meanwhile, website crawling involves developing and running a script using programming languages (e.g., R and Python) (Krotov and Silva 2018; Krotov and Tennyson 2018). The present study particularly used Python programming language and Python packages. Python packages include Beautiful Soup for parsing HTML and XML documents, Selenium for browser automation, and *snscrape* python library for scraping from social networking sites such as X (formerly Twitter).

Human Supervision

Website Analysis → Website Crawling → Data Organization

Required Technical Knowledge

WWW Architecture, HTML, CSS, XML, XBRL, Web Databases

Programming (e.g. R or Python), Web Scraping Libraries (e.g. rvest in R or Beautiful Soup in Python)

Programming (e.g. R or Python), File Formats (e.g. Excel, CSV), NLP Libraries (e.g. tm package in R), Databases

■   **Figure 3.** Website scraping phases, as lifted from Krotov and Tennyson (2018).

In the case of some websites or applications, there is no need to use web scraping because they have Application Programming Interface (API) services. The API is an interface that allows two software components to communicate with each other, following a set of terms and conditions.[16] Developers of Facebook, YouTube, and X provide API that would allow users to access data. To use APIs, we must create an account, go to the developer's website to register an application, and then obtain an Application ID (AppID), Application Secret (AppSecret), or Access Tokens.

Data for Pakikipagkapwa

Comments, posts, and replies were gathered using web scraping and APIs. The objective is to examine if the pakikipagkapwa value is manifested or mentioned in these discussions. Sources for this study include the following: two social media platforms (YouTube and X) and five online forums (Subreddit Philippines [r/Philippines], PinoyExchange (PEx),[17] Philippines Expats Forum,[18] Expat.com,[19]

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[16]   "What is an API? (Application Programming Interface)," Amazon Web Service, accessed 19 November 2022, https://aws.amazon.com/what-is/api/

[17]   Pinoy Exchange is now a defunct website. It was accessible through https://www. pinoyexchange.com/

[18]   Philippine Expats Forum is accessible through https://www.philippines-expats.com

[19]   Expat.com - Philippines Forum is accessible through https://www.expat.com/forum/ viewforum.php?id=201

and Skyscraper City[20]). YouTube comments were extracted from *Fernando Poe Jr.'s (FPJ's) Ang Probinsyano* videos, which were posted on the official ABS-CBN YouTube channel. The authors specifically chose *Ang Probinsyano* after hypothesizing that the popular television series exhibits the pakikipagkapwa value (and other related values) in many of its episodes.[21] For the other platforms, the authors used keywords related to pakikipagkapwa to gather posts or comments that are potentially relevant. The use of keywords helps filter out irrelevant discussions. The keywords are listed in the first column of Table 2.

TABLE 2. LIST OF THE TOTAL NUMBER OF SCRAPED COMMENTS FROM DIFFERENT SOURCES RELATED TO PAKIKIPAGKAPWA

KEYWORDS	DATA SOURCES				
	TWITTER	PHILIPPINE EXPATS FORUM	SKYSCRAPER CITY	PINOY EXCHANGE	EXPAT.COM
PAKIKIPAGKAPWA (Regarding others as fellow human beings)	3 040	295	5 732	3 766	73
KAPWA (Fellow human being)	60 000	0	0	0	0
PAKIKITUNGO (Amenities or civility)	15 000	0	69 437	0	0
PAKIKISALAMUHA (Literally, "mixing" or engaging)		0	13 382	0	0

20   Skyscraper City - Philippine Forums are accessible through https://www.skyscrapercity.com/forums/philippine-forums.295/

21   As a television series, *Ang Probinsyano* exaggerated situations to gain the viewers' sympathy; hence, we did not assume that it was realistic. The intention was to analyze the comments of viewers, possibly because they can relate to the situations as depicted in the series. It has also become part of the Filipino pop culture. It may have some direct and indirect influence on the everyday interaction of viewers through the concept of parasociality. Parasociality involves relating to a person or situation they do not personally know/experience.

KEYWORDS	DATA SOURCES				
	TWITTER	PHILIPPINE EXPATS FORUM	SKYSCRAPER CITY	PINOY EXCHANGE	EXPAT.COM
PAKIKILAHOK (Joining or Participating)	15000	0	16 453	0	0
PAKIKIBAGAY (Conforming)	499	0	0	0	0
PAKIKISAMA (Comradeship)	10 000		15 279	0	0
PAKIKIPAGPALAGAYANG LOOB (Establishing mutual trust/ rapport)	32	0	0	0	0
PAKIKISANGKOT (Getting involved)	245	0	5 078	0	0
PAKIKIISA (Solidarity)	12 206	0	0	0	0
PAKIKIBAKA (Joining in the struggle)	5 000	0	12 236	0	0
PAGGALANG (Act of respect)	20 000	0	0	0	0
PAGBIBIGAY GALANG (Showing respect)	436	0	0	0	0
PAGRESPETO (Respect)	8 311	0	9 382	0	0
PAGTULONG (Helping)	6 809		4 679	0	0
PAGBIBIGAY TULONG (Offering assistance)		0		0	0
PAG-AALAGA (Caring or nurturing)	5 196	0	11 016	0	0
PAG-AARUGA (Nurturing)		0		0	0
PAGDAMAY (Commiseration)	14 149	0	0	0	0

KEYWORDS	DATA SOURCES				
	TWITTER	PHILIPPINE EXPATS FORUM	SKYSCRAPER CITY	PINOY EXCHANGE	EXPAT.COM
PAKIKIRAMAY (Showing compassion)	16 129	0	0	0	0
SUMAKLOLO (Providing aid or support)	3 538	0	0	0	0
SAKLOLOHAN (Providing aid or support)		0	3 854	0	0
TULUNG-TULONG (Collective assistance)	15 000	0	0	0	0
PAGLILINGKOD (Act of Service)	44 778	0	0	0	0
PAG-AABULOY (Giving donation)	923	0	0	0	0
PAG-ALALAY (Providing support)	2 950	0	0	0	0
MAGTUSTOS (To provide)	227	0	0	0	0
TUSTOSAN (To provide)		0	0	0	0
MAGSUSTENTO (To provide financial support)	6 659	0	0	0	0
SUSTENTUHAN (To provide financial support)		0	0	0	0
PAGTATAGUYOD (To provide support)	4 333	0	0	0	0
NAGTAGUYOD (Provided support)		0	4 918	0	0
PAGSASAKRIPISYO (Sacrificing)	7 309	0	0	0	0
PAGBIBIGAY (Giving)	15 000	0	0	0	0

KEYWORDS	DATA SOURCES				
	TWITTER	PHILIPPINE EXPATS FORUM	SKYSCRAPER CITY	PINOY EXCHANGE	EXPAT.COM
PAGSESERBISYO (Giving service)	2 819	0	0	0	0
PAGSISILBI (Serving)	4 310	0	0	0	0
BAYANIHAN (Cooperative effort)	60 000	0	0	0	0
TOTAL	359 898	295	171 446	3 766	73

TABLE 3. TABLE SHOWS THE TOTAL NUMBER OF SCRAPED COMMENTS FROM YOUTUBE VIDEOS OF FPJ'S *ANG PROBINSYANO* AND SUBREDDIT PHILIPPINES ONLINE FORUMS.

DATA SOURCE	NUMBER OF SCRAPED COMMENTS
YouTube	54 749
Subreddit Philippines	51 500

The study used YouTube API to extract comments from YouTube videos. The main challenge of this is that comments can only be extracted one video at a time due to the need for each video's unique identification (ID) when running the python code. To streamline the process, we listed all links to obtain their video IDs. In this way, the video ID can be copied from the list and pasted to the script before running the code. Running time took a few seconds to five minutes, depending on the number of comments. Extracted data include usernames, content/comments, timestamp of comments, and the number of likes and replies.

For extracting tweets, the study did not use Twitter API, since it cannot scrape tweets posted more than three weeks prior (Hernandez-Suarez et al. 2018). To avoid such restriction, we used *snscrape* Python library, which allowed the retrieval of tweets from 2006. This scraping tool is for scraping information, such as user profiles, hashtags, searches, threads, and posts for social networking

services (Desai 2021). We imported the *snscrape* library and made a variable for the keyword/s (see Table 2) including the time of the tweets to be scraped. We also set a limit for the number of tweets, made a *for loop*[22] to retrieve the tweets based on the keywords, listed the data (e.g., username, tweet content, date and time), and created a data frame to be saved as *CSV* [Comma-Separated Value] file.

We also used two methods to scrape online fora. These included: API to scrape subreddit Philippines; and Selenium for the other online fora (i.e., Pinoy Exchange, Philippines Expat Forums, Expat.com, and Skyscraper City). Scraping comments from the subreddit is the same with the process for YouTube. One must make an account and create a Reddit application to get an API key (or the Reddit ID) and secret key. We set a limit of 60,000 posts and replies, due to our uncertainty about the exact number of posts and replies in the Philippines subreddit community.

Moreover, Selenium Python library was used to scrape the four other fora: Pinoy Exchange, Philippines Expat Forums, Expat.com, and Skyscraper City. Before performing the three phases of web scraping (see Figure 3), we first created an account for each forum. Then, we used the keywords or search words (as shown in Table 2) to narrow down the online discussions related to pakikipagkapwa. After identifying the threads of these discussions, we performed web analysis to understand the structure of each website. Selenium made the process convenient, given the dynamic nature of online fora. Then, we used the following libraries: WebDriver from Selenium for browser automation, *CSV* for saving data into a file, and *time* library for setting up a waiting period while the browser was loading. After importing the libraries, we opened the Chrome browser and located all corresponding elements in the HTML code of the website using locators (i.e., xpath), such as class name, id, tag name, link text, or CSS selector. We then extracted the necessary data, including the username, contents and replies of posts, and date posted. After that, we saved them as a *CSV* file. For websites with multiple pages, we created a *for loop* and set the range, depending on the total number of pages of a website.

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[22]   *for loop* is a control flow function that repeats an operation for a specified number of times.

Text Analysis

The collected data were subjected to text analysis. Each comment, post, or reply was treated as one document (the unit of analysis). We decided to conduct a separate text analysis for each data source. This approach determined which website most frequently discusses or manifests pakikipagkapwa, and to further explore the concept across different platforms. For the analytical technique, we applied a topic modeling technique called Latent Dirichlet Allocation model (LDA), which automatically extracts topics/themes from a corpus of texts. The LDA assumes that each document is composed of several topics, in which each one is a distribution of words. The number of topics, denoted as *k*, is set in advance but can also be determined empirically. In this study, we set the number to 100 for every run of LDA. Gibbs sampling[23] was also used to estimate the topic proportion per document and the word distribution per topic.

Results and Discussion

Corpus

After applying the procedures for web scraping and using API, we managed to scrape a total of 54,749 comments from *FPJ's Ang Probinsyano* videos on YouTube, 51,500 posts and comments from the [r/Philippines] subreddit on Reddit, and 359,898 tweets from X. From the other forums, we extracted a total of 295 comments from Philippine Expats Forum, 171,446 comments from Skyscraper City, 3,766 comments from Pinoy Exchange, and 73 comments from Expat.com. In total, 641,727 texts were collected from seven sources.

Text Preprocessing

Before applying text analytics techniques, we first preprocessed the text. Preprocessing typically involves text cleaning, through which it is transformed into a form that is suitable for the application of analytical techniques. During

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[23]   Gibbs sampling is a sampling method typically used to estimate a posterior probability distribution.

text cleaning, we converted all characters to lower cases. Next, we removed English and Tagalog stop words,[24] since some texts were in English and others were in Tagalog. We used precompiled lists of stop words for both languages. We also removed punctuation marks, emojis, and numbers. Then, we made a new set of stop words specific to this context. The processed corpus was represented as a Document-by-Term matrix (DTM), in which the rows are the documents, and the columns are the terms. The entries of the DTM are the raw frequencies of words found in each document. To reduce the size of the dictionary and consequently the dimensionality of the DTM, we deleted words (or terms) with a frequency less than three. No further weighting of the terms was applied; we used raw frequencies as input. Although we removed some words, those that were semantically relevant were retained, so there was no major alteration of meaning. The same steps have also been applied in other studies (Kobayashi et al. 2018).

Text Analysis Results

We ran separate topic models for each source. Each one was labeled as a "topic" and was categorized whether it pertained to pakikipagkapwa or not. In this study, six experts independently performed labeling. Afterwards, we computed the reliability of their labeling using Fleiss' kappa, which measures the reliability of agreement between a fixed number of raters. The possible values of this measure ~~are~~ range between 0 and 1 (inclusive), where values close to zero indicate poor agreement and values close to 1 signify almost perfect agreement. Table 4 presents the computed Fleiss' kappa for each source. There is a slight to fair agreement among the six experts.

TABLE 4. COMPUTED FLEISS' KAPPAS FOR THE LABELING OF TOPICS FOR EACH SOURCE

SOURCE	FLEISS KAPPA
PinoyExchange	0.15

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[24] Stop words are words that are considered insignificant. Examples are prepositions, articles, etc.

Philex	0.30
X (formerly Twitter)	0.20
Skyscraper	0.09
Reddit	0.19

The final labels were determined by obtaining the majority label of each topic. In case of a tie, the experts discussed among themselves to come up with a different label. Topics that have no relevance to pakikipagkapwa were deleted. In summary, there are twenty (20) topics from Pinoyex that are relevant to pakikipagkapwa. From other sources, there are six (6) topics from Philex, seventy-three (73) topics from X, three (3) topics from Skyscraper, and three (3) topics from Reddit. In total, there are 105 topics labelled positively. Each of them is further categorized according to what aspect or dimension of pakikipagkapwa is expressed. Table 5 shows some topics related to pakikipagkapwa.

We did not extract any meaningful topics related to pakikipagkapwa from the television series, *Ang Probinsyano.* Most comments were either about the actors, or anticipations for the next episode. Hence, the results excluded texts from the show.

TABLE 5. EXAMPLE OF TOPICS AND LABELS FROM SELECTED ONLINE SOURCES

SOURCE	TOPIC (WITH TOP 15 TERMS)	LABEL
PinoyExchange	pinoy, Philippines, respect, worked, pinas, you're, referred, friends, pulubi (beggar), choice, manager, find, subordinates, house, govt (government)	Social Interest and Concern for Community
PinoyExchange	alam (known), kilala (known), kita (visible), personal, talaga (really), ano (what), totoo (true), diyan (there), waste, pati (also), mahal (precious/beloved), pagmamahal (love), raw (s/he/they said), madalas (often)	Better Social Connections

SOURCE	TOPIC (WITH TOP 15 TERMS)	LABEL
PinoyExchange	god, love, things, life, kind, pray, hope, you're, good, religious, power, mass, long, posted, don't	Religious Priming
PinoyExhcange	parents, family, money, don't, feel, you're, mom, job, support, college, make, relatives, pay, child, lot	Family Centeredness
X	Pagbibigay (the act of giving), mayor, Sotto (Pasig City Mayor Victor Ma. Regis "Vico" Nubla Sotto), patuloy, Vico (Mayor Sotto), maria, inang (mother), taga (comes from), isko (Manila Mayor Francisco "Isko" Moreno Domagoso), Tito (Senate President Vicente "Tito" Castelo Sotto III), Maynila (Manila), congratulations, mabuhay ("Live," a cheer analogous to Spanish "Viva"), manila, puno (punô, or "full")	Governance
X	patuloy (continuing/continuance), pandemya (pandemic), gitna (middle), kabila ("other side"), iba (different/other), pagsunod (the act of following), ngunit (however), bansa (nation), krisis (crisis), balita (news), kababayanan (township), dzrh nationwide (Radio Station DZRH, 666 AM), aral (lesson), dulot (to caused [by]), karunungan (knowledge)	Crisis and Technology

An Emergent Model of Pakikipagkapwa

Our results revealed that the various topics that were generated through data mining can be grouped into different clusters, depending on their relationship with pakikipagkapwa. While the model builds on the "classic" Enriquez structure, it does not limit itself to values associated with kapwa. Instead, this framework also includes behavioral manifestations, mediums, enablers, and moderators of pakikipagkapwa.

First, the "Mediums" cluster consists of variables that serve as potential channels for pakikipagkapwa. These variables include technology, social media, mass media, nongovernmental organizations (NGOs), and government agencies.

Second, the "Manifestations" cluster includes topics that depict how pakikipagkapwa is demonstrated. Third, the "Enablers" cluster consists of events that initiate the process of pakikipagkapwa, or actions that serve as catalysts for its occurrence. Enablers include the presence of suffering, crisis, and natural disasters.

Lastly, the "Moderators" cluster comprises variables that affect the extent of pakikipagkapwa and/or influence its nature. These variables include families, religious organizations, educational institutions, and celebrities or famous personalities in the Philippines.

■ **Figure 4.** The emergent model of pakikipagkapwa from social media data.

Manifesting Pakikipagkapwa

Social networking sites allow the expression of affective responses to both direct and indirect experiences (i.e., something that happened to someone else, whether real or fictional). Getting a sense of what others feel and understanding

where a person is coming from stems from the ability to empathize. Empathy is necessary for pakikipagkapwa.

Expressing Empathy

Analysis of X (formerly Twitter) posts on the government's response during the COVID-19 pandemic using the code "*sana all*" ("hopefully everyone") has surfaced language users' attitude towards empathy (De Jesus et al. 2021, 76). Tweets about "sana all" are anchored on certain perceptions. For example, "*sana all mayaman*" ("hopefully everyone's wealthy") comes from the presupposition that "not all people are capable to purchase goods" and that the "economically poor will not survive in this crisis."

In this study, similar expressions of empathy surfaced from the data. Text clusters referencing death (e.g., Twitter, Topic 70) were accompanied by expressions of condolences to survivors and wishes for the soul's eternal repose. The term "RIP" (rest in peace) is repeatedly seen in discussions on death, regardless of the level of intimacy between the sender and the deceased (e.g. Twitter, Topic 67, which was about the passing of former President Benigno Aquino III). In these text clusters, another word that appears repeatedly is pakikiramay, which connotes that the message sender feels for the one who has experienced the loss. Venzon and Gopilan (2023, 15) similarly identified pakikiramay and pakikidalamhati in the mediated Filipino death rituals on Facebook, where there are memorialized accounts of those who passed away. The death rituals fostered an online community that allowed the expression of pakikipagkapwa; people come together in virtual spaces to collectively mourn and remember the departed.

Pakikiramay entails the ability to take on the perspective of another person and imagine losing a loved one. However, *pagdamay* is not limited to loss by death. It can also mean an offer of support and solidarity to people who experienced other tragedies, such as in Twitter Topic 25. In this topic cluster, words like *pagsama* (joining or coming together) and *pakikinig* (listening) were also mentioned. Both words, including pakikiramay, can be overt ways through which the value of pakikipagkapwa is expressed. By engaging in such behaviors, we are able to demonstrate our regard for others. Pagsama entails being there for others and making ourselves emotionally accessible to accompany them. In a sense, pagsama is an offer to carry some of the burden. Pakikinig can also be an expression of pakikipagkapwa. Suspending judgment and genuinely listening are anchored

in respect and care for the other. Pakikinig is crucial in developing empathy. A person's responses become guided by what another's experience instead of preconceived notions.

In Twitter Topic 94, the concepts of malasakit (compassion), pakikisalamuha (interaction/engaging with others), pakikibagay (conformity), and pagrespeto (respect) are associated with pakikipagkapwa.

Twitter Topics 90 and 92 are examples of how pakikipagkapwa is manifested. Both topics focused on protecting others. In other words, pakikipagkapwa serves as a means to promote other people's safety.

Mirroring a Collectivist Society

The Filipinos' collectivist culture is manifested in the data. This orientation, as opposed to an individualist one, was reflected by mentions of values associated with aggrupations/groups in the selected texts:

- Pakikisama (comradeship) with residents (Twitter, Topic 7)

- Pakikiisa (solidarity) with *bansa* (nation) and Muslim (Twitter, Topic 20)

- Paggalang (the act of respecting) with *Kristo* (Christ) and *kuya* (elder brother) (Twitter, Topic 22)

- Makabayan (patriotic) with bansa (nation) and *bayani* (hero) (Twitter, Topic 55)

- *Pamilya* (family) and *magkakapatid* (siblings) (Reddit, Topic 20), and

- Pakikisama (comradeship) linked to Philippines, residents, and Filipinos (Twitter, Topic 12).

In other cases, they were observable through manifestations of pakikipagkapwa: the use of *opo* (yes) as an act of paggalang (respect) (Twitter, Topic 22); acts of *pagmamahal* (the act of loving), *pagsasakripisyo* (sacrificing), *pagtitiis* (enduring) despite *pagod* (exhaustion) and *sakit* (sickness) (Twitter, Topic 41); *pagsasakripisyo* (sacrificing) that is specifically linked to *parent*, *nanay* (mother), and *tatay* (father) (Twitter, Topic 62); and *pagpugay* (salute) for *bayani* (heroes).

Demonstrating Social Interest

The World Wide Web (WWW) has become a space that parallels many things outside this virtual space unfold. However, digital mediation diminishes personal touch in social interactions. One concern is the proliferation of socially disinterested and antisocial behaviors. The WWW nonetheless affords spaces for the manifestations and expressions of social interest. Some of these include sociocivic engagement, activism, political participation, and collective action anchored on values like social justice and freedom. Most themes related to social interest were gathered from X. This may be because of the popularity of X among Filipino social media users, as compared to other platforms like Pinoyex, Philex, Skyscraper, and Reddit.

Social interest is the inclination to care for matters that are bigger than the self. It is necessary for developing a sense of kapwa. Our voluminous online data surfaced themes related to social and national concerns. These include:

• Challenges brought about by the COVID-19 pandemic to Filipinos (e.g., Twitter, Topic 64)

• Struggles of marginalized groups, such as farmers, low-income workers, and indigenous peoples (e.g., Twitter, Topic 76; Twitter, Topic 9), and other essential workers during the pandemic, such as public utility vehicle drivers and couriers/delivery riders (e.g., Twitter, Topic 21)

• Public service provided by government workers and leaders (e.g., Twitter, Topic 51; Twitter, Topic 80)

• The 2022 election campaign and national elections (e.g., Twitter, Topic 88; Reddit, Topic 32)

• The drug war under the Duterte administration and the fight for human rights (e.g, Twitter, Topic 9)

• Disparity across socioeconomic classes (e.g., Pinoyex, Topic 6)

• Unity and solidarity based on a strong sense of national identification (e.g., Twitter, Topic 11; Twitter, Topic 91; Skyscraper, Topic 49)

- Love for country (e.g., Twitter, Topic 55); *bayanihan* and mutual help (e.g., Twitter, Topic 64; Twitter, Topic 9; Twitter, Topic 20; Twitter, Topic 56; Twitter, Topic 58; Twitter, Topic 70; Twitter, Topic 75); and media and collective action (e.g., Twitter, Topic 77).

While some of these issues may not have direct repercussions for individuals (i.e., concerns specific to a particular group that one is not a member of), they are national concerns. Some online discussions may ally with groups to which one may not belong; these outsiders are ibang tao, reflecting a broader category that includes both the individual and others. For example, someone who is not a jeepney driver might still object measures that oppress jeepney drivers, because they relate as a fellow Filipino struggling to make ends meet. In this regard, the shared struggle serves as a connecting thread.

There were also discussions on non-insular concerns (e.g., Philex, Topic 33). In recent years, advancements in transportation and communication have made physical boundaries less fixed. People are becoming not just citizens of a nation, but also citizens of the world. Mercado's concept of *sakop* (Avenido 2019, 4) pertains to "a group where a Filipino belongs." This sense of global citizenship seems to indicate that there is a broadening of sakop. It includes considering the success and welfare of others as fulfilling, even if one is not a member of these groups (Avenido 2019, 4). Perhaps the most important identification would be the sense of shared humanity. The overarching category is "being human," which is how the concept of kapwa has been defined.

It is social interest that drives behavioral manifestations of kapwa—such as civic engagement and political participation. Kapwa then becomes an extension of the self. The saying that "pain focused on the pinky finger is still pain felt by the entire body" (Javier Jr. 2017, 83) is a fitting analogy. This is the essence of pakikipagkapwa, which is an ethical imperative to treat others as one would treat oneself. It is the cultural standard in social interaction and the basis for *pagpapakatao* (aspiring for humaneness) (Aquino 2004, 134).

In this study, topics labeled as "civic engagement" mention individual and/or collective initiatives to rally support for the kapwa who are experiencing difficulties. The words "*bayanihan*" (coming together for a common goal), "*pagtulong*" (the act of helping), "*tulong*" (assistance), "*pagbigay*" (the act of giving) and "*brigade*" were mentioned across topic clusters. These behaviors

become more salient in the face of unprecedented and uncontrollable events, such as pandemics and natural disasters like typhoons and earthquakes. Differences are put aside as people unite against a common crisis.

Social networking sites can be viable tools beyond giving one's opinions. Twitter Topic 71 and Topic 75 mentioned how social media has helped facilitate the act of pagbibigay (giving). In the past, tweets[25] during Typhoon Yolanda (internationally known as Haiyan) in 2013 fostered cooperation toward a common goal. Tweets articulated concern or solidarity, and encouraged civic engagement like charity events, volunteer works, donation drives, among others (Soriano et al. 2016, 16). Social media has provided a virtual central command center that informs people of what help is needed, which communities need help, and what are the ongoing rescue and relief efforts.

Information and communication technologies (ICTs) have increased participation in social and political spheres. Political involvement has increased since people started going online; web use can predict campaign interest and the likelihood of voting (Johnson and Kaye 2003, 26–7). An inarticulate person can express their opinion by being "passively active": sharing posts, tagging people, and hyperlinking (Lim 2009, 70). Social networking sites (SNS) enable the following: discourse among peers and those who hold power such as political figures and leaders; the expression of opinions; the gathering of public support through information dissemination and awareness building; and organization and mobilization (David 2013, 335).

In this study, there were mentions of popular electoral candidates. For example, Twitter Topic 51 mentioned Leni Robredo and Kiko Pangilinan, as well as the words "*pagseserbisyo*" (service), "*people's choice*," "*totoo* (true)," and "*malinis*" (pure). In Twitter Topic 88, supporters of then presidential candidate Ferdinand "Bongbong" Marcos, Jr.—who eventually won the elections—were linked to words like "*pagsisilbi*" (service) and "*pagbabago*" (change).

Some were dissatisfied with the outcome of the presidential race, particularly the loss of Leni Robredo. This was evident from her supporters (referred to as

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[25]   A tweet is a single post on the online platform X, previously known as Twitter.

kakampinks, a portmanteau of kakampi, meaning ally, and pink*),* who repeatedly used ~~of~~ the word *sayang* (which connotes the frustration of a missed opportunity). Kakampinks seem to see one another as kapwa. The same is true for the other groups; anyone who identifies with them is considered a kapwa, or an insider. People were divided based on their presidential bet, even after the elections. There were times when online interactions among the groups turned hostile with the exchange of personal insults. In Reddit Topic 32, there were mentions of "BBM" (referring to Bongbong Marcos), "Leni" and "kakampink," and "DDS" (Diehard Duterte Supporters of former president Rodrigo Duterte). In this cluster, there were also emotionally charged terms such as "*bobo*" (dumb/stupid), "*tanga*" (foolish), and "toxic." One reason for these aggressive interactions could be that the other group is seen as *di kapwa*, instead of a *kapwa* (others). This aligns with the findings of Labor and Gastardo-Conaco (2021).

Detractors deemed some leaders as di kapwa who lacked pakikipagkapwa-tao. Some candidates were also perceived lacking in hiya*,* when they ran for public office despite legitimate objectionable reasons (e.g., issues of corruption). In Philippine society, being walang hiya (shameless) is a grievous sin. The walang hiya is seen as a person who is *makapal ang mukha* (thick-skinned). Javier (2017, 17) describes such person as having failed to become human and remaining a brute, ~~thus~~ hence the expression *hindi marunong mahiya* (lacks a sense of shame) or *hayop* (animal). Such shameless self is the opposite of kapwa. In Filipino culture, hiya is the epitome of one's being.

Making a Stand

While social interest is part of pakikipagkapwa, it does not quite capture the essence of pakikipagkapwa as *paninindigan* (commitment or stand). Although Filipinos tend to shy away from confrontations and conflicts, paninindigan entails taking a stand when there is a threat to ideals of what is good and true. This is much harder to do when one must *manindigan* (take a stand) against people who are part of one's group, or hindi ibang tao.

The root word of paninindigan, across different languages in the Philippines, equates to standing up or getting up (Javier 2010, 49). It calls to mind the idea of rousing from slumber or changing from a former state of passivity. Paninindigan also carries an evident force, powered by a person's internal motivation rather than merely being performative (Javier 2010, 50). To demonstrate paninindigan

means having an awareness of one's most cherished, essential values and principles and behaving in accordance to such, despite the difficulty to do so.

Instead of being disinterested bystanders, participants of the study expressed discontent, outrage, solidarity, and support, even toward social concerns from which they do not benefit. Although some issues do not directly impact the self, people unite through their shared space and humanity. In Twitter Topic 76, there was mention of taking a stand, rooted on the values of justice and freedom, as well as defending the rights of groups that have been marginalized. These groups include farmers, low-income workers, and indigenous peoples.

Pakikipagkapwa is a paninindigan that entails correcting what is wrong. It rests on principles such as respect for all forms of life and diversity, the fight for truth and justice, and compassion for the powerless and oppressed. The concerns of the kapwa become also one's concern. *Pakikibaka* is a Filipino term that means "joining in the struggle," as mentioned in Twitter Topics 9 and 55. At face value, pakikibaka seems to be the antithesis to the peaceful character of pakikipagkapwa. However, Enriquez (1977, 9) maintains that paninindigan is an aspect of pakikipagkapwa when one's sense of justice is challenged.

Moderating Pakikipagkapwa

Influence of Family Members

The family, a primary social institution, remains important in Philippine society. The family is seen as a source of happiness, comfort, and love (Twitter, Topic 62). A family environment is characterized, in general, by positive affective experiences and nurturance that cares for others' welfare (Cleofas and Oducado 2022, 285). However, instances of tension and conflict are inevitable at times (e.g., when lending money to relatives outside the nuclear family) (Reddit, Topic 20). Kinship structure in Philippine society is made up of bilateral relations. These relations encompass grandparents, siblings of parents, and others, including connections forged through rituals like marriage and the sacrament of confirmation (i.e., having/becoming godparents) (Torres 1985, 489). Pakikipagkapwa underlies the interactions among kin, informed by informal norms of reciprocal privileges and obligations (Torres 1985, 493). Thus, it is expected that one receives help when requested. The recipient of such help often assumes that the assistance is given freely and does not require an immediate return. *Utang na loob* (a debt

of gratitude) is then formed. There is an implicit understanding that, in the future, the recipient will help the giver, should circumstances arise that the giver would need assistance. Indeed, in Filipino families and culture, there is an emphasis in familial duties, roles, and obligations of each member, reinforcing interdependence and the value of utang na loob (Alampay 2014, 113).

It is also within the family that virtues like respect for others, particularly for the elderly and the parents, are taught during a child's formative years (Twitter, Topic 3). This resonates with Alampay's (2014, 108) argument that the family is a setting where respect and mindfulness of others are first learned.

When someone voices the intent to start a family, it often means they desire to be a parent. A typical family structure usually include children (Reddit, Topic 20). Having children presents a host of challenges, especially in terms of finances. This necessitates many sacrifices on the part of the parents (Twitter, Topic 43). In particular, one source of monetary outlay for an extended period of time is schooling. Getting a formal education is highly valued in Philippine society. Given its importance, the extended family usually rallies together to pool resources, specifically for financial support (Pinoyex, Topic 31; PhilEx, Topic 6), as well as for moral support (Twitter, Topic 62).

Additionally, overseas labor migration has affected the Filipino family in various ways, altering parenting methods and the lifestyle of family members. The Overseas Filipino Worker (OFW) phenomenon, in the context of family, is observed on PhilEx Topic 51. This phenomenon is among the biggest global diaspora of migrant labor (Roces 2021). On average, 3,400 Filipinos leave the country every day to work abroad (San Juan 2009, 99). By mid-2022, there were approximately 1.96 million OFWs (Philippine Statistics Authority 2023). Family members look for overseas employment due to the lack of available jobs in the country, as well as the unsatisfactory compensation packages. This results in long periods of physical separation among family members. Nevertheless, constant interaction is made possible by the advances in digital technology. Loved ones who are far from each other can also express their care through many ways, including the practice of giving *pasalubong* or souvenirs (Pinoyex, Topic 18).

Members who are physically apart—such as the case of OFWs, students on scholarship abroad, or migrants—maintain psychological closeness through pasalubong. Up to now, Filipinos who are *balikbayan* (returning to the homeland)

can be identified in airports through their big boxes (i.e. luggage). Their families are regular recipients of *padala* (delivery).

The act of pasalubong, which stems from the term *salubong* or "welcome/ greeting," reflects pakikipagkapwa in many ways: thinking and remembering loved ones; bringing them joy; making others feel valued and cherished; strengthening ties; sharing the experience of traveling to other places; expressing gratitude; and returning to be accepted by those who waited. The act demonstrates Filipinos as loving, valuing, nurturing, sharing, thankful, and having hiya (Daya et al. 2020, 49–51). Families become part of the journey of migrant Filipinos who carry loved ones in their hearts (Daya et al. 2020, 55).

Based on the narratives of young migrant returnees, pasalubong permits the sharing of experiences to others through memorabilia that are unique to the foreign country. Memorabilia have also "immortalized culture," in a sense that they are representations and memories of the narratives of foreign lands (Agonos 2019, 21).

Religious Membership

Religious priming is defined as the exploration of the influence of religion in human relationships, prompting a person to concretely act for the betterment of another person. Others may call this faith or love for humanity. As a universal concept or perception, love is irrespective of religious persuasion. It can be expressed in many ways, such as extending a helping hand to friends in need or even to complete strangers. Meanwhile, studies on religious priming have yielded positive results in terms of more prosocial behavior or pakikipagkapwa (Shariff et al. 2016, 41; Batara et al. 2017, 640).

In the Information Age, the Internet has become an essential channel for personal interaction and social communication. Social media platforms, in particular, have been used to disseminate religious and faith-based ethos to foster respect and concern for others. They prime prosocial behavior, including in Twitter, PinoyExchange, and Skyscraper.

Biblical teachings, like the Parable of the Good Samaritan (Luke 10: 25–37), were discussed in a PinoyExchange forum (Topics 62, 74, and 84) to instill love for neighbors and to serve as evidence of being a devout Christian. Different

religious groups—such as Catholics, Protestants, Ang Dating Daan, Christ Global Church, and Members Church of God International (MCGI)—make use of social media to urge their members to embrace the spirit of *paglilingkod* (service to others) (PinoyExchange, Topic 100; Twitter, Topics 1, 8, and 14).

Forums on religious principles and beliefs also included being good, being kind, *paghahandog* (the giving of self), *pagaabuloy* and *pagbibigay* (giving donations), *pagtataguyod ng kapakanan ng iba* (supporting the welfare of others), and *pagkakaisa* (unity) (Twitter, Topics 6, 8, 14, 17, 32, 47, 53, 72, and 82; Skyscraper, Topic 85). Being aware of the needs of others and offering help were mentioned as a form of *biyayang nakalulugod* (pleasing grace and blessing) (Twitter, Topics 27 and 99).

Impact of Famous Personalities

One of the most obvious patterns that emerged after scraping was the repeated mention of celebrities. This suggests the significant role played by parasocial interactions in facilitating pakikipagkapwa online.

The parasocial relationships in the online narratives of the study mostly covered show business (showbiz) figures, such as comedian Vice Ganda (Twitter, Topic 78), and actresses Kisses Delavin (Twitter, Topic 25), and Maymay Entrata (Twitter, Topic 42) who were both discussed in the context of their respective "love teams."[26] Political figures also appeared, such as former Vice President Leni Robredo (Twitter, Topic 51); Pasig City Mayor Vico Sotto and Manila Mayor Isko Moreno (Twitter, Topic 4); Senator Chiz Escudero (Twitter, Topic 71); and former President Benigno "PNoy" Aquino III (Twitter, Topic 52). Another notable figure is the journalist Jessica Soho, who is most known for the news feature program called *Kapuso Mo, Jessica Soho* (KMJS) (Twitter, Topic 77).

This concurs with Centeno's (2016, 445) assertion that the parasociality Filipino audiences develop with media personalities crosses over into other domains like politics.

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[26]   A love team is usually a marketing tactic in the Philippine show business industry through which celebrities are portrayed to the public as a romantic couple on- and off-screen.

There was a slight difference in the words and phrases associated with each category of personalities: political figures were identified with the specifics of their office. Leni Robredo was associated with her office's free pandemic-era telemedicine service Bayanihan "eKonsulta," alongside more generic terms like "malinis" (clean) and "pagserbisyo" (service). Vico Sotto was tied to "Pasig," "pagtulong," and "gabay" (guidance). Meanwhile, Jessica Soho's television program was associated with words indicating the public service nature of the show, such as "suporta" (support) and "saklolohan" (rescue). The show business personalities, whose public roles did not directly involve a public service component, were associated with more basic terms that describe acts of pakikipagkapwa, such as pakikisama, pakikitungo (the act of relating to someone), and pakikiisa (supporting, symphatizing). In all these cases, the parasocial relationships the writers had with the celebrities involved an expectation—or at least an affirmation—that the celebrity should use the platform available to them as a means of pakikipagkapwa.

Overall, this analysis suggests that the parasocial relationships Filipinos develop with celebrities come with an expectation of pakikipagkapwa that goes beyond the specifics of the celebrity's platform, even though the platform defines the specifics of the interaction. The analysis also shows that Filipinos who participate in celebrity events are not just passive participants, but are active shapers of the narrative of the event (Pertierra 2020). Additionally, it may even suggest a clue as to why celebrities in the Philippines can transition easily from one role to another. The "strong overlaps" that Centeno (2016, 445) observes in the relationships that Filipinos develop with show business personalities and politicians are defined by pakikipagkapwa, regardless of role or platform.

In the field of advocacy work, these findings give credence to the practice of making celebrities a key part of the communication strategy, and present a case for making them not just endorsers sharing key messages to their audiences, but also as stakeholders actively using pakikipagkapwa to engage with audiences. They are also actively shaping the engagement. Pakikipagkapwa—both as a value and as concrete manifestations—could thus be useful in defining expectations of celebrity stakeholders in social advocacies, and in measuring the degree of engagement within a social media campaign.

Power Distance and Hierarchy

Filipinos' acceptance of hierarchy and its status as a high Power Distance Index[27] country (Acuña and Rodriguez 1995, 2) was particularly evident in PinoyExchange Topics 42 and 88, and Twitter Topics 3 and 63. All of these texts assert age as a component of seniority, notably in PinoyExchange Topic 88 and Twitter Topics 3 and 63.

Twitter Topic 3 asserts the value of "pagsunod" (obedience) towards "matanda" (the elderly) and "magulang" (parents). Twitter Topic 63 asserts both age ("tanda"), womanhood ("pagiging babae"), and more specifically, motherhood ("pagiging nanay"), as rationalizations for behaviors that constitute "respeto" (respect). Meanwhile, PinoyExchange Topic 88 asserts the value of using the honorifics "Sir" and "Ma'am" as a sign of being "submissive" to elders.

In PinoyExchange Topic 42, the recognition of age as a component influencing social hierarchy is less explicit and formal, with the use of the word "manong," the Ilocano word for "older brother," which has since been adapted in other Filipino languages as a generic reference to males older than oneself.

Additionally, the use of honorifics "Sir," "Ma'am," and the neologistic gender neutral honorific "Mamsir," is notable in two PinoyExchange topics. PinoyExchange Topic 88 associates these honorifics with a more formal hierarchical context, as implied by the word "superiors." Meanwhile, PinoyExchange Topic 42 associates it with a more casual context, implied by less formal titles such as "pare," "friend," and "manong." While Topic 88 manifests behaviors merely of *pakikitungo* (civility), Topic 42 implies a more expansive pakikisalamuha (act of mixing), as implied by the colloquial use of the words "kausap" (not just "to speak with," but to negotiate with over the course of a longer relationship) and "kultura" (culture, not in the broad sense, but in the sense of ways how things are done and informally negotiated).

The theme of family, or at least quasi-family ("magulang" in Twitter Topic 3, "nanay" in Twitter Topic 63, and "manong" in PinoyExchange Topic 42) is

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[27] A measure of the degree to which a country's citizens accept hierarchies and the authority of such.

implied in three out of the four posts. It is not precluded by the phrasing of the other post (PinoyExchange Topic 88), suggesting that power distance in the family informs the manifestations of power distance in other contexts, such as the workplace.

Interestingly, the power distance depicted in these posts is not as evident in topics on parasocial relationships with government figures. It is unclear if this is because their authority is already implied (i.e. Leni Robredo, Vico Sotto, and Chiz Escudero), thus reducing the need to explicitly assert the value of hierarchy. It may also be because the authority arising from their celebrity status is somewhat different from the authority stemming from immediate family relations.

Either way, the implication that Filipinos' acceptance of hierarchy can be associated with how such hierarchy was asserted in their families in their upbringing helps contextualize our relationship with social and political leaders. Asserting hierarchy as a value seems to draw more on powerful associations with family relationships, instead of authority arising from one's office or platform.

Aligned with the existence of power distance and hierarchy, there were themes on discrimination or social prejudice. One post (Reddit, Topic 7) characterizes the People's Republic of China (PROC) as "atheist" and "communist," and it is filled with cyber-laughs ("LOLz," "haha," and "LOLs"). Another post (Reddit, Topic 19) asserts the "valid" need for gender neutral bathrooms in light of the transphobic incident involving an employee of Fashion brand Zara who disallowed a trans woman from using the women's fitting room in their store in Bonifacio Global City. The third (PinoyExchange, Topic 8) discusses the role of priests in the Rwandan genocide.[28]

Interestingly, the Zara texts and the Rwanda texts indicate their authors' efforts to understand and address incidents of such discrimination. The Zara texts call for respect for gender differences. Meanwhile, the Rwanda texts express dismay over the involvement of priests in the genocide. These efforts, in a way, manifest the egalitarian aspect of kapwa (Yacat 2013). Arguably, it can also be a

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[28] The 1994 Rwandan genocide was a mass killing systematically orchestrated by extremist factions within Rwanda's Hutu majority, who aimed to exterminate the minority, the Tutsi population, along with anyone opposing their plans.

manifestation of pakiramdam. The authors of the texts are "making an effort to be aware of the inner states" of the discriminated groups (transgender people and Tutsi victims, respectively), and seeking to understand their own personhood while considering how they would react if in a similar position (Munsakhani 2005, 188). In these two cases, empathy and pakikiramdam have likely been supported by media narratives portraying the perspectives of transgender people and the experiences of the Tutsi victims, particularly in the forms of Sexual Orientation, Gender Identity, and Gender Expression (SOGIE) bill[29] awareness campaigns, and the success of the film, *Hotel Rwanda.*[30]

Meanwhile, social discrimination was mostly observed as a hindrance to pakikipagkapwa in the "PROC" texts, possibly exacerbated by ongoing tensions between the Philippines and the PROC in the West Philippine Sea.

The texts also depict an "othering" of the mainland Chinese along three interrelated axes of social distance: political belief, religion (in this case, atheism), and nationality. These three axes have not been addressed much in the Philippines by dedicated anti-discrimination movements (i.e., movements advocating ways to end discrimination based on religion, nationality, or politics), whereas previously there have been many notable campaigns which sought to fight discrimination along the axes of gender and race.

The promotion of Philippine–PROC relations over the last half decade has mostly happened through political engagements and financial assistance, rather than cultural exchange through media narratives. Thus, if the PROC wants to promote pakikipagkapwa between the two nations, they could deploy the media through advocacy narratives. However, promoting pakikipagkapwa will probably require clarity in the political sphere before changes can happen on the cultural and interpersonal level, as observed in the texts. In light of current tensions, it seems unlikely that there will be institutional campaigns to promote an understanding of atheism, communism, and Philippines–PROC relations among the Filipino public.

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[29]   This is an anti-discrimination bill that seeks to give fair and equal treatment to all, regardless of sexual orientation and gender identity.

[30]   *Hotel Rwanda* (2004) is a docudrama film that is based on the Rwandan genocide in 1994. For roughly 100 days, the minority ethnic group was murdered by Hutu forces.

In cases where social discrimination is not exacerbated by diplomatic tensions, the texts in this study all hint that such discrimination can be addressed. Moreover, pakikipagkapwa can successfully be promoted if media narratives are designed to help both sides understand the other's perspective. Factual presentations may help in accepting "differences," but it is stories that depict the inner life of others that build up empathy, and eventually lead to egalitarianism and pakikipagkapwa.

Educational Institutions

Several words from Pinoyex and Twitter scraping indicate a school settings, such as the words "school," "college," "class," "year," "ma'am/mam," "prof (professor)," "gawain" (tasks), "grades," "sir," "exam," "impormasyon" (information), and "activity/ies."

Pakikipagkapwa is implied by the following words: "friend/s," "kaming" (we/us), "choice," "makisama" (being civil), "kuya" (older brother or male senior), "kasama" (companion), "pagbibigay" (giving), and "galang" (respect). The words "good," "work/activity/job," "choice," "side," "high," "kalmahan" (calm down), "dahan" (slow down), and "hinay" (softly) tell a story about calmness in the learning space, which can foster a safe ecosystem for a person and influence one's pakikipagkapwa.

Channeling Pakikipagkapwa

Technology

In Pinoy Exchange Topic 55, technology is presented as a means to socialize and contribute to public opinion. Meanwhile, Twitter Topic 79 highlights the role of technology as a medium for charitable acts. Technology enables the sharing of one's resources with others via mobile wallet apps, such as GCash and PayMaya (Maya). Twitter Topic 34 even notes the use of a call center to facilitate public service delivery. Additionally, Twitter Topics 54, 66, and 71 pertain to the role of social media as a facilitator of pakikipagkapwa or bayanihan (communal help). Notably, social media can be used to share important information with a large number of people and facilitate assistance to those in need. The results of data mining support an earlier study, which argued that utilizing technology can facilitate socialization (Moawad and Ebrahem 2016, 171–76), which is a basic form of pakikipagkapwa. However, our study found that technology and online

platforms can also give visibility to more in-depth forms of pakikipagkapwa, such as conducting philanthropic deeds and bayanihan.

Mass Media Companies with Humanitarian Units

Mass media companies were found to be crucial in channeling pakikipagkapwa on a societal level. Twitter Topics 49, 58, and 77 touched on the role of mass media as a promoter of pakikipagkapwa. Televised public service programs have become means to invite an audience to engage in pakikipagkapwa. Based on text mining results, mass media's role is critical during times of crises or disasters. These are periods when pakikipagkapwa is a must; pakikipagkapwa is amplified to a nationwide or even a global scale. These results echoed the assertion of Anwar et al. (2020, 1) that media's capability to reach the masses makes it indispensable during periods of instability and uncertainty, such as a pandemic.

Government

The findings of the study support the previous claim of Lavides (2020, 157) that government actions affect pakikipagkapwa. Furthermore, the results give additional insights on the relationship between government performance and pakikipagkapwa. Twitter Topic 65 refers to the government as a channel of pakikipagkapwa. Government offices demonstrate pakikipagkapwa through distribution of assistance to its constituents. Twitter Topics 4 and 51 highlight government leaders as initiators of public service or pakikipagkapwa, particularly in the case of former Vice President Leni Robredo and Pasig Mayor Vico Sotto.

Meanwhile, Twitter Topic 45 shows that government employees, particularly frontliners, can also be initiators of pakikipagkapwa. This implies that these workers, regardless of rank, play a key role in serving as promoters of pakikipagkapwa. Twitter Topic 44 points out that, during crises or disasters, pakikipagkapwa is more important than political affiliations. Additionally, the government remains accountable through their acts of pakikipagkapwa. Twitter Topic 24 stresses that the government is a major agent of pakikipagkapwa due to its significant amount of resources, power, and network. This is reflected in Twitter Topic 23, which highlighted their lead role in mass vaccination. Pinoy Exchange Topic 98 shows that state policies can facilitate pakikipagkapwa, such as bestowing selected organizations with a charitable status to encourage donations and reducing their taxable income.

Enabling Pakikipagkapwa

Crisis, Natural Disasters, and Presence of Suffering

Based on the results of data mining, natural disasters can pave the way for pakikipagkapwa. Skyscraper Topic 77 and Twitter Topics 58 and 69 showed disasters as catalysts which could facilitate the occurrence of pakikipagkapwa. Witnessing the suffering experienced by victims ignites the spirit of bayanihan. During typhoons, bayanihan is shown through giving donations, distributing relief goods, and conducting rescue or fundraising activities through the help of volunteers. These findings support the earlier studies by Lee and Fraser (2019, 112) and Calo-Blanco et al. (2017, 6–8), who claimed that past experience of disasters motivates people to volunteer, share their resources, and participate in civic-oriented organizations.

In Twitter Topics 45, 49, and 58, the implication of the effects of the pandemic is gleaned from the words "COVID," "health," "DOH [Department of Health]," "medical," "healthcare," "pandemic," "testing," "Duque,"[31] "hospital," "pandemya" (pandemic), and "krisis" (crisis). Other calamities are also indicated: "bagyo" (storm), "nasalanta" (devastated), "ABS,"[32] "biktima (victim)," "pagsubok" (challenge), and "kalamidad" (calamity). These indirectly point to crisis situations where pakikipagkapwa arises.

These are evident in words "care," "kababayan" (compatriot), "pag-ahon" (to rise or to survive), "gawain" (task), "kapamilya" (family member), and "tulong-tulong" (helping each other). When people face crisis, they learn to empathize with their fellow human beings. Then, pakikipagkapwa blooms.

Based on the four clusters which comprise the emergent framework of pakikipagkapwa, it is evident that there are extrapersonal drivers of pakikipagkapwa that are of varying proximity to the individual. This is a departure from Enriquez and Clemente et al. who limited their focus on

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[31] Francisco Duque served as the Secretary of Health from 2017 to 2022. His term was riddled with allegations of neglect and corruption, particularly during the pandemic.

[32] ABS-CBN is one of the largest media networks in the Philippines. Its franchise was revoked in 2020, during the administration of former President Rodrigo Duterte. This controversy led to nationwide protests, citing an attack against free press.

value systems and hierarchies. The model in this study utilized a more macro perspective, where values and behaviors related to pakikipagkapwa are just one "slice" of the diagram (under "manifestations"). Also included in the model are environmental events that could act as antecedents largely beyond our control, as well as social institutions and cultural creations that facilitate and moderate the various expressions of pakikipagkapwa.

Table 6 displays the summary of concepts, cited literature, and relevant topics from the data mining.

TABLE 6. SUMMARY OF CONCEPTS, CITED LITERATURE, AND RELEVANT TOPICS FROM DATA MINING

CONCEPT	LITERATURE CITATION	TOPICS
DISCRIMINATION / SOCIAL PREJUDICE (REDL)	Mansukhani, R. (2005)	Reddit – Topic 19 PEx – Topics 7, 8
EMPATHY	De Jesus, Doroteo, Garcia, and Vicentino (2021, 76)	Twitter – Topics 25, 41, 57, 67, 70, 94
FAMILY	Agonos (2019, 21) Alampay (2014, 108; 113) Cleofas and Oducado (2022, 285) Daya, Aleta, Cunanan, and Bognot (2020, 49-51; 55) San Juan (2009, 99) Torres (1985, 489; 493)	PinoyEx – Topics 18 and 31 PhilEx – Topics 6, 51 Twitter Topics 3, 22, 43, 62 Reddit – Topic 20

CONCEPT	LITERATURE CITATION	TOPICS
INDIVIDUALIST VS. COLLECTIVIST ORIENTATION (REDL)	Hofstede (2010, 27) Acuña and Rodriguez (1995, 2,7) De Guia, 8 David et al., 44	Reddit – Topic 20 PhilEx – Topic 41 Twitter – Topic 21, 22, 41, 55, 62
PARASOCIALITY (CELEBRITIES/ INFLUENCERS) (REDL)	Tatad (2020) De Guzman Centeno (2016, 445, 460) Schramm and Wirth (2010, 26) Pertierra (2023)	Twitter – Topics 25, 42, 77, 78 (Show business); 51, 52, 71 (Politicians) PhilEx – Topic 41
SMART SHAMING (REDL)	Rodriguez (2017)	No topics identified
POWER DISTANCE AND HEIRARCHY (REDL)	Acuña and Rodriguez (1995, 2, 6) Clemente et al. (2008, 16, 19)	Twitter – Topic 3, 63 PhilEx – Topics 42, 88
SOCIAL INTEREST (CONCERN FOR COMMUNITY/CIVIC ENGAGEMENT)	Aquino (2004, 134) Avenido (2019, 4) Enriquez (1992, 52) Javier Jr. (2017, 83) Soriano, Roldan, Cheng, and Oco (2016, 16)	PinoyEx –Topic 6 PhilEx – Topic 33 Twitter – Topics 21, 29, 41, 56, 58, 64, 71, 75, 77, 80
SOCIAL INTEREST (PANININDIGAN)	Enriquez (1977, 9) Javier (2010, 49, 50)	Twitter – Topics 9, 11, 55, 76, 91 Skyscraper – Topic 49

CONCEPT	LITERATURE CITATION	TOPICS
SOCIAL INTEREST (POLITICAL PARTICIPATION)	David (2013, 335) Javier (2017, 17) Johnson and Kaye (2002, 26–7) Lim (2009, 70)	Twitter – Topics 5, 88, 97 Reddit – Topic 32
ACCESS TO TECHNOLOGY AND SOCIAL MEDIA	Moawad and Ebrahem (2016, 171–76)	Twitter – Topics 54, 66, 71 Pinoy Exchange – Topic 55 Twitter – Topic 79 Twitter – Topic 34
GOVERNMENT	Lavides (2020, 157)	Twitter – Topic 24 Twitter – Topic 23 Twitter – Topic 65 Pinoy Exchange – Topic 98 Twitter – Topics 4, 51 Twitter – Topic 45 Twitter – Topic 44
NATURAL DISASTERS	Lee and Fraser (2019, 112) Calo-Blanco et al. (2017, 6-8)	Skyscraper – Topic 77 Twitter – Topics 58 and 69
MASS MEDIA	Anwar, Malik, Raees, and Anwar (2020, 1)	Twitter – Topics 49, 58, and 77

CONCEPT	LITERATURE CITATION	TOPICS
RELIGIOUS PRIMING	Shariff et al. (2016, 41) Batara et al (2017, 640) Luke 10:25–37	PinoyExchange – Topics 62, 74, 84, 100 Twitter – Topics 1, 6, 8, 14, 17, 27, 32, 47, 53, 72, 82, 99 Skyscraper – Topic 85

Conclusion

The application of data science techniques enabled the authors to unearth the various dimensions of a complex cultural concept like pakikipagkapwa. This new knowledge paves the way for an in-depth understanding of how pakikipagkapwa takes place and the different factors that affect the process. The "topics" extracted from the data revealed that values related to pakikipagkapwa are manifested online. Likewise, the values may differ across discussion fora, and are expressed in different ways in a variety of situations. For example, there is substantial discussion about social interest related to governance and political participation. This finding can be used to inform policymakers about the opinions and sentiments of stakeholders about a particular policy, thereby increasing citizen participation. Surprisingly, some concepts in our analysis were never tackled in existing studies, such as the emergence of famous personalities, paninindigan (standing one's ground), and pakikipagkapwa during times of crisis and disaster. Moreover, this study intriguingly finds the impact of extreme weather conditions on pakikipagkapwa as a subject for further investigation. Climate change has been a popular topic in recent years. It will be interesting to further investigate how this phenomenon could influence values and culture. This study provides a strong impetus to use social media data and text mining techniques to study pakikipagkapwa and other Filipino values.

This discussion paper is the first to comprehensively review values related to pakikipagkapwa and to investigate how these values are expressed online. The findings of this research can be used as input for developing government policies

and programs that are anchored on Filipino culture and more responsive to the needs of the people. The use of social media and text mining allow for rapid, cost-effective, and ecologically valid results, which can be a timely input for policies that must integrate pakikipagkapwa in, for example, disaster response, climate change, health, environmental concerns, consumption of mass media, communication protocols, and technological adoption and development.

Recommendations for Further Research

While there are many advantages to studying pakikipagkapwa by using online data, the methodology requires a close look at the context under which pakikipagkapwa is assessed and measured. It thus becomes necessary to clarify the contexts where the value is observed in the data.

To further elucidate each of the concepts describing kapwa (and pakikipagkapwa), we recommend validating these in survey research designed to measure the degree to which people acknowledges pakikipagkapwa as an aspiration or value, or whether the respondent claims to have taken actions manifesting pakikipagkapwa. Scraping, by nature, examines a more heterogeneous set of assertions, which is beyond the control of the researcher, who cannot elicit responses from research queries. Nevertheless, our approach has both theoretical and practical merits; it points to a promising area of investigation in the future while driving interest in this indigenous concept in the digital world.

Moreover, text mining has the advantage of exploring and documenting experiences of pakikipagkapwa more expansively. As journalist Maria Ceres Doyo pointed out, pakikipagkapwa and the words associated with it are "not just a noun, [but] has been coined from both verb and noun" (2009). Online data can document both dimensions. The results here should inform future policies related to government communication, AI, and the promotion of more culturally sensitive online spaces. Moreover, values unite society and promote a "whole-of government and whole-of-society response and recovery" (The Philippine Development Plan 2017–2022), especially during calamities. They should serve as key components in policies and programs to achieve social inclusion, sustainability, and people-centered development. Their dynamic and multidimensional aspects necessitate methodologies and data sources that are rapid, automatic, and easily accessible.

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Python Code

https://github.com/pistocop/subreddit-comments-dl

https://github.com/Raka-Raka/download-youtube-comments-with-python

The UP CIDS
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The UP CIDS Discussion Paper Series features preliminary researches that may be subject to further revisions and is circulated to elicit comments and suggestions for enrichment and refinement. They contain findings on issues that are aligned with the core agenda of the research programs under the University of the Philippines Center for Integrative and Development Studies (UP CIDS).

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THE PROGRAM

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