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Sharon Geeling University of Cape Town, slgeeling@wol.co.za

Irwin Brown University of Cape Town, AfrJIS.Editor@gmail.com

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# ETHICS RESEARCH IN THE CONTEXT OF SOCIAL MEDIA

Research in Progress

Sharon Geeling, University of Cape Town, Cape Town, South Africa, sharon.geeling@uct.ac.zaIrwin Brown, University of Cape Town, Cape Town, South Africa, irwin.brown@uct.ac.za

# Abstract

In this paper we position a perspective for exploring ethical issues in the context of social media which we conceptualise as an instance of an information system (IS) artefact. We follow a general systems theory-informed view of the IS artefact (and hence social media), constituted by social, technology and information components. Information is placed at the nexus of the social and technology subsystems and positioned at the centre of moral claims. Differences between distinguishing characteristics of social media and IS artefacts that preceded its development and use raise new ethical issues and call into question the efficacy of applied ethics concepts in use in the IS field of study to effectively address these. We submit that new perspectives are needed for research exploring ethical issues associated with social media.

Keywords: Ethics, Social Media, Information, Information Systems Artefact.

### 1 Introduction

The term "social media", used to describe digital technologies that enable people to communicate and share information through online communities, has been in common use since 2004 (Merriam-Webster, n.d.). Since then, social media have proliferated and today billions of people across the world routinely use them to experience their daily lives (Lupton, 2016). Social networking sites (e.g., Facebook, Twitter) allow individuals to collaborate and connect with others, while content communities (e.g., YouTube, Instagram, TikTok) facilitate the sharing of life experiences (Schlagwein et al., 2011). Social media also provide unexpected societal benefits. Recently, the popularization on TikTok of hand gestures indicating distress was instrumental in the rescue of a kidnapped teenager (Biron, 2021). Despite numerous positive attributes social media also introduce new ethical issues into society. For instance, the Instagram platform has been shown to be implicated in increased rates of anxiety and depression, suicidal thoughts, and eating disorders amongst teenage girls (Wells et al., 2021), while Facebook has been used for human trafficking, to incite violence against ethnic minorities and for the sale of human organs (Scheck et al., 2021). In addition, social media raise less visible social threats. Facebook has a system (XCheck) that shields high-profile users from normal enforcement processes, allowing them to post rule-violating content that contains harassment or incites violence (Horwitz, 2021). Other social media platforms manipulate personal information and use this to change individual behaviour, like purchasing choices or voting habits (Warren and Burmeister, 2017). These and similar practices contribute to claims by scholars like van den Hoven that we are witnessing a gradual deterioration of society through an invasion of digital solutions conceptualised with societal benefit as a secondary consideration (Maedche, 2017). Van den Hoven goes on to suggest that advances in technology have raised deep moral problems on a global scale that require new ways of thinking (Maedche, 2017).

The information systems (IS) field of study has a history of engaging with the ethical issues caused by introducing novel technology into society (Centivany, 2016; Chatterjee et al., 2009; Chatterjee et al., 2015; Fleischmann et al., 2017; Lowry et al., 2017; Maedche, 2017; Mason, 1986). Unique

characteristics of social media however call into question the relevance of existing approaches to deal effectively with these issues. Social media differs from many IS artefacts that preceded its development and use, in that these prior artefacts were designed in support of organizational goals (hereafter referred to as the traditional IS artefact). In contrast, the core function of social media is online social interaction and collaboration (Schlagwein et al., 2011). While social media may be used in an organizational context (e.g. enterprise social media) we focus our attention on social media used in the public domain. Consequently, the impact of social media extends beyond any organizational context and indeed beyond geographical boundaries and social groups (Tilly et al., 2015). Interactions by individuals on social media involve the co-creation, modification, exchange and consumption of information by any member of the social media community (Tilly et al., 2017). The context in which information is produced, the users of that information and the use to which the information will be put is not predetermined, an important contrast to the traditional IS artefact designed with organizational goals in mind (Tilly et al., 2015). A key challenge in mediating social media interactions is how to incorporate the diversity in moral standards in the social media community (Himmelreich, 2019). In addition, the fundamental differences between social media and the traditional IS artefact raise new ethical issues.

Our objective with this paper is to position an approach to exploring ethical issues associated with social media use in the public domain, that accommodates the novelty of this type of IS artefact and any shortcomings in the applied ethics concepts in use in IS. This work represents a preliminary step in a research project to implement principles that foster ethical social media interaction between individuals and groups. The overarching research question to be answered is: *What principles foster ethical social media interactions*? In this paper, we advance towards this goal by identifying novel ethical issues that emerge in social media interactions.

This paper is organised as follows. We begin with a conceptualisation of the IS artefact. We follow this with an overview of ethics in the context of the IS field of study and social media. This discussion elaborates our argument that social media have differentiating features that challenge the efficacy of the applied ethics concepts in use in IS. We conclude the paper by suggesting a theoretical perspective for future research on ethics in the context of social media.

# 2 Conceptual Background

In this section we describe the nature of the IS artefact. We also discuss ethics research in the IS field of study and the novelty of social media as an instance of the IS artefact. We argue that this novelty warrants a careful consideration of the usefulness of applied ethics concepts used in IS research for addressing ethical issues associated with social media.

### 2.1 The IS Artefact

Lee et al. (2015) posed the concept of an IS artefact as opposed to an information technology (IT) artefact, to counter a prevailing IT–centric perspective in IS design but also to reinforce the notion of IS as "an information *system*" (p. 6). Drawing from general systems theory, the IS artefact has since been conceptualized as the interaction of separate technology and social subsystems, with information being a property (not a subsystem) arising at the confluence of the two subsystems (Chatterjee et al., 2021; Sarker et al., 2019). The relationship between the social and technology subsystems can be either affording or constraining, with emergent action dependent on the features of the technology subsystem and the skill and predisposition of the social actors (Chatterjee et al., 2021). Information plays a key role in capturing the state and behavior of the social and technology subsystems and contributes by either promoting or inhibiting order in the system (Chatterjee et al., 2021; Lee et al., 2015).

Conceptualising social media as an instance of an IS artefact is useful for considering solutions to ethical issues raised by social media (Maedche, 2017). The IS artefact is a purposive system, with mutually adaptive subsystems that are concerned with maintaining system equilibrium and order (Chatterjee et al., 2021). Each subsystem, together with the relationships between them, is a contributor to successful

system outcomes. Thus, each has a role in contributing to the ethical status of the system. Additionally, the IS artefact accommodates the contextual environment of social media by being open to inputs from the environment and contributing outputs (Chatterjee et al., 2021). This is important given the reach of social media across geographical and social boundaries (Tilly et al., 2015).

The three components of the IS artefact are described in Table 1.

System Components	Description	
Technology Subsystem	• Consists of the devices, tools and techniques that enable the transformation of inputs into outputs (Chatterjee et al., 2021) that assist people in achieving their goals or solving their problems (Lee et al., 2015)	
Social Subsystem	<ul> <li>Consists of individuals and collectives</li> <li>Includes the knowledge, skills and values of individuals and collectives, the structures within which they interact and their inter-relationships (Lee et al., 2015)</li> </ul>	
Information	<ul> <li>The nexus of the social and technology subsystems (Chatterjee et al., 2021)</li> <li>Four stances concerning the nature of information have been adopted in IS (Boell, 2017):</li> <li><i>Physical stance</i>; Information manifests as a physical difference (a token, sign or mark) that can be captured, specified and measured and which may or may not be accessible to humans (Mingers and Standing, 2018). Also referred to as data (Checkland and Holwell, 1998).</li> <li><i>Objective stance</i>; Information is related to human understanding, contained in signs, bound to that medium, and therefore existing independent of the minds of observers (Boell, 2017; Floridi, 1999; Mingers and Standing, 2018). Considered processed data (Checkland and Holwell, 1998).</li> <li><i>Subject-centred stance</i>; Meaning is not inherent in the data. Meaning is assigned to data by individuals (Boell, 2017). The same data could convey different information to different individuals (Boell, 2017; Checkland and Holwell, 1998; Mingers and Standing, 2018).</li> <li><i>Sociocultural stance</i>; Information depends on society, groups or culture for the meaning and relevance of data to emerge (Boell, 2017).</li> </ul>	

Table 1.The components of the IS artefact.

### 2.2 Ethics and the IS field of study

At its foundation, ethical behavior and practice is concerned with moral issues, values and principles that have a focus on helping rather than harming others (Guragai et al., 2017; Kroener et al., 2019). Ethics in the context of the IS artefact is especially relevant for the maintenance of human dignity. In his seminal work on ethics in relation to IS, Mason (1986) argues that "nowhere is the potential threat to human dignity so severe as it is in the age of information technology" (p. 9).

In IS research applied ethics is much more widely used than ethical theories, where discourse ethics, duty ethics, virtue ethics, value ethics, Confucian ethics or utilitarianism are among the most popular theories in use (Kern et al., 2022). Applied ethics involves the mapping of aspects of ethical theory to a domain of interest with the intention of evaluating existing policies and practices from an ethical perspective (Winkler, 1998). Few IS studies have used applied ethics to explore ethical issues related to social media (Kern et al., 2022). In the context of this paper, we define ethical issues as problems that arise from the use of social media.

Numerous ethics concepts emerge when applied ethics is used in IS research to explore the ethicality of phenomena. Kern et al. (2022) provide a useful categorisation of these concepts into umbrella terms. Of these, the categorisations of (1) IS ethics (frameworks to explore contextualised ethical issues), and (2) computer ethics (where concern focuses on human values in an information technology environment) are relevant for exploring ethical issues related to the use of social media, as the focus of both is on the use of IS extending beyond organizational boundaries.

### 2.2.1 IS Ethics

The concept of IS ethics includes ethical topics defined as relevant to IS by Mason (1986)—privacy, accuracy, property, accessibility (PAPA)—as well as work done by Mcbride (2014) to expand on the PAPA topics (Kern et al., 2022). The PAPA topics remain influential in IS research (Hassan et al., 2018). Privacy addresses concerns regarding the type of information individuals should be required to reveal about themselves and their relationships (Mason, 1986). It includes consideration of the conditions under which information is revealed (e.g., are services offered in exchange for private information, or is private information gathered surreptitiously) as well as the measures in place to safeguard the invasion of privacy (Mason, 1986). Accuracy relates to the authenticity and dependability of information. It includes consideration of the accountability for errors in information as well as compensation to those negatively impacted by inaccurate information (misinformation) (Mason, 1986). Property concerns relate to the ownership, retention and distribution of personal information and preferences, like an individual's right to access their own information or correct inaccurate information. Consideration is given to issues like the theft or deliberate distribution of personal information and ownership of the channels through which information is distributed (Mason, 1986). Accessibility addresses the rights of individuals or organizations to obtain information. It includes ethical concerns related to the intellectual skills necessary to assimilate information, access to the required technologies that then enable access to information, and the authority to access the information itself (Mason, 1986).

Mcbride (2014) expanded on the PAPA topics to address concern that the interpretation of PAPA as a research framework has skewed the focus of IS research and led to an overemphasis on privacy as an ethical issue. Additionally, PAPA focuses on the relationship between individuals and organisations in the management and use of information. In a context where information is no longer under the control of an organization and instead is generated and distributed differently, such as in the case of social media interactions, the complexity of the ethical issues makes PAPA ethics difficult to apply (Mcbride, 2014). Mcbride (2014) therefore introduced the mnemonic ACTIVE to represent six ethical issues in IS more relevant in the twenty-first century; Autonomy - individuals ability to make choices about their own information; Community - whether the effect of an IS on a community is ethical or not; Transparency - the clarity of content derivation and processing in an IS; Identity - the effect of an IS (social and ethical) on the distinctive characteristics of a person; Value - the moral worth associated with information and hence on the individual associated with the information; and Empathy - the extent to which the IS impacts the ability for emotional connections between IS professionals and users (Mcbride, 2014).

### 2.2.2 Information Ethics

Despite the relevance and influence of the ethical topics in the IS ethics concept, there have been recent calls to change the ethical focus in IS from logic and rational thinking, to embrace other equally important aspects of society, like life and living (Hassan et al., 2018). Information ethics (IE) is proposed by Floridi (1999) as a philosophical foundation for ethical principles relevant to "computers". IE is closely aligned with "computer ethics", an umbrella term proposed by Kern et al. (2022) for IS research concerned with the protection of life, health, security and freedom in the context of information technology. In this paper we use the term information ethics (IE) as it better captures the central role of information in social media. Floridi (1999) argues that ethics theory has not kept pace with technology, where advances and new technologies introduce unanticipated problems. In creating ethical principles that apply to information, Floridi (1999) grounds IE on principles that go some way toward focusing ethical attention on other aspects of life. These include:

- information processes; past, present, and absent
- information entities; any logically possible entity
- the infosphere; the totality of information entities
- the agency of information entities; capability to produce information that can affect the infosphere
- information entropy; absence / negation of information (Floridi, 1999)

IE attributes moral status to all information entities, not just to human beings (Floridi, 1999). The infosphere is described by Floridi (1999) as:

Not just all persons, their cultivation, well-being and social interactions, not just animals, plants and their proper natural life, but also anything that exists, from paintings and books to stars and stones; anything that may or will exist, like future generations; and anything that was but is no more, like our ancestors (p. 43).

Floridi (1999) proposes that any information entity has an equal right to exist and flourish in the infosphere. This argument expands on biocentric ethics, and the moral value given to life and the absence of suffering. IE suggests that being (understood as information) is more fundamental than life or suffering and thus has an intrinsic worthiness and the right to persist and flourish. Information is thus placed at the centre of moral concerns and can act as both a moral agent and a moral patient (Floridi, 1999; Floridi, 2002). IE further maintains that as the infosphere consists of the totality of information entities have an intrinsic right to persist and flourish, rational beings are duty bound to contribute to the growth of the infosphere (Floridi, 1999). Actions that cause an increase in the level of entropy in the infosphere are thus unethical. Despite the significance of information as an IS concept, Floridi's work is seldom referenced in IS ethics papers (Mingers and Standing, 2014).

### 2.3 Social Media and Ethics

We distinguish social media as a specific type of IS artefact (see Figure 1). Social media is hence defined as any socio-technical system that enables individuals to engage in activities such as collaborating with others, sharing content, reviewing products and services, sending messages and participating in virtual worlds (Tilly et al., 2019). While social media may be used in an organizational context (e.g. enterprise social media) we focus our attention on social media used in the public domain. Popular types of social media include blogs, social networking sites (e.g. Facebook), collaborative projects (e.g. Wikipedia), content communities (e.g. Instagram), and so on (Karahanna et al., 2018). As an instance of an IS artefact, social media is involved in the creation, storage, and distribution of information (Mingers and Standing, 2018; Tilly et al., 2015; Tilly et al., 2019). The traditional IS artefact exists within an organization to support organizational members with their work related activities and problems (Tilly et al., 2015). In contrast, the core function of social media is the support of online social interaction (Schlagwein et al., 2011), not confined to an organizational or other setting. Despite both being sociotechnical systems with common component subsystems, the nature of the relationship and interactions between the social media subsystems perpetuate existing ethical issues and introduce new ones into society. We describe these issues as they pertain to each subsystem.



*Figure 1.* Social media as an information system (Adapted from Chatterjee et al., 2021; Lee et al., 2015; Sarker et al., 2019)

#### 2.3.1 The technology subsystem

Social media is based on social technologies that enable collaboration across geographies and social groups. Ethical issues relate to the accurate recording of situations and events in the form of facts or data (Checkland and Holwell, 1998). This data must accurately represent reality in the detail that is presented about a situation or an event and these details should not be open to interpretation (Boell, 2017; Mingers and Standing, 2018). However, ethicality related to truth is problematic in the context of social media, where determinations of good or bad and determinations of truth (Boell, 2017; Floridi, 1999; Himmelreich, 2019; Mingers and Standing, 2018; Mingers and Walsham, 2010) must accommodate the diversity in moral standards in the social media community. Accessibility concerns can also arise if the social media platform makes it difficult for individuals to gain access to their personal data when they choose to withdraw from the community (Bankston, 2018). Additionally, computer algorithms used by social media platforms act as "knowledge gatekeepers"; agents that gather and distribute information to individuals (Chatterjee and Sarker, 2013), effectively controlling their access to information. This has the effect of influencing an individual's knowledge creation (Chatterjee and Sarker, 2013).

#### 2.3.2 The social subsystem

Membership of the social media community is voluntary (Tilly et al., 2015; Tilly et al., 2019). Individuals are motivated to use social media to fulfill various psychological (Karahanna et al., 2018) and social needs, like exchanging information, cultivating friendships, and being entertained (Tilly et al., 2015). However, motivation to engage with social media can vary amongst members and across social media platforms (Tilly et al., 2019). Thus, social media is used in highly variable ways (Schlagwein et al., 2011; Tilly et al., 2015), creating new social interaction dynamics (Tilly et al., 2017). For instance, the governance of interaction between social media community members is often reliant on social feedback and transparency, rather than hierarchical or legal controls (Schlagwein et al., 2011). Social media can amplify and reinforce beliefs and views held by particular social groups, creating the quintessential echo chamber (Kitchens et al., 2020; Risius et al., 2019) and contributing to the polarization of society caused by the coalescing of groups around a particular worldview or position (e.g., based on political affiliation, stances on topical issues, conspiracy theories). The affording relationship between the social and technology subsystems also contributes to ethical issues. Ccomputer algorithms are used to direct and control the behaviour of individuals by distracting attention towards particular content and activities (Williams, 2018). The social networks of users may also combine with characteristics of platform algorithms to shape user behaviour (Kitchens et al., 2020).

### 2.3.3 Information

Tilly et al. (2015) define social media as a meeting place for those who demand information and those who supply it, through processes of interaction and collaboration. Social media is designed to distribute and integrate the search and evaluation of information amongst multiple individuals, thus supporting collaborative information behavior (Tilly et al., 2017). This introduces a unique perspective on the production and consumption of information (Tilly et al., 2017). Consumers of information are motivated to participate in social media by an expectation that they will find the content they are looking for. Producers of information participate because they are looking for an appreciative audience (Tilly et al., 2015). Each occupies an equally important role in the success of the social media platform (Tilly et al., 2015).

Information emerging from the relationship between the social and technology subsystems should not contribute to entropy in the system (Chatterjee et al., 2021; Floridi, 1999). Agents capable of acting responsibly have an ethical duty to limit the potential for information to nefariously disrupt the orderly functioning of the system (Floridi, 1999). Additionally, every information entity in the social media community has a right to expect ethical consideration (Floridi, 1999). This implies that interactions between the social and technology subsystems should be assessed with respect to the potential of the information that emerges to upset the orderly functioning of the system. This assessment is however

subject to moral standards and social norms. Social media has the challenge of mediating assessments of information to suit the needs of large, informal, heterogenous communities stretching across geographical boundaries and social groups (Tilly et al., 2019), where consensus regarding moral standards and social norms is unlikely (Mingers and Walsham, 2010). Additionally, exerting control over content on social media or how it is used is difficult (Tilly et al., 2015).

### 2.3.4 Summary

We summarise persisting and novel ethical issues related to social media in Table 2 in the context of information as being at the centre of moral concerns (Floridi, 1999). We position ethical issues from the perspective of the different stances on information used in IS research; physical, objective, subject-centred and sociocultural stances (Boell, 2017).

Information Stances	Persisting Ethical Issues	Novel Ethical Issues
Physical	<ul> <li>Privacy; Accuracy; Property; Accessibility (PAPA)</li> <li>Autonomy; Community; Transparency; Identity; Value; Empathy (ACTIVE).</li> </ul>	<ul> <li>Determinations of good or bad</li> </ul>
Objective	- True information	- Determinations of truth
Subject- centred	<ul> <li>Knowledge</li> <li>Internal shaping of individuals</li> </ul>	<ul> <li>Algorithmic gatekeeping of information</li> <li>Nudging attention through algorithms or design</li> <li>Negative psychological effects</li> </ul>
Socio- cultural	<ul> <li>Shared understanding</li> <li>Information quality</li> <li>Polarization of social groups</li> </ul>	<ul> <li>Interpretation of wider social system connotations</li> <li>Determinations of the significance of information</li> <li>Creation of echo chambers / filter bubbles</li> </ul>

Table 2.Persisting and novel ethical issues related to social media.

# 3 Research Contribution

Social media introduce novel ethical issues into society (see Table 2), creating a need for IS research that focuses attention on these issues. Difficulty in accommodating unprecedented diversity in the social subsystem compromises important ethical considerations like determining the relevance of information (Hassan et al., 2018; Tilly et al., 2015) or interpreting the nuances of the wider social system (Boell, 2017; Mingers and Standing, 2018; Tilly et al., 2017). Additionally, increasingly sophisticated algorithms and features in the technology subsystem, combined with the availability of personal information, underscores gaps in applied ethics concepts in use in IS to address the manipulation of an individual's online behaviour, the practice of tailoring the information served to individuals (Williams, 2018) and the polarisation of social groups (Risius et al., 2019).

We submit that the novel ethical issues introduced by social media necessitate new perspectives on how we explore these. Adopting a conceptualisation of social media as an IS artefact is useful for considering solutions to these issues (Maedche, 2017). The purposive nature of the IS artefact and the tendency to maintain system equilibrium and order (Chatterjee et al., 2021) is well suited to exploring such phenomena. Additionally, the integrated nature of the system components implies that even small efforts to address discrete ethical issues nevertheless contribute to the overall ethical health of social media. We further submit that ethics concepts in use in IS that extend beyond traditional topics to capture other aspects of life and living (e.g., Floridi, 1999) allows the development of deeper insight into the pivotal role of information in moral concerns. Multiple avenues present themselves for exploration in exhausting the different stances on information, suggesting the ethical issues facing social media can be tackled from a variety of approaches that target both the technology and social subsystems.

## 4 Next Steps

In this paper we position the applied ethic concepts in use in IS research in the context of social media to argue a new perspective is necessary for exploring the novel ethical issues that arise in the social media context. We describe the differences between the traditional organization-specific IS artefact and public domain social media that call into question the efficacy of ethics concepts in use. The next step to progress our research is to draw from the concepts discussed in this paper and develop a theoretical basis for furthering our research objective of implementing ethical principles to mediate social media interactions. Our intention is to construct a conceptual model where information plays a central role as the primary object of morally responsible action (Floridi, 1999). To achieve this, we intend to elaborate on the different stances on information (Boell, 2017), all of which we accept as having a valid place in social media. Each stance on information offers a distinct focus for finding solutions to ethical issues and suggests the relevance of components of social media and specific ethics concepts. Our understanding at this stage is summarised as follows:

- *Physical stance*: The technology subsystem and considering how information is captured, encoded or decoded (Boell, 2017) should be the focus of research adopting this stance. Ethical concepts that address concerns rooted in information in its physical form are relevant e.g., PAPA (Mason, 1986) and ACTIVE (Mcbride, 2014).
- *Objective stance*: Information is bound to the medium in which it is contained (Boell, 2017; Mingers and Standing, 2018). The technology subsystem should be the focus of research with ethics concepts requiring information to be well-formed, meaningful, and veridical (Floridi, 1999; Floridi, 2004; Mingers and Standing, 2018). Interventions to improve ethical practice are expected to focus on the detail contained in signs and messages and the extent to which these accurately reflect reality.
- *Subject-centred stance*: Information is not inherent in a sign or message but instead meaning is attributed by an individual (Boell, 2017). Both the technology and the social subsystems should be the focus of research efforts adopting this stance. As yet, applied ethics concepts particularised to a subject-centred stance on information, have not been forthcoming. Fruitful areas to further develop an ethical response is to examine the negative outcomes of social media use and associated affordances that give rise to them (Winterstein et al., 2022). Research efforts could also consider affordances to develop an ethical response in the context of social media development (Geeling and Brown, 2020). Furthermore, by examining the psychological needs that fuel social media use (Karahanna et al., 2018), consideration can be given to negative effects arising from these needs not being met.
- *Socio-cultural stance*: Context is important as individuals create and interpret information within a particular sociocultural context (Boell, 2017). Both the social and the technology subsystems should be the focus of research. Ethical concepts related to the collective interpretation of information are relevant as members of a social media community may not share the same views on what ethical standards and guidelines are appropriate (Tilly et al., 2019).

Our research objective is practical outcomes that change practice and create prescriptive knowledge. This involves the implementation of ethical principles that assist civil society with social media interactions. Hence, an action research approach is proposed to further this research, using the methodological steps of diagnosis, action planning, intervention, evaluation, and reflection proposed by Davison et al. (2012). Sampling and analytical techniques from grounded theory methodology aligned to the guidelines suggested by Urquhart et al. (2010) will be used to provide the intellectual basis for proposed interventions.

Our hope is that this work will contribute to the formulation of principles respectful of moral diversity in society, the need for individuals to interact with others and the rights of individuals to make their own decisions, in ways that contribute to a just and happy society.

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