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Communication practice in village data collection

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Abstract This study analyses two communication practices for rural data collection in Indonesia: top-down, carried out by the state, and bottom-up, initiated by collective intellectuals. This research is to reveal how to communicate rural data collection actions. The differences in data manifest the practice of communicating rural data collection actions; and Doxa, habitus, and symbolic violence that is 'hidden' in the procedures and mechanisms of data collection run by the state. The study area is Tegallalang Village, Gianyar Regency, Bali. Quantitative data in Prodeskel from the Ministry of Home Affairs and Precision Village Data (DDP) with a Drone Participatory Mapping approach were obtained independently by researchers. The research used Mixed Methods Research. Qualitative data were obtained through in-depth interviews using the Nvivo R1 application analysis. Knife analysis using Pierre Bourdieu and Nick Couldry. The study results found two differences in the practice of rural data collection, namely; first, the difference in data collection actors. The state represents Prodeskel, and collective intellectuals represent DDP; second, the difference in data is due to differences in the practice of communication actions (procedures and mechanisms) of data collection. Prodeskel data with a top-down approach produces low-accuracy data and vice versa for DDP. This research also reveals the opus operatum of communication actions in the form of Doxa, habitus, and symbolic violence in data collection of the country's countryside and digital technology to build a space for communication and citizen participation which is the key to the birth of DDP.

Keywords: village precision data; doxa; habitus; symbolic violence; communication in village data collection

INTRODUCTION

The population of Indonesia occupies various administrative areas at the village level, totalling 83,931 (BPS, 2018). This administrative area consists of: 75,436 (89.76%) villages, 8,444 (10.18%) sub-districts, and 51 (10.18%) Unit Pemukiman Transmigrasi (UPT) or Transmigration Settlement Units. This proportion causes the data most widely reported by the government to be data related to village data (Figure 1). Many parties argue that village data used as a reference for village data development programs in various fields is not precise and is inaccurate data (Sjaf et al., 2020, 2021).

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Figure 1. Distribution of village, sub-districts, and UPT administration in Indonesia (Source: Data Compilation by Author, 2021)

At the end of 2020 and early 2021, researchers made observations and received input from village officials and residents about the relationship between development and rural data collection; researchers found facts: (a) the community welfare programs in the village data have not been planned, measured, effective, and on target; (b) the data that is used as the basis for policy on village development programs cannot describe the actual conditions and needs of the community, where the potential of village data can be optimised for village empowerment; (c) village data obtained without communication and participation of villagers: residents are positioned as objects, and (d) village data that is not precise is indicated to be one of the causes of misuse of the state budget.

The researchers found that Article 28 of the 1945 Constitution of the Republic of Indonesia was not used as a reference for rural data collection in development planning. In fact, the 1945 Constitution mandates the state's obligation to realise the fulfilment of the constitutional rights of citizens, namely development oriented towards the realisation of community welfare by guaranteeing the rights of every people to (1) basic needs; (2) education and culture; (3) health, employment, and social security; (4) social life, legal protection, and human rights; and (5) good and safe infrastructure and environment. These five aspects of the community's welfare should portray village conditions through Indonesia's village data collection system.

Currently, village data collection in Indonesia does not yet have 'a single data,' that is to say, big data in village data as a reference in development policies. In line with this, the researchers also have not found references that mention big data in village data in other states. Specifically in Indonesia, there are two types of village data produced by the state: (1) Village Potential Data (Podes) produced by BPS (Indonesian Central Agency on Statistics); and (2) Village/Sub-district Profile Data (Prodeskel) produced by the Ministry of Home Affairs. The two-village data produced by the state were obtained using a top-down approach.

However, these two data do not reflect the actual conditions of the village and the real needs of village residents (Sjaf et al., 2020, 2021). In the view of Sjaf et al. (2020, 2021), this could be due to several things, including wrong methodology, data politics, data colonisation, and so on (Smith, 2017; Ruppert et al., 2017; Couldry & Yu, 2018; Couldry and Mejias, 2019b; Couldry, 2020a). So it is regrettable that this data source is still used as the government's foothold in determining village data development policies in all fields (Calzati, 2020).

Along the way, the government began to improve the data production approach for village data. Responding to the 4.0 era, the government began to use digital technology in village data collection. However, this approach still seems to be carried out in a top-down manner because village residents are still positioned as objects, thus closing the communication space and participation of village residents (Anderson, 2020; Couldry, 2020; Sadowski, 2019). Therefore, the data generated from the top-down village data collection can be pseudo.

Unlike the previous method, collective intellectuals use digital technology in bottom-up village data collection practices (Couldry & Yu, 2018; Couldry, 2020a). The bottom-up village data collection in this study takes the village data collection model by Sjaf et al. (2020) called Village Precision Data (or DDP). The indicators in the DDP were synthesised from the indicators used in the top-down village data collection process and added with input from various parties (local government and village residents). DDP also utilises Unmanned Aerial Vehicle (UAV-Drone) to produce spatial data, digital census application (MERDESA-census Application) to produce numerical data and participation of village residents in data collection and processing. This approach is known as Drone Participatory Mapping (DPM).

Then, to achieve development goals, DDP put five aspects of community welfare as the basis for compiling question indicators in the village data collection. DDP seeks to position village residents as data collection subjects. Village residents are involved in planning, implementing, and evaluating the data collection process and the resulting data. In addition, village residents are actively involved in taking high-resolution imagery with UAV-Drone. The data generated from the bottom-up village data collection is village data that is precise, which describes the real condition of village data and the real needs of village residents. This practice is similar to Colloredo-Mansfeld et al. (2020), utilising UAV technology to map and accurately view agroforestry practices in the Galapagos. The same practice was also carried out by Song et al. (2021) to map the obstacles in the spatial planning of China's national territory. On the other hand, according to Davis et al. (2021), UAVs in remote sensing practice cannot be separated from the power relation in its use. Because DDP does not have a state legitimacy basis in juridical norms, precise data is not used to reference village data development policies.

On this basis, this study aims to reveal communication practice in village data collection (procedures and mechanisms), the facts of differences in data as a manifestation of practice village data collection, and Doxa, habitus, and symbolic violence that are 'hidden' in procedures and mechanisms of data collection set and implemented by the state. This is important because communicative actions can open up space for village residents to participate in data collection, so that village residents are positioned as subjects. Not only that, but technological advances also provide an opportunity for big data to be born for village data that comes from the bottom up so that development policies will be on target.

To achieve the research objectives, the researchers used the concepts of Pierre Bourdieu and Nick Couldry as an analytical tool. These two scientists believe that village data collection cannot be separated from the state's role. According to Bourdieu et al. (1994), the state plays a significant role in unifying and universalising culture. Thus, the researcher considers that village data collection is closely related to the arena and state power. Ongoing data collection is like a culture that is legalised by the state. Researchers call this a "data collection culture." The state-constructed data collection culture looks natural. So, to check the "natural-looking state ability," there is no other way than to do a "genesis reconstruction." According to Bourdieu et al. (1994), this reconstruction is done by removing all existing possibilities and taking other possibilities that can happen (and indeed still can), whatever the way. The genesis reconstruction used in this study is also based on Couldry's view regarding media use in the digital era. Couldry (2016) emphasises that what is essential is not what we do with this or that media, but rather the quality of the whole process of life that involves us intensively and continuously on multi-dimensional communication through digital platforms.

Then, Couldry (Couldry & Powell, 2014) explains that the transformation of governance has profound implications for the practical process of governance and everyday understanding of the social world. Furthermore, government management is increasingly based on the continuous collection and analysis of dynamically collected individual-level data about the state of society, what the people do, and what the people say, which is called Big Data. Couldry (2020) reminds us that the actual process of data collection, processing, and organisational adjustment associated with such narratives is not a myth; they are important 'facts' that all social actors must face. He offers a social approach to constructing and using these data with related analyses. Furthermore, for Couldry & Yu (2018), the emerging culture of data collection must be examined to emphasise the agency and reflexivity of

individual actors, as well as the variable ways in which power and participation are built and enacted (in juridical norms).

In addition to the two main concepts (Pierre Bourdieu on Doxa, habitus and symbolic violence; and Nick Couldry on big data from the bottom up), which are used as analytical tools in this paper, the researcher also explores previous studies that have used Bourdieu's concepts in various social studies. One of them is (Ignatow & Robinson, 2017), which uses the concept of cultural capital in the form of information capital, habitus, and arena as a theoretical framework in using digital technology. In addition, Ruppert et al. (2017) use the concepts of social capital, economic capital, cultural capital, symbolic capital, and arena in examining data politics as objects of power and knowledge. Furthermore, Smith (2018) uses the concepts of Doxa, capital, symbolic capital, habitus, and arena in exploring the use of data-generating technology in people's daily lives.

Not only that, but the researcher also reviewed several previous studies, which directly or indirectly showed the development of Bourdieu's concepts by Couldry concerning the media approach as practice in the digital era. The studies in question include: Couldry & Yu (2018), which use the concepts of data collection (datafication), big data, deconstruction, and shared data to deconstruct the dominant discourse of data collection naturally; (Couldry & Mejias, 2019a), which uses the concept of data collection to analyse the political economy of the data industry or social quantification; Couldry & Mejias, (2019b) which uses the concepts of data, infrastructure media, rituals, and colonialism to explore capturing and processing data as social relations; and Couldry, (2020) uses the concepts of the symbolic power of data collection, social order, actor networks to explain exploratory and critical arguments against the social science legacy of data collection.

Furthermore, for novelty in this study, the researchers reviewed previous studies that analysed the use of UAV-Drones. Some of the previous studies analysed were Nurdin et al. (2019), which used the concept of UAV-Drone, remote sensing (Remote Sensing Technology), and participatory mapping to produce geospatial data and information on coastal village resources with references from the Geographic Information Agency in Bahasa Indonesia, *Badan Informasi Geospasial* (BIG; Colloredo-Mansfeld et al., (2020) using the concept of participatory mapping, Agroforestry, UAV-Drone, and Aerial Perspective interviews (API) to test mapping methodology with DPM in management practice and local knowledge of agriculture and agroforestry on the Galapagos Islands, in San Cristobal and Isabela; and Walambe et al., (2021) who used the concept of UAV-Drone, object detection, data argumentation to conduct experiments with scalable object detection algorithms.

Moving on from the concept of Bourdieu and Couldry and the previous studies that have been described, the researcher formulates

three fundamental differences with this study, namely: (a) the concepts of Bourdieu and Couldry have not been used in research on village data collection; (b) does not explain Doxa, habitus and symbolic violence in village data collection; and (c) not using the Bourdieu and Couldry idea analysis tool, and not being linked to a comprehensive village data collection. The novelty raised in this paper is significant to contribute to communication studies, especially related to the use of digital technology in communication actions.

Considering the typology of agrarian society in Indonesia, which is still thick with culture (Sjaf, 2019), this study takes a case in the highlands of Bali, precisely in Tegallalang Village Gianyar Regency. This research will reveal Doxa, habitus, and symbolic violence 'hidden' in the data collection procedures and mechanisms set and implemented by the state.

METHODOLOGY

This study used Mixed Methods Research (MMR) with quantitative nesting data in qualitative designs (Leavy, 2017). This method design was intended to find gaps in how digital technology was instrumental in research with a participatory 'media as practice' perspective. Thus, this research adds a new dimension to the MMR study with a participatory methodology, particularly in research on the practice of village data collection in Tegallalang Village, Gianyar-Bali.

Using MMR, both quantitative and qualitative data types were collected simultaneously or before the other (in any order). The quantitative data function was used to add or support qualitative data. Quantitative data was obtained through two events, namely secondary data and primary data. Secondary data was obtained from the Village-Sub-district Profile (Prodeskel) numerical data from the Director-General of Village Government Development at the Ministry of Home Affairs. Meanwhile, primary data was obtained from DDP through the DPM approach developed by (Sjaf et al. (2020). Primary data was generated in the form of spatial and numerical data. The results obtained from this primary data were juxtaposed with secondary data, so it can be seen that there is a gap in data sourced from top-down (government) with bottom-up (participatory). Table 1 shows the involvement of village residents and the time required to collect primary data.

Furthermore, for qualitative data, researchers used instruments in the form of interview guidelines and structured questions that became the guideline for researchers and the data collection team. This interview guide was used to dig up information from ten informants that the researcher had determined. This instrument allowed researchers to gain insightful information and understand how people organise and value the world and their world. Data was collected through face-to-face and in-depth interviews (Fontana & Frey, 1994).

Then, the village data collection practice in a top-down and bottom-up manner was carried out parallel. Top-down village data

collection analysis influenced a bottom-up village data collection study. Meanwhile, a bottom-up study of village data collection was conducted to examine how communication spaces and village residents' participation are built through digital technology. This study helps uncover hidden features in the village data collection top-down and uncover a natural-looking symbolic violence state.

Primary Data Collection		Involved village residents	volved village Initial/Background residents	
1.	Spatial	Village Governments	DAM/Village Officials	2-10 March 2021
		Village Security Agency	BS	
		Army Forces in the Village	AG	
		Village Youth	VCP/Village Youth	
2.	Census (social)	Village Government	PS/Village Officials	11-24 March 2021
	. ,	Village Youth	PP/Village Youth	
		-	KAW/Village Youth	
			SOD/Village Youth	
			MG/Village Youth	
			DAW/Village Youth	
		Courses Decemb	har's Data 2021	

Table 1. Involvement of village residents and primary data collection time in

 Tegallalang Village, Gianyar – Bali.

Source: Researcher's Data, 2021

During the implementation of this research, the researchers formed a team consisting of four people who participated in the research process from planning, implementation, and evaluation. The researcher also involved several spatial researchers and village youths in collecting data while in the field, which was carried out from 30 September 2020 to 27 August 2021.

RESULTS AND DISCUSSION

This section describes the five findings of the study, including: (1) village data collection procedures and mechanisms; (2) the fact of the difference in data from the two sources; and (3) Doxa, habitus, and symbolic violence in village data collection. The three findings refer to the formulation of the problem and objectives proposed in the study.

Practice Village data collection: Procedure and Mechanism

Communication in this research is presented through the practice of village data collection, which can be seen from the procedures and mechanisms through the Minister of Home Affairs Regulation Number 12 of 2007. This juridical norm clearly shows the *opus operatum* procedure and mechanism for preparing the Prodeskel. In other words, the procedures and mechanisms that are sourced from the applicable regulations create a village data collection culture that positions villages and their village residents as objects (Couldry & Yu, 2018).

These practices can be seen from preparing data collection instruments (primary data on families, village and sub-district potential, village and sub-district development levels), preparation of working groups, data collection, data processing, and data publication to public spaces. This entrenched practice (Couldry & Mejias, 2019b impacts the elite-biased actors involved in village data collection. This can be seen from implementing the collection, processing, and publication of Prodeskel data from the village and sub-district, district, to national levels.

The implementation of data collection, processing, and publication of Prodeskel data at the village and sub-district level is reported by the Village Head or Sub-district to the District Head. Meanwhile, districtlevel Prodeskel data are reported by the District Head to the Regent or Mayor. Then, at the district or city level, the collection, publication processing, and utilisation of Prodeskel data are reported by the Regent or Mayor to the Governor and the Minister of Home Affairs through the Director-General of Community and Village Empowerment. At the provincial level, the Governor reports the preparation, publication, and utilisation of Prodeskel data to the Minister of Home Affairs through the Director-General of Community and Village Empowerment.

This practice is different from DDP, where data collection is carried out on a bottom-up basis. The implementation of bottom-up data collection is carried out by first strengthening the capacity of the village government and village residents. This training and capacity building targets village youth representatives from the Rukun Warga (RW) or Neighbourhood Council. Through the Head of the RW, the village government recruits two village youths (maybe more depending on the need) to build the DDP. Not only that, village image data collection is carried out with youth and village officials by including determining the coordinates of village boundaries, determining drone flying points, taking village images with drones, and sewing photos into village images.

Participation digitisation was carried out with village residents at the RW or local neighbourhood unit level to detail each material in the village image. Likewise, the collection of numerical data through a census with the MERDESA Application is also carried out by village youth in each RW or local environmental unit. Data clearing activities are carried out through a plenary session of the parties to classify data, make minutes, and submit data to villages. The spatial and numerical data analysis is carried out by utilising technological advances through artificial intelligence.

The above description is more clearly shown in Table 2, which shows the differences in village data collection conducted by the government (Prodeskel) versus collective intellectuals (DDP), including juridical norms, data categories, instruments used, target respondents, types of data, participation of village residents, as well as the position of the village and village residents. These seven differences are presented in Table 2.

		Village data collection			
	Differences	Prodeskel	DDP		
1.	Juridical norms	Minister of Home	None. Although there is an		
		Affairs Regulation	opportunity in Presidential		
		No. 12/2007	Regulation No. 39/2019.		
2.	Data Category	Three aspects: (1)	Five aspects of community		
		basic family data;	welfare: (1) basic needs; (2)		
		(2) VIIIage	education and culture; (3)		
		villago	nearth, employment, and social		
		development	buman rights protection: and (5)		
		development	infrastructure and environment		
3.	Approach	Data collection	Data collection using the DPM		
-		from village	approach		
		officials			
4.	Instrument	Questionnaire	MERDESA census application		
		(paper-based) and	(smartphone base)		
		application			
-	Deens and ant /Information	(website base).			
5.	Respondent/Informant	village officials	village officials, all families living		
6	Type of data	Numerical	Numerical and Spatial		
7	Participation of village	None	Neighbourhood council and		
<i>,</i> .	residents	None	association, community figures,		
			village youths, village security		
			agencies, and army forces in the		
			village		
8.	Position of the village	Object	Subject		
	and village residents				

Table 2.	Differences in village data collection procedures and mechanisms in
	Prodeskel and DDP

Source: Researcher's data, 2021

Facts in the Data Differences from the Two Sources

In the previous section, the different procedures and mechanisms for existing village data collection have been explained. Furthermore, to find out the differences in data from practice village data collection, several examples of data from two different sources (government versus collective intellectuals) will be presented, covering land use, population, livelihoods, and education. The presentation of some of this data is intended to ensure the level of accuracy of data from two different sources.

Land Use

This study found five pieces of information on land use data from Prodeskel and DDP (33.33% of the total land use attributes). The other ten data information is only found in DDP (66.66% of the total land use attributes). Of the five available data information, both from Prodeskel and DDP, none of the data was the same (Table 3).

		Data Source			
	Land Llea	Prodeskel	DDP		
	Land Ose	hectar	re (ha)		
1	Size of the area*		733 00		
2	Size of rice fields*	316	224 50		
3	Size of other fields*	374.16	3.59		
4	Size of plantations*	48,5	27,76		
5	Other type of lands*	27,71	Ó		
6	Road networks	15,63	17,50		
7	Sports facilities	0	0,09		
8	Settlements and other buildings	0	162,29		
9	Rice fields irrigations	0	0,19		
10	Shrubs	0	279,56		
11	Cemetery	0	0,4		
12	Tourism facilities (Parking areas)	0	0,07		
13	Swimming pools	0	0,05		
14	Other types of land	0	9,40		
15	Jogging Track	0	0,31		

Table 3. Land use data from Prodeskel versus DDP data sour
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Note: * data is found in both Prodeskel and DDP sources.

Source: Prodeskel (2020) and research results (2021) using the DDP concept with the DPM approach

Table 3 shows a significant difference between Prodeskel data and DDP data. This fundamental difference is due to the approach used to obtain the two data. The Prodeskel data source comes from information from the village officials obtained from the questionnaire. The informant stated this finding with the initials YH:

"...it is true that we have high hopes to complete the data so that we have a complete picture. The hope is so great, until now there are still many villages that have not been able to use or have not input data into the Prodeskel..." (Interview: 30/09/2021)

In contrast to Prodeskel, the DDP data source is the DPM approach. Specifically for land use data, DDP presents numbers (numeric) and spatial data, as presented in Figure 1.

Figure 1 shows that the land use data of Tegallalang Village is completer and more precise than the land use data sourced from the Prodeskel. The open space for village residents' participation as actors in village data collection using technology (drones and the MERDESA application) causes village data to be adequately presented and can be accounted for. As stated by the informant with the initials WY:

"...one thing that is different from other data collection programs, DDP involves the community represented by youth organisations. Well, the involvement of youth organisations in the current data assessment process is extraordinary..." (Interview: 26/05/2021)



Figure 1. Spatial data on land use in Tegallalang Village was obtained with the DPM approach. Source: Data Processed (2021)

Population

In contrast to land use data, all population data is found from two data sources (Prodeskel and DDP): male population, female population, total population, number of households, and population density. However, this study found a relatively high difference between the two-population data. The highest difference is found in the population density (people/km2) in the village of Tegallalang, which reached 10,220.6%. This number is followed by data on the male population of Tegallalang Village by 10.4%. This means that the male population of Tegallalang Village from the Prodeskel source is 10.4% greater than the population density data sourced from DDP.

Differences were also found in the total (10.1%) and female (9.8%) population in Tegallalang Village. The data source from the government (Prodeskel) is higher than the collective intellectual data source (DDP). Meanwhile, the number of households (5.1%) is higher in data sourced from Prodeskel compared to DDP sources (see Table 4).

Table 4 shows the significant difference between Prodeskel and DDP data. Same as before, this difference is due to the different approaches used. The source of the Prodeskel data comes from village officials' information obtained from the Prodeskel questionnaire, while the DDP comes from the census using the MERDESA census application. This finding is supported by the statement of the informant with the initials DW:

"... if we look at the data, the data in the village up to now, I have noticed that it is not valid. A basic example is a population..." (Interview: 31/05/2021)

		Data Source		Difference	% in
	Population	Prodeske I	DDP	s	Difference s
1	Male population	4.637	4.200	437	10,4
2	Female population	4.695	4.275	420	9,8
3	Total population	9.332	8.475	857	10,1
4	Household population	1.863	1.772	91	5,1
		119.335,0	1.156,2		10.220,6
5	Population density	4	8	118.179	

Table 4.	Population	data fro	om Prodeske	versus D)P data s	sources.
	ropulation	aaca ne			n aaca c	Jourcesi

Description: Source of Prodeskel data (2020) and research results (2021) using the DDP concept with the DPM approach.

To test the validity of this population data, DDP offers population data in numbers (numeric) and spatial data that can show information by name, by address, and by coordinate based on Banjar, as presented in Figures 2 and 3.

Citra Spasial Banjar		•	Data Presisi Berb	asis Keluarga
		NO	Item	Data KK
- 1.1		1	Kode Bangunan	1167
	TTO ALCO	2	No KK	5104061111080013
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 22	3	Nama Kepala Keluarga	I nyoman budiawan
A DAY DAY	-	4	Nama Tulang Punggung	I nyoman budiawan
	A1109	4	Desa	Tegallalang
	4178	5	Banjar	Gagah
	405	6	RW	
	4177 4178	• 7	RT	*
		8	Alamat Rumah	Lianggaja
	and the second s	9	Nomor HP	081338023049
		10	Jumlah Anggota KK	5
		11	Usia	53
		12	Pendidikan	SMA/sederajat
		13	Pekerjaan Utama	Perawat - PNS
		14	Etnis (Soroh)	bendesa manik mas
N Skalar 1:2,300 PETA KERJA SEMBUS DOP DESA TEGALALANG L'12 - 2 - 12 - 12 - 12 - 12 - 12 - 12 -	The second se	15	Keikutsertaan BPJS Kesehatan	PUIK Negara

Figure 2. Data on families and residents of Tegallalang Village, Gianyar-Bali obtained using the DPM approach. Source: Data Processed (2021)

Livelihoods

There is twelve similar livelihood data information in the Prodeskel and DDP data. However, Prodeskel only has information on the type of livelihood of farmers and ranch owners. In contrast to DDP, 11 information on livelihood data were identified, except for ranch owners. Not only that, DDP was able to identify 13 livelihood data information that was not found in the Prodeskel data source (Table 5).

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Figure 3. Data on families and residents of Banjar-based Tegallalang Village was obtained using the DPM approach. Source: Data Processed (2021)

	Liveliheed	Data Source			
	Liveimood	Prodeskel	DDP		
1	Farmers*	1.122	538		
2	Civil Servants*	0	68		
3	Groceries Owners*	0	485		
4	Ranch Owners*	1	0		
5	Mechanics*	0	15		
6	Independent Midwives*	0	2		
7	Private Employers*	0	1.058		
8	Housewives*	0	654		
9	Freelance Workers*	0	169		
10	Unemployed*	0	4.190		
11	Other services*	0	25		
12	Others*	0	939		
13	SOE Employeers	0	120		
14	Teachers	0	226		
15	Security personals	0	31		
16	Odd-jobs	0	351		
17	Home assistants	0	117		
18	Doctors	0	12		
19	Midwives	0	38		
20	Nurses	0	24		
21	Fire fighters	0	3		
22	Architects	0	12		
23	University Lecturers	0	7		
24	Programmer/IT/Videography	0	3		
25	lournalists	0	2		

Table 5. Livelihood data from Prodeskel versus DDP data sources.

Note: * data found in the Prodeskel and DDP data sources. Source data: Prodeskel (2020) and research results (2021) using the DDP concept with the DPM approach

Table 5 shows that of the 25 livelihood data information, the Prodeskel data source can only identify livelihoods as much as 8% of the total information data in Table 7. The remaining 92% of questions in the form of information are not filled in. On the other hand, DDP can provide information as much as 96% of the total information on livelihood data and only 4% of which there is no information.

The lack of livelihood data from Prodeskel is understandable because Prodeskel data collection is collected from interviews with village officials through a questionnaire. In addition, the absence of procedures and mechanisms for updating data makes the accuracy of the livelihood data from the Prodeskel not guaranteed. In fact, this livelihood data is used as one of the parameters to measure the level of village development, as stated by informant YH:

"...the village's level of development. Here we see population development, then the community's economy, domestic products, per capita income, livelihood structure, control of economic assets, public education, public health, security, and order, political sovereignty, then the role of society in development... (Interview: 05/31/2021)

Education

Like livelihoods, education data sourced from Prodeskel is 100% empty (no information). On the other hand, DDP produces the complete data shown in Table 6.

	Education Statuc	Data Source		
		Prodeskel	DDP	
1	Children aged 3-6 years not yet enrolled			
	to Kindergarten	192	306	
2	Students aged 7-18 years old	1.031	1.290	
3	Graduated from primary school	17.570	2.009	
4	Graduated from junior high school	660	985	
5	Graduated from senior high school	2.119	2.609	
6	Graduate with a university diploma	108	503	
7	Graduate with a bachelor's degree	588	748	

Table 6. Education	status data fr	om Prodeskel	versus DDP.

Description: Prodeskel data (2020) and research results (2021) using the DDP concept with the DPM approach.

The educational data presented in Table 6 shows that the village data collection approach, which relies on village officials as a source of information for the Prodeskel data, has low accuracy. In contrast to DDP, the DPM approach involving village residents can be an alternative to a new approach that the government can use to update the existing village data collection approach.

Doxa, Habitus and Symbolic Violence in Village Data Collection

Doxa, habitus and symbolic violence have a strong relationship in the practice of village data collection. This condition can be seen from the social facts related to the acceptance of the government and village residents, as well as the implementation of the village data collection top-down (Prodeskel) so far (Bourdieu, 1991; Bourdieu & Passeron, 1990; Bourdieu & Wacquant, 1992)



Figure 4. The relation of Doxa, habitus, and symbolic violence. Source: Data Processed (2021)

The previous view is in accordance with the results of the author's research that connects the three concepts through the NVivo R1 instrument, which shows the strength of Doxa, habitus, and symbolic violence at every level in the practice of top-down village data collection (Figure 4).

Figure 4 shows the habitus village data collection determined from the work of Doxa on all informants (micro, meso, and macro levels), which have an impact on the occurrence of symbolic violence. This relationship is further strengthened by the relationship sensitivity analysis, which maps the similarity of words used by the informants with Jaccard's Coefficient (Rajaraman & Ullman, 2011). The analysis results also show that the highest sensitivity is seen in the relationship between habitus and Doxa, followed by the relationship between state, power, and symbolic violence with Doxa. Finally, the lowest relationship is between state, strength, and symbolic violence with habitus (Table 7).

Concept Relation		Jaccard's Coefficient Value
Habitus	Doxa	0,29137
State, Power, and Symbolic violence	Doxa	0,29045
State, Power, and Symbolic violence	Habitus	0,28988

Table 7. Relationship sensitivity of Doxa, habitus, and symbolic violence.

Source: Data processed (2021)

Table 7 shows that habitus in village data collection is determined by Doxa, which has long been institutionalised. Through juridical norms (Minister of Home Affairs Regulation No. 12/2007), village data collection (Prodeskel) produces and reproduces village data with a low level of accuracy. The data sourced from information from village officials then becomes an inherited experience in a top-down relationship pattern. Furthermore, this pattern of relationship forms unconditional loyalty from village officials through filling out the list of questions in the Prodeskel questionnaire, as stated by an INS informant:

"...we recorded data based on legality, then recruited and formed a working group. Then we carried out the process of filling out questionnaires at the village, RT, family and individual levels one by one..." (Interview: 26/05/2021)

The researcher found an interesting thing when introducing the bottom-up approach (DDP) in the practice village data collection compared to the Prodeskel data obtained from the top down. Both practice village data collection (both Prodeskel top-down and DDP bottom-up) were responded to with positive and negative sentiments from informants. The results of the NVivo R1 analysis showed that the informants gave a more significant negative sentiment towards village data collection on a top-down basis. On the other hand, positive sentiment is more significant towards village data collection bottom-up (Figure 5).



Figure 5. Comparison of sentiments from informants to top-down (Prodeskel) and bottom-up (DDP) data collection. Source: Data Processed (2021)

The sentiment analysis in Figure 5 confirms that the bottom-up approach in practice village data collection can change the habitus of village officials and village residents in producing and reproducing village data. The emphasis on the bottom-up approach through DDP, which requires digital technology, reminds us of (Nick Couldry, 2004) as an entry point for DDP legitimacy with its DPM approach. With collective intellectuals, DDP puts forward agency and reflexivity of individual actors and village data collection built on a bottom-up basis. Taking advantage of the momentum of the 4.0 era, the use of digital technology (drones and applications) in DDP aims to simplify data collection and processing and ensure the data collected is precise. Involvement or participation of village officials and village residents in data collection and processing is necessary. However, DDP requires conventional juridical norms (formal legality) to avoid symbolic violence. Every village apparatus and village residents need cultural capital to practice village data collection that produces "Big Data" villages from the bottom.

On the other hand, if the Doxa originating from the juridical norm of the top-down approach still dominates, then the habitus of obedience and obedience is ensured and the occurrence of symbolic violence. Symbolic violence in practice village data collection leads to the marginalisation of village data, such as loss of access for village residents to collective resources and inaccurate village data development policies. The *opus operatum* (the result of the action) of symbolic violence can be seen from the IMA informant's expression:

"...If the data is not accurate, how will you distribute it? More like dislikes and likes. Such as assistance given to people the leader likes. On the other hand, if there is data with high accuracy, then there is no longer a dislike term... As has happened in America or developed countries..." (Interview: 27/05/2021)

The previous explanation confirms the view (Couldry & Powell, 2014) as an entry point for DDP legitimacy with its DPM approach. With collective intellectuals, DDP puts forward agency and reflexivity of individual actors and village data collection built on a bottom-up basis. Taking advantage of the momentum of the 4.0 era, the use of digital technology (drones and applications) in DDP aims to simplify data collection and processing and ensure the data collected is precise. Involvement or participation of village officials and village residents in data collection and processing is necessary. However, DDP requires conventional juridical norms (formal legality) to avoid symbolic violence. Every village apparatus and village residents need cultural capital to practice village data collection that produces "Big Data" villages from the bottom. Thus, this study proves that rural data collection through the DPM approach answers Couldry's thesis on "Big Data from Bottom Up," which can be realised by utilising technology and involving citizens in rural data collection. The use of digital technology that involves the

participation of villagers can change Doxa and build new habits and prevent the occurrence of symbolic violence in rural data collection.

CONCLUSION

This study shows that there are two existing practice village data collections. First, practice village data collection with a top-down approach. Prodeskel data represents this approach, where the dominant actor is the state; and second, practice village data collection with a bottom-up approach. This village data collection represents Village Precision Data (DDP) with a Drone Participatory Mapping (DPM) approach. The two practice village data collections have different procedures and mechanisms in their implementation.

As a result of the different procedures and mechanisms in the village data collection, it was found that there were differences in data from the two source village data collections. Taking several samples of data information (land use, population, education, and health) from the two approaches in question, it was found that there were significant data differences. In general, Prodeskel data has a lower level of accuracy than DDP. In addition, the accuracy of DDP is due to the type of DDP data collected, not only numerical data but also spatial data collected through the participation of village residents. One of the advantages of DDP that Prodeskel does not have is that village data collection is carried out by collaborating with three approaches simultaneously, namely census, spatial, and participation of village officials and village residents.

The normative juridical village data collection (Minister of Home Affairs Regulation No. 12/2007 concerning Prodeskel), which is still being implemented today, is a Doxa that creates a habit of obedience and obedience by village officials and village residents in practice village data collection. Village officials and village residents cannot leave Doxa as manifested in Minister of Home Affairs Regulation No. 12/2007, although the data produced has a low level of accuracy. Introducing DDP as an alternative approach in practice village data collection changed village officials' and village residents' habitus from obedience to a more substantial negative sentiment towards the Prodeskel. On the other hand, the presence of DDP was able to minimise the occurrence of symbolic violence, which led to the marginalisation of village data.

The conclusion above reinforces that the practice village data collection requires two-way communication through a bottom-up approach. This is intended to create mutual understanding, agreement, and action. This conclusion answers that symbolic violence (Bourdieu, 1991) will not occur if doxa in the form of juridical norms opens up space for citizen participation in rural data collection (Couldry, N., & Powell, A., 2014). This is different from the one-way communication action (as exemplified by Prodeskel), which impacts the occurrence of symbolic violence in rural data collection. Therefore, a regulation at the level of a Government Regulation is needed that regulates the importance of basic

village data as the basis for making development policies from village to national level.

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