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EDITORIAL

Carpe diem–"Seize the day!"

Editor-in-Chief: Prof. Hong Shen

We are entering a new era of 5G broadband networks and enhanced artificial intelligence. The technological revolution in these two fields will inevitably bring new change and challenges to the study of art and the humanities in the contemporary world. Many professional positions of our time, such as radio broadcaster, television anchor, dancer, chess player, interpreter, taxi driver and courier, will very likely be replaced by robots one day. The rapid progress in computer-assisted translation, for instance, has brought fear to many college students of English major as to their future careers.

Crisis also brings opportunity. With change and challenges looming, education in the arts and humanities has become even more crucial. Although robots possess some extraordinary skills and functionality, it is still impossible to replace human beings in terms of emotion and consciousness. The development of artificial intelligence has thus prompted us to reflect on the originality and imagination of human beings. The more we are confronted by the impact of technology, the more we must strengthen our humanistic values, and pursue new breakthroughs in the fields of artistic creation and research. Some aspects of arts and humanities still lie well beyond the ability of artificial intelligence. Computer-assisted translation maybe efficient in rendering technical writing, but when it comes to translating Shakespeare's play or sonnets, with all their rhetorical devices, puns, and word-plays, as well as their literary, religious and historical allusions, the translational efficiency of computers is utterly inadequate and indeed beside the point.

Since Huawei has now taken the lead in the 5G field, the balance of new high-technology is beginning to favor the East. At the same time, the content of art studies and humanities is also changing, and the focus of art and humanistic studies is gradually shifting from the West to the East. Our mission is to follow this trend, accept the challenge, and work hard to find new research directions, as well as solutions to new problems.

In support of this mission, Syncsci Publishing Pte Ltd of Singapore has decided to sponsor an academic online journal entitled *International Journal of Arts and Humanities* (IJAH). Its current editorial-board consists of scholars from nine different countries: Australia, China, Iran, Italy, Malawi, New Zealand, Poland, South Africa and Spain. International cooperation of such kind among scholars in the fields of art studies and humanities is absolutely necessary. Together we can bridge the gap between East and West, and develop the wisdom that will allow us to meet the challenges before us.

Singaporean culture is in itself a mixture of western and eastern civilizations. IJAH provides an ideal platform for international scholars in the arts and humanities to work together. By studying issues of common concern, understanding and inspiring one another, can we truly surpass ourselves.

Correspondence to: Hong Shen, School of International Studies, Zhejiang University, Hangzhou 310058, China; Email: hshen_72@126.com

We welcome this opportunity and will make every effort to promote international cooperation and cultural exchanges, and to address the questions in this brave new world.

RESEARCH ARTICLE

Is individual responsibility enough?

Hans Lenk

Abstract: Intriguing challenges, risks, and functions for responsible behaviour in a system-technological and eco-social world are addressed from a methodological and ethical point of view. Various kinds and levels of responsibility are distinguished in terms of action (causal) responsibility, of task and role responsibility, and of universal moral and legal responsibilities well as from institutional and association perspectives. Some problems of ascribing, justifying, and distributing responsibility are discussed. Some professional codes of ethics in science and technology and characteristic responsibility conflicts are analysed, and 20 priority rules are proposed to help deal with or solve these important problems.

Keywords: universal moral responsibility, individual responsibility, collective responsibility, corporate responsibility, distribution of responsibility, social traps, professional codes of ethics, priority rules

1 Introduction

Problems of technology and applied sciences as social and ecological phenomena are not only socially and legally but also certainly ethically relevant.

Moral judgements and ethical problems with respect to technology and economy are usually problems of bearing, attributing, and distributing responsibility. We can understand the human being as a normative being, that is, she/he is morally distinguished from other creatures by the capacity to bear, acknowledge, consciously identify, and accept responsibility for the outcomes of one's own actions and role-fulfilments. Humans are so to speak moral beings. Yet, moral responsibility is but one sort of responsibility, which can be located within a rather complex realm, for example, those responsibilities engendered by contracts or other mutual agreements that not necessarily be moral in the narrower sense, that is, they might not affect the life, limbs, psyche, and well-being of other people or living beings in general. These ethically speaking not morally relevant responsibilities might be called ethically neutral. But they are still normative and prima facie to be obeyed by the respective persons who have accepted these non-moral responsibilities. In addition, these ethically neutral responsibilities can come into conflict with moral duties and ethically

relevant obligations, *i.e.* moral duties in the narrower sense. Should a manager simply follow managerial and economic strategies of maximising (instead of optimising or 'satisficing') (Simon, 1987) profits or pressing to save time in risky operations and strategies in the implementation of new technologies? Or should (s)he refrain from taking any risks for life and limb when consenting to operational plans of implementing a new technology? Is safety to be valued first - even at the price of setbacks with respect to economic development and a possible maximisation of gains or profits? Should for instance an engineer, who is employed in a dependent position, 'blow the whistle' in the case of a risky decision and issue a warning to the public about possible risks or hazards or potential negative outcomes? Should loyalty to his firm or supervisors or the consideration of his personal career override his moral (co-)responsibility for public safety? Or should moral responsibility take precedence over contractual responsibility, although keeping to contracts certainly also has a moral dimension, insofar, as we are morally obliged to abide to the law. There is also the question whether or not moral responsibilities occurring in economy and technology are identical or overlapping or perhaps contradict one another. Indeed, one could perhaps argue that ethical problems in economy are further-reaching than moral problems in technology, because there are many problems in the economic sector; various, if not all, sections such as the distribution of work, unemployment *etc*., which may not be directly related to technology but where technology is a contributive or even decisive factor. Economic management and the distribution of jobs and so forth are mostly if not directly related to or influenced by tech-

nological factors. However, there is a large overlap between these two are , and as far as technology is involved and technological implementation is at stake within economic decision-making, the ethically relevant problems are very similar or at least closely connected in both fields (Lenk and Maring, 1996; Lenk and Maring, 1998).

Yet, with respect to the question of safety, managers apparently sometimes ignore this connection. This fact is dramatically illustrated by an analysis of the catastrophe of the US spacecraft Challenger in 1986, when 73 seconds after take-off from Cape Canaveral the manned spaceship exploded and seven astronauts lost their lives. The direct cause was a brittle rubber sealing ring which, in accordance with the predictions and warnings of the engineers from the rocket manufacturer Morton Thiokol, cracked under low temperature conditions. One day before takeoff the engineers, in particular Allen MacDonald, the project leader, and Roger Boisjoly, the expert on sealing rings in rocketry, had warned and protested against take-off plans for the next day. They informed NASA about the danger that the sealing rings would break below the freezing point. They were supported by the Deputy Director of the engineering department of the rocketry firm, Robert Lund, who also informed Jerry Mason, a superordinate engineer within the same firm. Mason, however, silenced Lund and ended the discussion with the words 'Take off your engineering hat and put on your management hat'. Lund gave in and consented to take off, which was notified to the project leader of NASA, who authorised the take-off without any reservations resulting in the catastrophic accident. (Later, the engineers who had launched the warnings, MacDonald and Boisjoly, were transferred to another department, which they deemed a kind of quasi-punishment.) (Lenk and Maring, 1998)

Do indeed managers decide differently than engineers? Do their decisions rest upon a different set of criteria? Regarding ethical decisions, does the management hat differ from the engineering hat? In any case, this example demonstrates how complicated the problems of responsibility, its interpretation and its distribution are: Who was the responsible person or body in this case? Everybody who had been involved? Just NASA, not a single individual? Each to a certain degree? How much, then? Before dealing with these questions, we will first turn to issues of defining and delineating responsibility in general.

2 Responsibility and responsibilities relational constructs

'Responsibility' is not just a concept solely to be used in a descriptive sense, for example, someone is responsi-

ble, but is above all an evaluative attributional concept - somebody is held (to be) responsible. This introduces the normative, even ethical dimension of action in a stricter sense. The concept of responsibility itself is a diverse concept of structure or relation that is linked to assignment, attribution, and imputation, namely a scheme that needs to be analysed and interpreted with respect to the following elements:

Someone: the subject or bearer of responsibility (a person or a corporation) is responsible for: something (actions, consequences of actions, situations, tasks) in view of: an addressee ('object' of responsibility) under the supervision or judgement of: a judging or sanctioning agent, *i.e.* in relation to: a (prescriptive, normative) criterion of attribution of accountability within: a specific realm of responsibility and action.

Responsibility is, first, a concept that "as or within a relational attributive norm (controlled expectation of action and behaviour"). Responsibility means that a person has to justify actions, consequences of actions, situations, tasks, and so forth in front of an addressee and before an agent or agency in respect to which (s)he has obligations or duties of rendering justification, in accordance with standards, criteria, norms. The responsible person is accountable for his or her own actions or appropriate content and sense, under specific conditions, for actions performed by others for whom she/he is vicariously responsible. (Parents, for example, are liable for certain wrongdoings of their offspring, perhaps in the sense of negligence of their supervisory duties.) The concept of responsibility gives a structure to social reality (of norms and actions) and to social relations. One can differentiate between the typical bearers of responsibility in terms of active roles and observer roles. Specifically, one imputes or attributes a particular responsibility to oneself as an actor or to others from the perspective of participant, observer, or scientist, in relation to rules and norms that are of a general nature. The attribution (in a particular case) activates, that is instantiates, the general pattern of responsibility in a specific instance. The attribution or imputation of responsibility is an active process both in and in the interpretation of the actions of others. One has to distinguish between a general responsibility for the results of an action derived from a kind of role responsibility and task responsibility on the one side and legal and moral responsibility on the other. A second aspect of interpretation emerges: The responsibility for the result of an action is seen only as a superordinate, schematic or 'formal' pattern; it still must be connected with or to, through the concrete or specifications of tasks or roles or through (universal) moral or legal interpretation, to the respective domain of values and norms. Only then can it

be filled with meaning or and thus become comprehensible. Action responsibility is at first to be interpreted as a formal and rather schematic labelling; it has to be fleshed out role and task specification or by subsuming it under moral (ethical) or legal or other, *e.g.* conventional, norms or values (Lenk, 2006).

3 Different types of and levels of responsibilities

In the following, some diagrams illustrating hierarchical models of different types of responsibility are presented; the respective levels or strata are referring to different dimensions of interpretations. They should be considered analytically helpful differentiations of an "ideal typ(ic)al" or "ideal types" similar but not identical to Max Weber's "ideal types" ("Idealtypen"). These general diagrams are to be considered on different levels: for example, the first diagram of action responsibility is schematic and rather formal, in contradistinction to the other ones which are themselves alternatives on the same level (*e.g.*, types are paratactical and mostly disjunct or, subordinate, interpretative constructs on the same level, whereas the levels are hierarchically organised. That means that the upper stratum is more abstract and must be substantiated by subordinated, more concrete interpretative constructs, *e.g.*, kinds of a "lower" responsibility type. In general, the levels are analytical and perspectivist constructs that may overlap and/ apply to a real case of responsibility instantiation which can be analysed either from a rather formal, abstract, and overall interactional or "causal" perspective or on a more concrete level of role, legal, or moral interpretation. That is, concrete instances of responsibility attribution can be analysed not only on a formal or abstract level (as in the first diagram), but also from a lower level, from a more concrete point of view, namely from the perspective of moral, legal, or role responsibility. Although usually one and the same analysis on a specific level is fixed to a certain interpretation, say, the legal one, this does not preclude another interpretation from a moral point of view, *i.e.* another general type structure. Within the rather concrete level of these schematic constructs, the different individual types are also analytic constructs which may sometimes be attributed more or less. *E.g.*, within the diagram of universal moral responsibility, the higher level responsibility to keep the Fifth Commandment would also apply, for example, when a doctor must make a decision in an intensive care unit concerning the reasonableness of a measure to be taken for the welfare of a patient under consideration of practical humanity; both the direct responsibility for life and limb of the respective

person and the formally higher responsibility of medical ethics as well as general ethics come into play. Even in the lower parts of the rather concrete type diagrams in the lower level of constructs are to be understood as analytical distinctions, *e.g.*, collective or group responsibility usually does not preclude individual or personal responsibility which might also be present, although collective responsibility cannot be analytically reduced to or derived from individual or personal responsibility alone. The same applies to institutional responsibility. Furthermore, there are conceptual connections or "analytical relations" between some juxtaposed or subordinated subtypes.

The most obvious and general level at which one can describe responsibility is referring to one's being responsible for the results and consequences of one's own actions. We may call this the level of the analysis of prototyp(ic)al (causally oriented) action responsibility. An agent is to be held responsible for the outcomes of his or her actions in an instance for which he or she is accountable. An engineer designing a bridge or a dam is responsible to the supervisor, employer, client and/or general public for his or her design in terms of technical correctness, safety, cost, feasibility, *etc*. Frequently, accountability questions are raised in negative cases, when one or more of these criteria are not fulfilled. The breaking of a dam may be the result of wrong statics calculations, careless, negligent, or even criminal work, poor craftsmanship or using cheap material. Therefore, it is important to emphasise negative action responsibility. Professionals, for example, have a responsibility to the public to ensure high standards in their work and to avoid risks of disasters as far as possible at a reasonable cost. The responsibility to avoid mistakes, failures, poor quality of work, *etc*. is part and parcel of action responsibility. Further subtypes of action responsibility are shown in the following diagram (Figure 1):
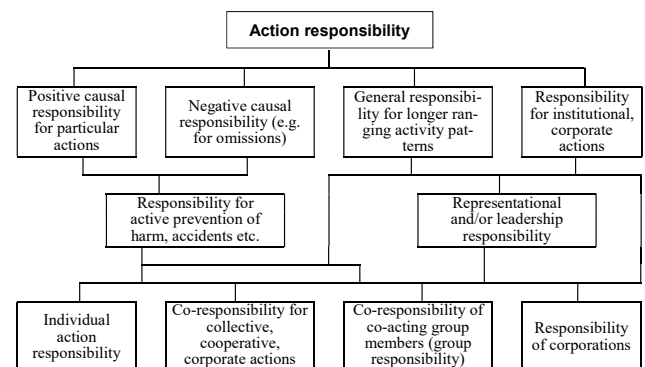

Figure 1. Action responsibility

Very often, organisations, institutions, or corporations

all of whom would act collectively or to speak, corporatively. Therefore, there is a responsibility of institutional or corporate actions: it may coincide, though not be identical, with the individual responsibility of a person in a representative position (the representing person or role holder). Leadership responsibility with respect to external addressees and agents or agencies is but one example of this kind of responsibility. The most typical case of responsibility dealt with so far is individual (or personal) action responsibility, but if a group is acting collectively or if individuals participate in joint group action, there is a co-responsibility of participating members. Responsibility for group actions is sometimes called collective or group responsibility. The second level is comprised of the types of role and task responsibility, universal moral responsibility, and legal responsibility (Figure 2):
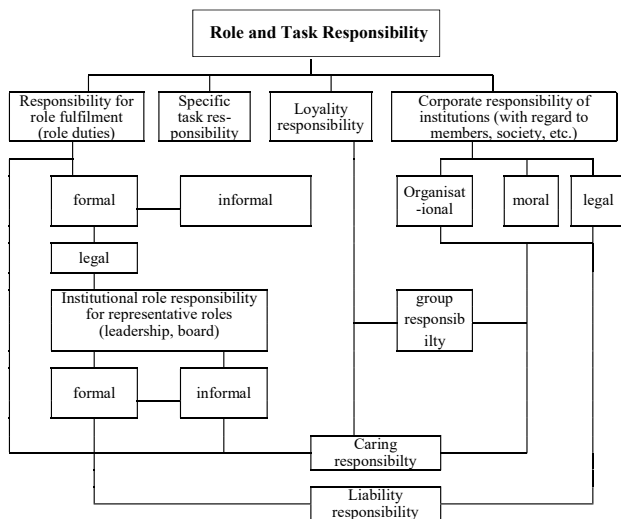

Figure 2. Role and task responsibility

In accepting and fulfilling a role or a task (*e.g.* in a job) a role-taker usually bears a responsibility for normally acceptable or optimal role fulfilment. These role duties might be assigned in a formal way or be more or less informal. They can even be legally ascribed or at least be legally relevant. If the role-holder is a representative in corporate or institutional role patterns, his or her responsibility may be connected with the associated institutional role responsibilities (as in leadership). In addition, there is the corporate responsibility of firms, corporations, or institutions, if these have a special task to perform or obligation to fulfil with respect to clients, the public, or members of the organisation or corporation.

This type of responsibility can have a legal, moral or neutral organisational character. Here again, this may coincide with group responsibility (of a group in charge

of the institution or corporation). The next level of responsibility consists of different types of universal moral responsibility (Figure 3):
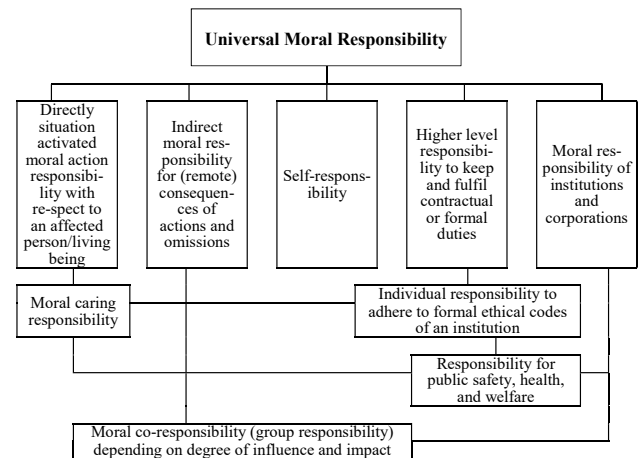

Figure 3. Universal moral responsibility

First, there is the direct moral responsibility for the agent's acts and results of his or her activities in a given situation. This responsibility is directed toward persons or living beings whose well-being is affected by the agent's activity. More remote consequences of the agent's activity - possibly combined with the impacts of other people's actions or omissions - might amount to an indirect moral (co-)responsibility. Neglecting a safety check or wrongly giving an approval stamp for an aircraft can result in loss of lives - as actually occurred in the 1974 crash of a Turkish DC 10 in Paris (Lenk and Lenk, 1993). In 1972, three inspectors of the DC Long Beach plant had wrongly approved modifications of the fatally dangerous cargo door locking system although no work was actually done on the cargo doors. A similar case was the erroneous approval of air brake testing of the prototype in the Goodrich case.

More complex problems of indirect co-responsibilities emerge in connection with the problems of synergetic and cumulative threshold effects within interacting systems mentioned below, e. g., in pollution or depletion problems. As shown recently, beside legal responsibilities, corporations also seem to bear moral responsibilities (particularly if they fail to improve dangerous conditions, for example, the management of Convair in the DC 10 case or Air New Zealand in the crash on the Antarctic Mount Erebus). This certainly is a type of moral responsibility different from an individual's moral accountability. Corporate moral responsibility frequently coincides, but need not be identical, with the moral co-responsibility of members of a decision-making board. Therefore, corporate moral responsibil-

ity is not to be confounded analytically with moral co-responsibility of group members partaking in a collective action or decision-making process. Caring responsibility is certainly not only role-bound but also morally relevant. It is the responsibility to ensure the well-being of a dependent person or living being through or specific acts within in the context of a general and permanent obligation. In engineering, ethical codes - as in many other professional codes - the responsibility for the safety, health, and welfare of the public is stressed - even considered to be of 'paramount' importance. This responsibility, a combination of indirect moral responsibilities mentioned above and the obligation to abide by the code of ethics of the respective professional associations, is - on a second sublevel - certainly a moral obligation, too. Therefore, besides immediate action or impact-oriented responsibilities there also is a higher moral responsibility to fulfil contractual or role duties and promises and to live up to the ethical standards of professional organisations, *etc*. This obligation certainly is a universal moral one if the fulfilment of a task, contract, or role does not contradict another overriding moral norm.

In general, thus, there exists a rather differentiated interplay of the mentioned levels and types of responsibilities - the moral obligations being but one spectrum. Moral responsibility may be activated by a special type of action and in connection with a special role, but it is universal. It is not peculiar to a specific person or role but would apply to anybody who is in the same situation and/or role. As mentioned, mMoral responsibility is however individualised in the sense that it cannot be delegated, substituted, displaced, or replaced or shoved off by the respective person (or corporation/organisation). It cannot be diminished or divided up, it cannot dissolve or vanish by being borne by a number of people. It is irreplaceable and cannot be decreased in that sense.

In addition to the mentioned types of responsibility on the second level, one should also mention very different ones. These will not be elaborated here.

4 Problems of distributing responsibility

A clergyman or had rendered great services and a village of wine-growers. Therefore, the wine-growers decided to give him a barrel of wine as a present on a special occasion. So, it was agreed that each wine-grower should contribute two litres of the best wine in his cellar. Accordingly, each wine-growers poured the agreed amount of two litres into a designated barrel. On the day of the celebration following a festive address , the barrel was tapped and the first glass of wine was served, *i.e.*, to the clergyman. Alas, the glass, contained only pure wa-

ter, and the festive atmosphere turned into one of general embarrassment.

It is not known whether the event mentioned in this example really did take place, but it is a very nice illustration of the problems and possible conflicts of the distribution of responsibility. The example immediately shows how complicated the problems of responsibility and its distribution are: Who is responsible in this case? Everybody? Each individual? Each to a certain degree? Problems of distributing responsibility are found today in particular in highly developed industrial societies shaped by technology and advanced economies. Individual actions seem to disappear behind collective, institutional, and group actions. Group and collective action is, on the one hand, the acting of and the acting within organisations (corporate acting) and, on the other hand, the action of many actors under strategic and competitive conditions; sometimes the actors are rather independent of one another. With respect to collective actions there are at least two classes of distribution problems, or rather distribution/distributability problems (which may however overlap): 1. the problem of attributing responsibility in the case of non-corporate collective actions of many actors (be they organisations or corporations or individuals collectively) and 2. the problem of attributing and distributing responsibility within the organisation with respect to internal corporate division of work and role assignments. Today and in the near future these problems will become extremely relevant and pressing, because of the impact of new systems-technological phenomena and processes. As a rule, in traditional philosophy only cases were debated and examined in which an individual alone must take on the entire responsibility. Yet are there not also and ever more so many cases of co-operative responsibility, collective/co-operative decisions, and collective action in general, that are becoming much more important today, in which someone carries full responsibility by sharing responsibility according to the degree of the individual co-operation or accountability? In other words, does the extent of the distribution of responsibility generally reduce the degree of moral responsibility? (Meanwhile, a category of "sytems responsibility" was introduced (Bühl, 1986).

As a provisional thesis, we come to the following conclusion in regard to this distribution problem: Central in the model of the distribution of responsibility is the question of the distribution of normative and descriptive responsibility - according to a theory of action - and the (equivalent) reduction of the collective responsibility to individual actors, which is dependent on the form of collective actions and causes. The respective form of collective action is also decisive and should constitute a cri-

terion for distinguishing the various ways of attributing responsibility. A further point of emphasis is the distribution in terms of the respective responsibility types. If one draws a distinction between a duty to compensate as a kind of legal responsibility and moral responsibility, then a division of compensatory sanctions and other attributions as a solution like the mentioned ones in the preceding passagesis rather likely. Basic problems of responsibility distribution arise not only out of the non-corporate collective action of many actors and/or agencies, but also out of specific strategic conditions, particularly in the division of labour processes, that is, in labour segregation in the market external to corporations. The effects, results, and side-effects of such actions have - and always have had - an increasingly explosive nature. The difficulty can perhaps be clarified with the help of examples and models of social traps, which have to date been discussed mostly within the realm of individual rationality vs. collective irrationality (Russell, 2010). Negative external synergetic and/or cumulative effects may occur if a large number of actors act along the lines of individual need calculations (each being directly responsible for their own interests and acts). Particular components, which as such are relatively, that is subliminally, even harmless, can lead as a whole to damage or even to the loss of highly valued 'commons goods' or public property. It is characteristic of such damage that property rights, *i.e.*, individual rights to use (*e.g.* public) resources, are poorly or not at all defined or that they are not complied with. Externalities or external effects are characterised by an incongruity between that outcome for which one is actually responsible and that for which one is made responsible or liable. To avoid external social costs, these could, for instance, be internalized , *i.e.*, incorporated into the 'production functions' and pay regiment of a business.

With regard to the distribution problem of responsibility, one can distinguish two sub-problems: first, the question of the distribution of responsibility for or in view of cumulative and synergetic damage, and second, the question of the responsibility for unforeseen or even unforeseeable consequences. With regard to moral judgement, it may be stated that in such a case a personal action responsibility sometimes need not or cannot be generally attributed to an individual agent alone nor, in many circumstances, can the cause be attributed to a single domain. In the sense of task and role responsibility, and also in the moral and legal sense, the concerned individuals assume a sort of co-responsibility corresponding to their active, potential, or formal (to be determined in each individual case). Considering the consequences of collective action, an extension of the operationally man-

ageable models of the distribution of (co)responsibility is imperative. Mere appeals to avoid social traps are not very useful. It is also necessary to introduce operationally available and efficient measures such as legal sanctions (product liability, collective responsibility, *etc.*), financial incentives in order to change methods of, the definition of property rights for public goods or commons, and so forth. The following statement can serve as a general guideline: as many laws, regulations, and prohibitions as necessary; as many incentives and individual initiatives and as much individual responsibility as possible.

A second level of problems involving corporate responsibility distribution includes the external responsibility of corporations - the responsibility of corporations and some or all of its members - and the internal responsibility of organisations or corporations with different structures (hierarchies, *etc.*) in terms of individual responsibility and co-responsibility, the delegation of responsibility, and so forth. The attribution of individual moral responsibility must be separately justified in each case. In general, one should make a distinction between the external (moral, legal, role-) responsibility of organisations or corporations and the (corresponding) internal distribution of responsibility. Thus, the respective moral responsibility be diverse, distributed or at least ae in regard to (ideal) corporate action of agencies, institutions, or organisations or corporations as such, also to organisational members, or the respective organisation or corporation and its members, among others; all these can be morally responsible in a sense.

Assessing and managing sustainability by strategic sustainability performance, *e.g.* responsible and "sustainable branding" as well as by collaborative "culture-sensitive, context-driven and performance.-oriented business practices" as well as inter- and cross-cultural "corporate sustainability management" as conducive normative "drivers for transformation" in/via internal CSR (Corporate Social Responsibility) are discussed in the latest literature (Gerner, 2019; Farooq *et al.*,2019).

In addition to role or task-specific, legal, and action responsibility, corporations and institutions have a moral responsibility or accountability analogous to personal moral responsibility. This moral responsibility can also be understood as a higher-level, secondary responsibility; it would exist in addition to and independent of the personal responsibilities of the individual member of the organisation or corporation. Individual responsibility and corporate responsibility do not have the same meaning; they cannot simply be reduced to one and the same thing, although they must always be seen in connection

with each other. One type of responsibility does not replace the other. Making organisations or corporations responsible can constitute a first step of attributing responsibility for corporate action; the internal distribution problem within the organisation can be dealt with in a second step. The latter is difficult to deal with according to kinds or types of responsibility.

The following 10 working hypotheses are formulated to address this point as a summary.

(1) It is only possible to lay down general distribution rules.

(2) These rules are (ideally) to be applied to each individual case with extra provisos regarding special conditions.

(3) Responsibility distribution is determined by the structures of the organization, decision-making structures (internal decision units) and principles (decision-making on an individual and collective basis, principles of unanimity or majority). (This applies to the social structure in general, too.)

(4) The external responsibility in view of third parties, society and with regard to their relevant agents or agencies is dependent on the corporate structure, on the influence and control of individuals, on the contributions of (individual) agents and in general on the internal responsibility distribution (in the sense of competency and task distribution and role-structure).

(5) The internal responsibility for the fulfillment of tasks and roles with respect to colleagues is also primarily determined by the structure of the organisation. It is primarily a sort of accountability to superiors and a special case of role and task responsibility. (The observation of these duties is generally legally required, usually in form of a contract; it can also be morally required.)

(6) Tasks and competencies and the responsibility connected with them can be delegated. In this case the responsibility of the delegating person does not (necessarily) end with the act of delegation. In general, however, it is not possible to delegate moral responsibility.

(7) The (normative) responsibility for the consequences of actions is primarily a result of the individual contributions of action and production. The individual director or the Chief Executive Officer, as well as the performer or executive, would act indeed. (The execution of an order or a command does not, however, generally exculpate the performer.) The distribution of such an external or internal responsibility, which for its part is a prerequisite for other responsibility distributions which would result from the respective contribution to the action or production and from the involvement of the actor or contributor.

(8) Role and task responsibility results from formal as well as informal roles and tasks; the responsibility and its (external or internal) distribution depends on corporate structure and system "internetting" hierarchy and position.

(9) Moral responsibility (in a narrower sense) as simply directly and personally attributable responsibility in view of external or internal addressees is made or rendered topical by its own action and possibilities of actions. Moral responsibility is a function of power, influence and knowledge. The degree of co-responsibility namely depends upon the strategic position of an individual within a corporation, organisation or system. It increases the higher the formal authority of the bearer and his or her position within the hierarchy or corporate decision structure. The moral responsibility of A can be greater than, less than or the same as the responsibility of B. However, it is more appropriate to express responsibility distribution with the help of comparative statements than in percentages. Indeed, is on. As we already stated, moral responsibility is not really divisible; however, it is open to sharing. It can be borne solely (exclusively) or jointly (each person fully or partly). In the distribution model of moral responsibility both the individuality of the attribution and the intuitively justified non-disappearance of the co-responsibility must be taken into account even in the case of an increasing number of participants (which might factually tend to minimize the personal share of the responsibility).

(10) The legal distribution of responsibility is dealt with separately according to legal or natural persons, to the respective civil or criminal law, to legal aspects of administration or aspects of constitutional or other legal approaches and perspectives. In this way the legal person may, as a rule, be held liable to third parties for those who act on its behalf according to civil law. Internally speaking, the organisation or corporation may have claims against natural persons (*e.g.* members).

To avoid or counteract the effects of large committee irresponsibility there are several possibilities, *e.g.* institutional measures of audiatur et altera pars and the consultation of external experts, review boards, consultants, *etc.*, or the official introduction of a role of advocatus diaboli for dissenting opinions within the firm, the development of a culture of fundamental debate, the establishment of an official monitoring and planning suborganisation as well as an office of internal control.

A further problem of the distribution of responsibility emerges from the use of expert and information systems. Can these, as bearers, be responsible? Can we make complex decision-making information systems and expert systems responsible? Is that not an attempt to introduce irresponsibility- even at times with no one suscepti-

ble to being appointed guilty,the violation of a taboo, or even a category error by the analyst. It is indeed important to make computer systems more reliable, but it does not seem sensible to attribute (moral) trustworthiness or responsibility to them. Indeed, that would be absurd! Computers are not moral beings, just as information systems are not social beings. In the far-reaching social implications of technical systems, human beings should carry the full responsibility for their use or misuse. Human beings cannot morally deprive themselves of their power of decision and their accountability or hand over their moral responsibility to computers and information systems. (This thesis however, must still be elaborated). The same or similar problems usually and more and more occur regarding the category and concept of "system responsibility".

5   Professional codes of ethics and responsibility conflicts

Professional regulations and rules of conduct, such as the codes of ethics should not and cannot merely reflect the current professional ethos. It is also necessary that ethical considerations, general social values and objectives are recognised obligatory or effective guidelines; the orientation to the common and public good(s) should be strengthened, various institutional control measures and possible ways to achieve and promote organisational discipline should be included; particular attention should be given to the question of the structural interrelations with the market and in the job and workplace (in businesses and corporations), to institutional corporate responsibility and to moral ideals (as virtues not enforced by law). If the codes can find stronger and increased entry into the law and gain a kind of legal status; this would increase the chances that the codes would be applied in practice: Mere appeals and the sensitisation of individuals - especially of dependent employees - appear to be insufficient, as necessary as they are indeed. Institutional support is also required. Again, it remains important to include ethical and moral basics in education and technological training, *i.e.*, teaching, training (*e.g.* off-line in trainee camps *etc*). and to provide for accompanying measures, such as discussion and publication of case studies, the establishment of ethics committees, the design and implementation of professional vows, *e.g.* a kind of Hippocratic oath, *etc*., and the provision of legal support for employees with particularly high ethical standards who may come under pressure, so that the ethics codes prove to be more than mere pretences or ineffective alibis that have nothing to do with real life. In particular, ethical codes must set priorities and decision criteria that will help in conflict resolution. With regard to responsibility conflicts in practice, there are no ready-made solutions or suggestions available in such cases. Instead, it is necessary to develop guiding principles, general recommendations and applicable rules/norm, *i.e.*, or practical guidelines on an intermediate level elaborated and practically enforced.. These rules should differentiate, for example, between moral ideals (virtues) and moral (obligatory) rules (Hennessey and Gert, 1985). A combination of individual and institutional measures seems necessary: The promotion of individual ethical competence is a necessary, yet by no means a sufficient step for the efficient solution of responsibility problems and conflicts. Moreover, an implementation of ethical considerations in law and politics would render this step more effective.

Most engineers and scientists work as dependent employees in industry. This means that the respective company codes, principles of management, and guidelines for specific jobs are relevant for them (Lenk and Maring, 1998). These norms are usually discussed under the heading of business ethics. In practical job situations, technology-related and science-oriented questions and problems are often intertwined, so that a clear-cut separation of these two fields is neither beneficial nor sensible. Responsibility for technology and science (research) is particularly concretised in corporate acting in and for businesses.

6   Priority rules

In view of the fact that there are different types of responsibility, it is necessary to have priority rules. We would like to propose the following 20 rules of priority which follow a sequential order and are valid under prima facie conditions (that is, they may at times be overruled by higher and more binding moral obligations).

(1) Absolute priority or preference must be given to the individual's basic human rights, legal as well as moral. These moral rights are non-alienable predistributive or primordial rights overriding utility considerations. Therefore, the first imperative is to weight the moral rights of the respective individual.

(2) When making compromises, the interests of all involved parties should be taken into consideration to the same extent.

(3) After considering the moral rights of each party, one should vote for the solution that causes the least damage or maximises the utility for all involved parties.

(4) Only after the application of rules 1 to 3 can utility considerations be weighted against potential harm. Thus, in general: non-alienable (predistributive) moral rights

are prior to considerations of avoiding harm and damage and these -in turn- have precedence over utility considerations.

(5) In practically unsolvable conflicts, one should look for fair compromises (that is, compromises which involve more or less equally distributed or proportionally justified distributions of disadvantages and benefits respectively.)

(6) General (higher level) moral responsibility has a higher priority than restricted non-moral prima facie obligations.

(7) Universal moral responsibility generally takes preference over role and task responsibility.

(8) Direct or primary moral responsibility, is usually, but not always, to be considered as having priority over indirect responsibility for remote consequences. (This is sometimes true because of urgency in the case of direct, *e.g.*, face-to-face interaction, in some cases this be modified according to the overall importance, magnitude of consequences and the duration of effect.)

(9) Primary and personal moral responsibility is more important than second level corporate responsibility.

(10) Public welfare and the common good have to take precedence over all other specific and particular interests.

(11) Safety comes before technical-functional and economic considerations (as stated, for example, by the /IEC Guide 51:1999) or, traditionally, by the German DIN standard norm no. 31,000.

(12) Global or continental as well as regional and local "environmental compatibility" as defined according to official ecological standards must be distinguished and be taken into account.

(13) System relevant or system critical and environmental acceptability as, *e.g.*, regional or continental or even global compatibility remain paramount. Sustainable development of ecosystems is particularly pressing on each of these levels.

(14) Urgency of eco-compatibility and sustainability (especially in a system decisive context) should surpass functional efficiency and economic utility.

(15) Human basic needs as well as necessary social and human(e) compatibility would in the case of conflict have to go in front of environmental and other species' requirements, which are, however, still to be considered as a means of reaching for meaningful compromises.

(16) Concrete humanity and humaneness should in relevant cases usually go in front of abstract requirements and formal universal principles.

(17) Anticipated acceptability of and compatibility with the requirements for the survival and quality of life of future human generations should take very high priority.

(18) Social and political planning at large should take into account endeavors to achieve a relative maximum of liberty and freedom of decision-making (openness and flexibility of large-scope planning) and largely equal opportunities for future generations.

(19) In the same vein, a relative (potential) multiplicity of options for the generations to come should have a high priority ("multi-options society"), *e.g.*, no important options should be blocked for them (avoiding total resource depletion and environmental pollution by favouring sustainable development).

(20) Concrete humanity and humaneness should go in front of abstract requirements and formal universal principles.

Such priority rules are conducive to tracing and solving conflicts between different types and concrete instances of responsibilities occurring in particular practice situations. Whereas differentiating between the levels and types of responsibilities is necessary for the discovery and identification of conflicts, the rules of priority could be helpful for solving or at least for sorting out and/or and assessing the respective conflict situations and for tracing their specific sources and effects or long-range impacts. Yet, much work remains to be done in this area.

7 Conclusion

The notion of individual responsibility is, in today's era, and will be in the future of institutional and corporate decisions and enterprises and ever-growing sytem-interactions and complex vicissitudes, of much import and of particular importance for technology. However, problems of collective and corporate responsibility as well as "systems responsibility" are expected to get more and more topical importance, and the relevance of this issue will dramatically increase in the future. Engineering ethics codes should be developed, improved, and operationally implemented. The rules of priority outlined above for handling responsibility conflicts must be elaborated much further. All this, then, is necessary to fulfil the ideal prerequisites for mutual and individual responsibility for technology in society.

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REVIEW

Human's spiritual evolution through a girl's eyes: The unique vision of Kalina Stefanova

Yue Wang

Abstract: Kalina Stefanova's *Ann's Dwarves* and *The Last Way Out* were originally written in Bulgarian and published as two loose sequel-fictions in 2004 and 2010. During the last decade, thirteen distinct translations were done. This review attempts to give readers a brief introduction of the author and her two fictions as well as their reception and criticism. As her review writer, I firmly hold the opinion that Stefanova has been providing samples of cosmopolitan writing about human's communication with the cosmos since ancient times, and human's spiritual evolution - all this through the girl protagonist Ann's eyes. This reveals the author's unique vision and her inner life of tranquility and freedom.

Keywords: inner life, Kalina Stefanova, *Ann's Dwarves*, *The Last Way Out*

1 Introduction

There mysteriously is a dearth of scholarship on children's literature by Kalina Stefanova. Perhaps such absence stems from the complicated position of her two fiction books, which can be regarded as semi-autobiographical and are delightful ventures into storytelling with a daring crossing of the genres. In the first place, like all good fairy tales (*a modern fairy tale* was the initial subtitle of *Ann's Dwarves*), these books are tales about our inner life. Indeed, Stefanova's view on both life and the cosmos beneath the surface narrative could be of help to almost every reader. No wonder she is compared to Antoine de Saint Exupery: she has a similar ability to express the inexpressible, her narrative being full of subtext.

Ann's Dwarves has been translated and published in nine countries, and has two editions in China. It has been included in the indicative reading lists for literature in some Brazilian colleges. *The Last Way Out* has been translated and published in three countries so far.

The two books are loosely connected mainly via the chief protagonist Ann and to an extent via the other characters. *Ann's Dwarves* is deceptively simple at first reading. It is based on the premise that one day Ann sees for

the first time her dwarves who, it turns out, have always been with her. This discovery leads her into rediscovering the whole world around her – a secret, as she is to learn, is already well known to her mom and many other people also able to see their own dwarves.

Albeit a loose sequel to *Ann's Dwarves*, *The Last Way Out* can actually be read as a stand-alone too. On a sunny late afternoon in Frankfurt, during the Book Fair, the hardly unusual appearance of a chocolate-brown dog triggers a mysterious chain of events. They unfold against a background of other cities around the world, now and in days of yore, in the air and in a mean city, in reality and in dreams, and end with the successful crossing of a metaphorical rope bridge, thin and unsafe, above a deep chasm. Meanwhile a succession of secrets is being revealed: about the existence of the Spiritual Bank, generators of thoughts and thought-mufflers (junk-thoughts being one of them), about the mission of animals today, about the role of Anti-Nature and about the last magical power of people, and a lot more. On the surface, this unusual book could be taken as a fantasy based on reality. On a deeper level, though, *The Last Way Out* is a very timely and topical read, since it provides the readers with kind of a 'lens' through which the current state of the world turns out to be in direct correlation with the state of our souls.

Ann's Dwarves editions: (1) Bulgaria, Bulgarian Bestseller, in Bulgarian (2004); in English for the territory of Bulgaria (2004, 2006); (2) Macedonia, Makavej, in Macedonian, 2007; (3) South Korea, Kayanet, in Korean, 2007; (4) Portugal, Vogais, in Portuguese, 2010; (5) Spanish World Rights, Alfaomega, 2010; (6) Brazil, Global

Editora, June 2011; (7) Japan, Poplar Publishing Co., October 2011; (8) Vietnam, VNN Publishing Agent JSC, 2012; (9) China, The Writers Publishing House, Beijing, Simplified Chinese, September 2012; (10) China, Beijing Bocaiyaji Culture Media Co. second edition, 2018.

The Last Way Out editions: (1) Bulgaria, UNISCORP, 2010; (2) Brazil, Lumen, 2014; (3) China, Beijing Bocaiyaji Culture Media Co, 2019.

2   *Ann's Dwarves*, a contemporary Bulgarian fairy tale for all ages

Ann's Dwarves is a usually defined as a fiction for all ages. Not an ordinary book, it's part game, part philosophy but throughout a story full of goodness. "The most valuable thing in *Ann's Dwarves*," wrote Mario Nikolov in the Bulgarian Dnevnik, "is that the book delves deep into the spiritual essence of human nature by the means of the fairy tale—that infinite universe dwelled in by the *Little Prince* and wandered around by Alice. Like them, the main characters here also belong to the world of magic: seven charming dwarves who Ann names after the seven musical notes. 'We, dwarves, are a part of you. We are your inner mirrors—truer than ordinary ones, because by looking at us you are able to see what's inside you, not only what's on the surface,' says one of the miniature characters. Kalina Stefanova's book manages to do exactly that: it gets under the surface of the visible reality in order to reach out to the 'things within us', because it's there where one can find the three most important 'things' everyone is in need of—love, faith and hope (**?**)."

3   The reception of *Ann's Dwarves*

In 2007 South Korea *Ann's Dwarves* was the special choice of the Editor-in-chief of Chosun Daily (the biggest Korean daily newspaper), in his section: 'Hot Topic in Culture' (**?**). The book received an overwhelming rave response in the major sites in Korea, garnering four and five star reader reviews. In the two top sites it elicited more than forty reviews during the first month and a half after the publication of the book. Here are some excerpts: "this story makes me realize very important values. We have to give space to the dwarves in our mind and life. In that way we could find our own purity." "The kind of thinking the book sets us on makes the world warm (**?**)."

4   The critics on *The Last Way Out*

When *The Last Way Out* was published in Bulgarian in 2010, the literary critic Georgi Tsankov wrote, "A benevolent sorceress has staked her unequivocal claim to a place in our contemporary literature. Kalina Stefanova is our

answer to Antoine de Saint – Exupery and Paulo Coelho. She enchanted us with *Ann's Dwarves* and, now her new book, *The Last Way Out*, is a veritable explosion of positive energy. Three generations of women – a daughter, a mother and a grandmother – make their way into the secrets of our being, stand courageously against the forces of destruction and strengthen their ties with Good, Love and Nature. Written elegantly and wisely, mystically and poetically, this masterpiece answers questions which we have for a long while been asking ourselves. In these unspiritual times, any such step towards restoration of the initial harmony is a great artistic feat." Tsvetan Tsvetanov from the National Radio reported that, "While reading *The Last Way Out*, we not only remember that life's fabric is woven out of miracles but we again start living them out. For it is only a step or two now that divides us from an end of the mankind that is no longer simply a possibility but something quite real - and caused by us at that. . . The conversation between Muhcho and Ann, the backbone of the narrative, is like a therapy session leading us, with its unconditional goodness, towards that light at the end of the tunnel that each of us secretly hopes to see." And Elena Peneva from Dnes.bg wrote that "The novel is a fantastic and colorful journey towards the inner, spiritual truths. . . The journey's itinerary follows 'the story of a conversation' in the course of which, via dreams, magic and revelations, three generations of women hand to each other a magical key for the interpretation of reality. . . . The topics are familiar: the power of consciousness, the direction consumerism leads us to, the harm of anger and fear, and the healing effects of Goodness and Love. The discovery, however, is in the metaphors through which Kalina Stefanova presents all that, and this is what makes *The Last Way Out* a must read for all fans of the genre."

5   *The Last Way Out* and Chinese culture

Interestingly, in Chapter 8 of *The Last Way Out*, the narrator uses the third person to describe how the protagonist Ann feels, whereas demonstrating her passion for the Chinese language, the hieroglyphs in particular. Her expression of ecstasy immediately reminded me of the author's infatuation with ancient Chinese philosophy, when I first had a chat with her at Wuhan Tianhe Airport in 2016, a few days before I happened to be the translator of her lectures at the Art School of Wuhan University.

The protagonist Ann believes that drawing the Chinese hieroglyphs is a great joy and, more importantly, that each of them is like a fairy tale (page 97, of the English edition). What a flash of intuition for Stefanova to understand Chinese hieroglyphs in this subtle way! How accurate! Moreover, what follows continues surprising

us: she illuminates the archaic Chinese characters and the history behind the current written form of several words, illustrating the point with the connotation and sound of the character Yi (intend, intention) as well as the shape of the character Zhi (know, knowledge) and Dao (road) and their combination of today's word Zhidao, with an identical meaning of know-how. She has not only mastered the meaning and the form of those characters, but has also grasped the reason behind the appearance, the essence behind the phenomena, the Chinese logic and the unique pattern of thinking – "the Chinese believed that it was with our hearts that we thought" and "when knowledge is genuine, what we say will be right on the target".

6   The unique vision of Kalina Stefanova

This writer is not writing simply fables. Stefanova is writing about human's communication with the cosmos since ancient times, about human's spiritual evolution in history! Such a cosmopolitan take on life she has! What a great girl Ann is, indeed, and what a benevolent writer holds her hand along the road towards her inner self, towards the hidden truths of our life!

It seems that Stefanova rehashes moments from her own childhood and also her later experiences, such as the imaginative memories of the dwarves as her compan-ions and the flight journey with her mom from New York to Puerto Rico and back, and also the Chinese learning experience. Her outspoken and subtle writing style is disarmingly sincere. The tranquil scenery and details all along her (characters') journey which she shares with readers often remind me of her depiction for her hometown with a nostalgic look in her eyes, echoing around in the depths of my soul. Indeed, Stefanova's unique vision towards human's past, present and future is shown subtly intertwined in the context of her own life. Maybe this is where the magic power of Ann comes from.

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(Edited by Snowy Wang)

RESEARCH ARTICLE

#FollowMe: An investigation into the relationship between social media behaviors and online harassment among adolescents

Tabrina M. Bratton[1*]   Robert D. Lytle[1]   Heather K. Hudson[2]

Abstract: Social media is a relatively new global phenomenon. Virtual places provide criminogenic motivators like financial gain, access to suitable targets, and massive amounts of information all under one virtual roof. Additionally, social media sites host large amounts of people in one space, generating significant opportunities for victimization. Despite the Internet's theoretical relevance to understanding victimization, scholarly research into the effects of social media activity in victimization is scarce. Using data from the Pew Research Center, I investigated the relationship between Facebook use and online harassment among adolescents between 13 and 17 years of age. The results showed that an adolescent's behavior on Facebook contributed to the likelihood of experiencing online harassment. Additionally, parental monitoring of their adolescent's Facebook activity did not have a significant moderating effect on adolescents' risk of online harassment. This research contributed to the literature by identifying specific behaviors in adolescents that increase their risk of online harassment.

Keywords: social media, online harassment, cybervictimization, dyadic data, Facebook

1 Introduction

Cyberspace connects an estimated 8.4 billion "things" globally, including nearly one-half of the world's population (Bossler and Holt, 2009; Smith and Anderson, 2018). One of the most common activities for Internet users is logging onto a social networking site (SNS). These virtual communities allow people from around the world to network and connect with others regardless of time or space (Danah, 2011; Danah and Ellison, 2008; Haythornthwaite, 2005).

Interactions through SNSs have allowed young adults to build, maintain, and sustain relationships by organizing social gatherings and sharing experiences with friends and peers (Horstmanshof and Power, 2005). Despite the benefits of SNS participation, SNSs also create new methods for nefarious behaviors and increase the risk of online harassment (Dehue et al., 2008; Haythornthwaite, 2005; Oksanen and Keipi, 2013; Reyns et al., 2016; Ryan and Xenos, 2011).

Though online harassment has been a persistent problem for adults (Duggan, 2017; Leukfeldt, 2014; Ngo and Paternoster, 2011; Reyns et al., 2011; Rife et al., 2013; Runions et al., 2017), adolescents remain the most common targets of cybervictimization (Moore et al., 2010; Marcum et al., 2014; O'Keeffe and Clarke-Pearson, 2011; Oksanen and Keipi, 2013; Sengupta and Chaudhuri, 2010; Smith et al., 2008; Tokunaga, 2010; Ybarra and Mitchell, 2008. Negative online experiences can adversely affect one's well-being and lead to deviance or victimization offline (Shaw et al., 2015; Valkenburg et al., 2006). For example, 25% of teenagers have had either a verbal or physical face-to-face confrontation due to an event that began online (Lenhart et al., 2011). Additionally, several cases of youth suicide have been linked to SNS participation (Hinduja and Patchin, 2011; Sullivan et al., 2015).

2 The current study

Research into online victimization has focused on various online platforms, including chat rooms, gaming websites, and SNSs. Despite the rising attention on online victimization, the number of studies that have examined the link between SNS-specific behaviors and online victimization remains relatively small (Leukfeldt, 2014; Moore et al., 2010; Oksanen and Keipi, 2013; Sengupta and Chaudhuri, 2010). The prevalence of online harassment,

Correspondence to: Tabrina M. Bratton, Department of Criminal Justice, University of Arkansas at Little Rock, Arkansas 72204, USA;   Email: tmbratton@ualr.edu
[1] Department of Criminal Justice, University of Arkansas at Little Rock, Arkansas 72204, USA
[2] Department of Health Sciences, University of Central Arkansas, Arkansas 72035, USA

along with the popularity of SNSs among adolescents, calls for our continuing attention.

We contribute to the growing literature on SNS activity and online victimization by examining the influence of adolescent SNS behaviors, along with parental monitoring thereof, on online harassment experienced through one of the world's most popular SNSs - Facebook (Desilver et al., 2014). This study also builds upon two core criminological components from opportunity theory - target suitability and guardianship (Cohen and Felson, 1979). Thus, we also assessed a possible moderating effect of parental guardianship on the relationship between adolescent SNS activity and online harassment. We used dyadic data collected through the Pew Research Center's 2014 Teen Relationship Survey (TRS) to answer two research questions:

RQ1: What is the relationship between adolescents' SNS behavior and online harassment?

RQ2: What is the moderating effect of parents/legal guardians on the risk of online harassment?

3 Literature review

3.1 Routine activities theory

Cohen and Felson's (1979) Routine Activities Theory (RAT) grew out of a desire to predict when and where criminal events might occur in a given setting (i.e., opportunity). The necessary "ingredients" of criminal opportunity are defined in RAT as offender motivation, target suitability, and capable guardianship. More specifically, RAT proposes that criminal opportunity is present when a motivated offender has access to a suitable (i.e., attractive) target in the absence of people or technology that can interfere with the crime (i.e., guardians; Cohen and Felson, 1979). Though social environments have changed drastically since Cohen and Felson (1979) first introduced their theory, RAT continues to be one of the most useful explanations for crime among criminal justice scholars (Bossler and Holt, 2009).

Technological advancements have transformed the traditional constructs of crime, place, and time, which necessitates additional theoretical consideration to encompass our modern information-centric society. Modern conceptualizations of place now need to include cyberspace, where opportunities for offending have exponentially increased. Within the RAT framework, routine activities were originally defined as, "any recurrent and prevalent activities which provide for basic population and individual need...thus routine activities would include formalized work, as well as the provision of leisure, social interaction" (Cohen and Felson, 1979, p. 593). This definition

of routine activities can also apply to cyberspace, such as engaging in social media or checking emails. To the degree that routine activities in online environments facilitates access to suitable targets in the absence of suitable guardians, RAT can prove useful as an explanation for criminal opportunity in cyberspace (Bossler Holt and May 2012; Choi, 2008; Holtfreter et al., 2008; Hutchings and Hayes, 2009; Kalia and Aleem, 2017; Mesch, 2009; Navarro and Jasinski, 2012; Reyns et al., 2011). For our study, RAT provides a useful theoretical framework in which to understand both the role of adolescent online behaviors and parental monitoring in one's risk of experiencing online harassment.

3.2 SNS participation

The growth and popularity of SNSs is partially attributed to the ability to form new social ties, maintain existing relationships, and share content with others (Danah, 2011; Livingstone, 2008). Although these behaviors are primary functions on SNSs, they have also been shown to predict cybervictimization (Bergman et al., 2011; Carpenter, 2012; Jelenchick et al., 2013; Mesch, 2009; Tandoc et al., 2015).

SNS profiles contain personal content, such as videos, pictures, information about one's identity and other various information (Dwyer et al., 2007; Mesch, 2009; Yardley and Wilson 2015), which adolescents freely share with others online (Dwyer et al., 2007; Madden et al., 2013). Although SNSs allow users to make their profiles private, privacy settings only prevent people outside of an individual's SNS network from accessing their information (Lenhart et al., 2011). Regardless, many SNS users do not take advantage of privacy settings (Lenhart et al., 2011).To build one's SNS network, users add and accept strangers to a list of contacts with access to the user's profile (O'Keeffe and Clarke-Pearson, 2011).

The average adolescent Facebook user has approximately 300 people in their network, 33%, of whom they have never met in person (Madden et al., 2013). This is concerning given the finding that adolescents who accept friend requests from strangers unknowingly doubled their odds of unwanted contact, sexual advances, and cyberstalking victimization. Bossler and colleagues (2012) examined cybervictimization among adolescents in Kentucky and found that the more participants posted pictures online, sent pictures of themselves to someone they met online, and interacted with people they met online the more at risk they were. Sending photos to other SNS members could be a way of flirting or sexting. SNSs are commonly used for sexting among young adults (Hudson et al., 2014; Lenhart, 2009; The National Campaign,

2009). While most sexting experiences were reported as positive and empowering, some sexting experiences have resulted in cybervictimization (Hudson et al., 2014). Relatedly,Sengupta and Chaudhuri (2010) found that adolescents who flirt on a SNS are more likely to experience online victimization.

For our study, this literature review led us to conclude that one's activity on SNSs informs one's risk of experiencing online harassment. More specifically, adolescents who casually share content, add strangers to their networks, and flirt online may, albeit unknowingly, increase their suitability as a target of online harassment. This conclusion informed our first two hypotheses:

H1. Online harassment will be more likely amongst those who have larger networks.

H2. Online harassment will be more likely amongst those who make friends through Facebook.

3.3   Parental guardianship

Parents have been well-documented to serve as effective guardians in the offline world (Finkelhor and Asdigian, 1996; Schreck and Fisher, 2004). It remains unclear, however, whether or not parental guardianship matters in online environments. A small but growing body of literature on parental monitoring in cyberspace has produced mixed findings on the effectiveness of online parental guardianship (Bossler et al., 2012; Mesch, 2009; Leukfeldt, 2014; Sengupta and Chaudhuri, 2010). For example, the odds of cyberbullying appears to be smaller when parents have well-established rules for visiting certain websites (Mesch, 2009). Conversely, adolescents whose parents installed protection software on the home computer were more at risk for experiencing online harassment (Bossler et al., 2012). Indeed, the most efficient online guardians may be programs that restrict Internet use to be effective online guardians (though these programs rarely apply to SNSs; Navarro and Jasinski, 2012). Further, parental guardianship on sexting has found that parents have a minimal deterrent effect on their teenagers sending and receiving sext messages (Martinez-Prather and Vandiver, 2014; Schreck and Fisher, 2004). Still other researchers have observed no significant relationship between parental monitoring and online victimization (Moore et al., 2010). Therefore, the role of parents as online guardians remains uncertain in existing research.

In the face of mixed results about parental guardianship in existing research, we relied upon our theoretical framework (Routine Activities Theory; Cohen and Felson, 1979) to develop our third hypothesis. Within a RAT framework, parents may limit the ability of adolescents to engage in online behaviors that may increase one's risk

of online victimization. For example, Martinez-Prather and Vandiver (2014) found participants sent and received fewer sext messages if their parents had restrictions, monitored their cell phone use, and spend more time with their children. Conversely, adolescents who participate online privately, or in the absence of parental guardians, were more likely to experience cyberbullying (Sengupta and Chaudhuri, 2010). Further, in offline environments, the presence of a guardian would be expected to discourage motivated offenders from engaging in crime until the guardian is incapacitated or removed (Cohen and Felson, 1979). If this were applied to online environments, then, we would expect that parental monitoring and supervision would attenuate the hypothesized relationships between an adolescent's SNS behavior and online harassment.

H3: Parental guardianship on SNSs will moderate the relationship between SNS behaviors and online harassment.

4   Methods

4.1   Data

The current study used data with adolescent-parent dyads from the Pew Research Center's 2014 Teen Relationship Survey (TRS) to investigate the relationship between adolescent's SNS behaviors and the moderating effects of parents on online harassment(The data used for this study was gathered by a data-driven, nonpartisan research agency that conducts public opinion polls, demographic research, and social trend analysis for use in social scientific research.). The TRS contains self-report questions about teenagers' use of technology to interact with peers, romantic partners, and friends. The TRS also includes questions for the teenager's parents regarding their own SNS use, their monitoring behaviors, and the way they talk to their teens about appropriate online behavior.

4.2   Sample

The final sample included adolescents (N = 351) and one of their parents or legal guardians (N = 351; see Table 1). The adolescent sample consisted mostly of females (n = 197). Of these adolescents, 97 were cell phone owners, 254 owned a smartphone, and 295 were Facebook users. The parent sample was comprised of 159 fathers and 192 mothers, of which 292 were Facebook users. Parental educational attainment ranged from high school or less (n = 122) to some college (n = 103) and a college or graduate degree (n = 126). We excluded 580 respondents from the initial sample of 1,638 due to lack of participation in the survey, and an additional 356 respondents who reported

Table 1. Sample descriptive profile (N = 351)

Variable	f	%	M	SD	Min	Max
Adolescent Variables						
Age			15.21	1.39	13	17
Race						
White	227	64.7				
Black	37	10.5				
Hispanic	87	24.8				
Sex						
Male	154	43.9				
Female	197	56.1				
Parent Variables						
Age			45.01	8.19	26	68
Race^a						
White	229	65.24				
Black	39	11.11				
Hispanic[3]	75	21.08				
Sex						
Father	159	45.3				
Mother	192	54.7				

Note: ^{a}Other self-reported racial categories not reported for parent sample;
[3] According to the 2016 US Census, Hispanic individuals made up 17% of the US population.

not using any social media platform.

Table 2. Descriptive statistics (N = 351)

Variable	f	%	M	SD	Min	Max
Dependent Variable						
Online Harassment	129	36.75				
Adolescent Variables						
Age			15.21	1.39	13	17
Race						
White	227	64.7				
Black	37	10.5				
Hispanic	87	24.8				
Sex						
Male	154	43.9				
Female	197	56.1				
Facebook Profile	295	84.05				
Device						
No	17	4.84				
Yes	334	95.16				
Met Friends Online						
(None)						
One	22	6.27				
Two-Five	86	24.5				
Five+	118	33.62				
Sexted	42	11.97				
Interacted	243	69.23				
Friended	246	70.09				
Friended upon Suggestion	99	28.21				
Network Size			246.82	482.48	0	5000

4.3 Variables

4.3.1 Online harassment

Harassment that takes place via cyberspace might not always meet the status of being criminal, but the effects on the victims can be just as severe. Therefore, in this study, we used Jones and colleague's (2013) conceptualization of online harassment for our dependent variable,"as threats or other offensive behavior targeted directly at youth through [social media]" (p. 54). Seven items from the adolescent sample in the TRS were used to create a dichotomous incidence measure of SM harassment (see Table 2). The first item used in the measurement of SM harassment asked respondents,"While online have you ever unfriended or blocked someone who was flirting with you in a way that made you feel uncomfortable?" The next six items used to create the dependent variable begins with, "Has your current or former boyfriend, girl-friend, significant other, or person you are dating or hooking up with ever done any of the following..." The next six items completed the question: "...used information posted on the Internet against you to harass or embarrass you, used the Internet to try to pressure you into sexual activity you did not want to have, to spread rumors about you on the Internet, contacted you on the Internet to threaten to hurt you, and demanded to know the passwords to your email and Internet accounts?" Responses to each of the seven items were binary - yes (1) or no (0). The final outcome measure indicated whether or not the adolescent reported an experience with any of the seven victimization measures. Over a third of our adolescents reported at least one form of online harassment.

4.3.2 Internet-accessible device

Smartphones and other Internet-accessible devices allow constant access to the Internet. Additionally, Mesch (2009) found that adolescents who interact more often via their cell phone have an increased risk of cybervictimization. Thus, we included a measure for having easy, constant, and mostly private access to the Internet via a personal smartphone or tablet. Two items were used to create a single binary composite variable to measure frequent online access via an Internet accessible device. The items asked respondents, "Do you, personally, have or have access to each of the following items, or not. Do you have...a) a smartphone, b) a tablet?" Adolescents who reported having at least one of these Internet accessible devices were scored a one while all others were scored zero.

4.4 Facebook profile

The large number of Facebook members creates opportunities for offenders by providing them access to millions of potential targets. The item used to measure Facebook membership asked participants, "Which of the following social media do you use, Facebook?" Only those who answered either yes (1) or no (0) to Facebook were included in the current study; all other social media platforms were excluded.

4.5 Control variables

Age has been included consistently in research on cybervictimization, though scholars have found contradictory results. Past research has found that older adolescents are more likely to be harassed while participating online than younger adolescents (Mesch, 2009; Moore et al., 2010). In contrast, Navarro and Jasinski (2011) found

that younger adolescents are more likely to be cyber-bullied than older adolescents. The differences in these results might vary because past research has examined various types of cybercrime victimization. For example, scholars have sought to understand the correlates of cyberbullying (Tokunaga, 2010); online harassment through email, chatrooms, and instant messages (Mesch, 2009), cyberstalking (Reyns et al., 2011); and cybervictimization (Oksanen and Keipi, 2013). The adolescent's age was recorded in years and ranged from 13 to 17.

Additionally, existing research has found that sex may also predict online harassment. Female adolescents who participate in cyberspace (i.e., chat rooms, blogs, SNSs, etc.) have been more likely to receive unwanted contact, sexual advances, and online harassment than their male counterparts (Mesch, 2009; Moore et al., 2010; Navarro and Jasinski, 2012; Oksanen and Keipi, 2013; Reyns et al., 2011; Reyns et al., 2016; Sengupta and Chaudhuri, 2010). Sex was measured dichotomously, with males serving as our reference category (0;). Finally, we created two dummy variables to indicate whether or not the adolescent identified as Black or Hispanic . White respondents were used as the reference category.

4.6   Adolescent variables

Adolescents may use SNSs to flirt, sext, and build their online network (Horstmanshof and Power, 2005; Hudson et al., 2014; Lenhart, 2009). Thus, we included measures for these online behaviors in our analyses. To measure the size of the participant's Facebook network, we used one item that asked respondents, "How many friends do you have on Facebook?" The participant's self-reported number of people in their network was measured as a continuous variable. Additionally, we used one item as a measure for meeting friends online. This item asked participants, "How many new friends, if any, have you made online?" Responses included meeting zero (0), one (1), two to five (2), and five or more (3) friends online.

The TRS included 5 items that addressed sexting and interacting via SNS. The first item used to measure the adolescent's romantic behaviors asked respondents, "Have you ever liked, commented or otherwise interacted with them on social media to let someone know you were attracted to them or interested in them?" The next three items began by asking participants, "To let someone know you were attracted to them or interested in them have you ever...". The question was followed by three activities participants were asked about including, "sent flirtatious messages," "sent them sexy or flirty pictures or videos of yourself," and "friended them on Facebook or another social network." The last item asked participants, "Have

you ever 'followed' or 'friended' someone because one of your friends suggested you might want to date that person?" Participant's responses were either yes (1) or no (0). These items measure adolescents engaging strangers rather than being sought out by a stranger increasing their suitability as a target. Further, these items speak to the building and composition of one's online network.

4.7   Parental guardianship variables

We used six items from the TRS to explore the moderating effects of parents on online harassment. Of these six items, three were included because they speak to the parents ability to monitor their adolescent's online behaviors. The parental monitoring items measured access to an Internet-accessible device, SNS activity, and network size for parents. These items were measured in the same way as adolescents.In addition to asking parents about having a Facebook profile, though, the TRS also asked parents if they were friends with their child on Facebook. Response options for these items were yes (1) and no (0).

Past research has also assessed the effectiveness of parental guardianship by measuring their limitations on computer use. But many adolescents have smartphones that allow frequent and easy access to their SNS profiles. Thus, we used one item to measure whether they were able to monitor their adolescent's SNS behaviors through their cell phone rather than on a computer. This item asked parent participants, "Do you happen to know [teen's name] password for their cell phone?" This variable had two response categories - yes (1) and no (0).

To better understand parents' guardianship abilities, we also included items related to their monitoring behaviors. To measure parental monitoring, we used five items that asked parent respondents about ways they monitor their child's online participation. Parents were asked if they ever did the following: used parental controls or other means of filtering online activities, checked which websites their child visits, checked their child's SNS profile, takes cell phone or Internet privileges as a form of punishment, or limits the amount of time their child can spend online. Each question was answered either yes (1) and no (0).

Mesch (2009) found that the odds of cyberbullying decreased among participants whose parents had established rules for visiting certain websites. This may suggest that talking to children about the risk of online behaviors influences online harassment. Thus, we included an index score of parental talk in the analyses. These items inquired about how frequently they talk about the appropriateness and inappropriateness of online behavior toward others, sharing online, viewing content, and behavior in

Table 3. Binary logistic regression of online harassment on SNS activity and parental guardianship

Variable	Model 1. Full Model with No Interactions			Model 2. Facebook Friends x Parental Monitoring			Model 3. Facebook Friends x Parental Talk		
	b	SE	OR	b	SE	OR	b	SE	OR
Adolescent Variables									
Age	-0.11	0.09	0.89	0.01	0.10	1.01	0.01	0.10	1.01
Race (White)									
Black	0.08	0.41	1.09	0.01	0.43	1.01	0.12	0.44	1.13
Hispanic	0.43	0.27	1.54	0.38	0.30	1.47	0.44	0.30	1.55
Sex	1.32	0.24	3.74*	1.11	0.27	3.03*	1.04	0.27	2.84*
Facebook User	-0.77	0.42	0.46+	-0.97	0.46	0.37*	-1.11	0.46	0.32*
Internet Accessible Device	0.04	0.42	1.04	0.12	0.64	1.13	0.18	0.64	1.20
Meet Strangers Online	0.33	0.09	1.39*	0.30	0.10	1.35*	0.28	0.11	1.32*
Sexting	1.22	0.39	3.39*	0.97	0.41	2.65*	0.99	0.42	2.70*
Liked SNS Users	0.50	0.32	1.65	0.62	0.35	1.86+	0.53	0.36	1.70
Friended SNS Users	0.75	0.33	2.13*	0.66	0.37	1.94+	0.71	0.37	2.05+
Connected with SNS Users	0.71	0.27	2.05*	0.71	0.29	2.03*	0.77	0.30	2.16*
Number of Facebook Friends	< 0.01	< 0.01	1.01+	< 0.01	< 0.01	1.01+	< 0.01	< 0.01	1.01+
Parent Variables									
Facebook User	-0.19	0.41	0.82	-0.36	0.44	0.69	-0.34	0.45	0.71
Friends with Adolescent	0.36	0.33	1.44	0.43	0.38	1.54	0.39	0.38	1.48
Mobile Device	-0.18	0.39	0.83	-0.11	0.48	0.88	-0.26	0.49	0.76
Parental Monitoring	0.02	0.08	1.02	0.05	0.09	1.05	0.01	0.10	1.01
Parental Talk	0.19	0.13	1.21	0.28	0.15	1.33+	0.28	0.15	1.33+
Facebook Friends x Parental Monitoring	-	-	-	< 0.01	< 0.01	1.01*	-	-	-
Facebook Friends x Parental Talk	-	-	-	-	-	-	< 0.01	< 0.01	1.01

Note: * = $p < 0.05$; $^{+}$ = $p < 0.10$; Reference categories in parentheses

social lives. Each of these items were scored in a 4-point Likert scale with more positive scores indicating more frequent protective talk. We generated an index score from these using a principal components analysis (Acock, 2018). Parental monitoring and parental talk were also used to create multiplicative interaction terms in the moderation analysis.

5 Results

5.1 Model 1: SNS behaviors and online harassment

The current study examined two research questions. The first was to explore the relationship between an adolescent Facebook user's SNS behaviors and online harassment. Due to the dichotomous nature of the dependent variable we used binary logistic regression(Prior to running the primary logistic regression, we ran a series of diagnostics to ensure four assumptions of logistic regression were not violated - influential cases, normally distributed residuals, multicollinearity, and model specification. Diagnostics indicated that our models did not violate any of these assumptions.) (Acock, 2018). Model 1 included online harassment as the dependent variable, adolescent demographics, adolescent online behaviors, and parental predictor variables. The overall results of Model 1 were statistically significant, X^2 (18) = 144.91, p <0.001 (see Table 3), which supports a relationship between SNS behaviors and online harassment.

Congruent with previous literature, the results showed that network size was a statistically significant predictor of online harassment (OR = 1.01, p < 0.05). This means that the more Facebook friends adolescents had in their SNS network, the more likely they were to experience online harassment. Additionally, we found support for our second hypothesis, which claimed online harassment will be more likely amongst those who make new friends online (OR = 1.40, p < 0.05). Model 1 also explored the relationship between online harassment and sexting, adding people because of romantic interest, and interacting with strangers. We found that adding strangers because of romantic interest (OR = 2.13, p < 0.05) and interacting with strangers (OR = 2.05, p < 0.05) significantly predicted online harassment. Additionally, sexting via social media increased the odds of online harassment nearly 4 times (OR = 3.40, p < 0.05). Of the remaining adolescent predictors in Model 1, the only significant predictors were having a Facebook profile and sex. Specifically, the results indicated that having a Facebook profile had a marginally significant and negative impact on online harassment (OR = 0.46, p < 0.10). Consistent with prior research, the results revealed the odds of females experiencing online harassment are nearly 4 times more likely than male adolescents (OR = 3.75, p < 0.001). The parental variables were not significant in Model 1.

5.2 Interaction models of parental guardianship on Facebook network size

Secondly, we assessed the moderation effect for two of our parental guardianship variables on adolescent risk of online harassment using binary logistic regression. Models 2 through 7 included a multiplicative interaction term for parental guardianship: adolescent network size x parental talk, adolescent network size x parental

monitoring, adolescent sex x parental monitoring, adolescent sex x parental talk, meeting new friends online x parental monitoring, and meeting new friends online x parental talk. Each regression included a single parent-by-adolescent interaction term at a time to avoid introducing multicollinearity into the model.

The only significant interaction effects were parental monitoring on the size of the adolescent's Facebook network (OR = 1.001) and parental monitoring on a male adolescent's risk of online harassment (OR = 1.38). As variety in parental monitoring increased, the effect of the number of friends one has on Facebook as a stronger, positive effect on online harassment (see Figure 1). The interaction effect became significant after three or more types of parental monitoring.
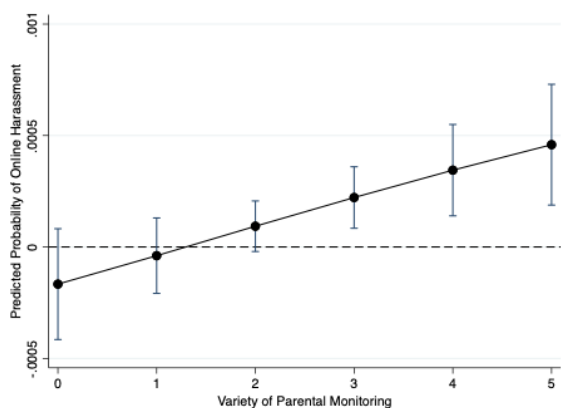

Figure 1. Interaction of parental monitoring on network size and online harassment

The sex effect on online harassment is only present at higher variety of parental monitoring. Male and female adolescents are no different in reported harassment when their parents use fewer monitoring approaches (see Table 4). Our results indicated that parental monitoring works differently for male and female adolescents (see Figure 2). Namely, whereas the probability of harassment declines with more diverse monitoring of male adolescents, harassment increases with more varied monitoring of female adolescents. This finding lends some support to Mesch's (2009) finding that when parents implement rules on Internet use and monitor the websites used, male adolescent's risk of online bullying decreased. Neither of the interaction terms representing the moderation effect of parental guardianship on meeting strangers offline were significant (see Table 5). Consequently, our results demonstrated mixed support for our third hypothesis.

6   Discussion

The purpose of this study was threefold. First, we aimed to investigate the relationship between an ado-
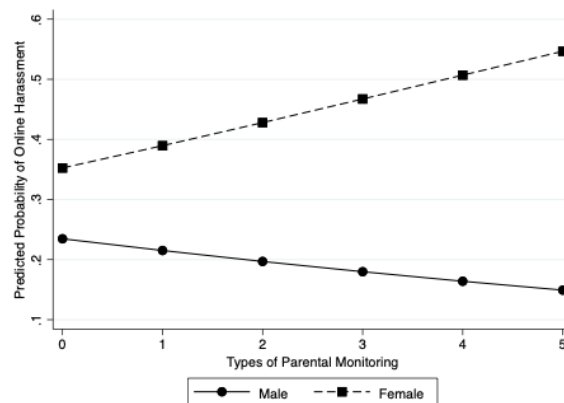

Figure 2. Interaction Effect of Parental Monitoring on Sex and Online Harassment

lescent Facebook user's SNS behaviors and online harassment. Overall, our findings revealed a statistically significant relationship between social media and online harassment. This means that social media users were at an increased risk of experiencing some form of harassment while participating on a SNS. However, this relationship warranted more exploration to identify specific correlates of online harassment, which was the second aim of our study. We found that respondents had greater odds of reporting victimization if they were female, had larger Facebook networks, met new friends online, sexted or flirted with others, or interacted with SNS users.

Although one purpose of SNSs is to make connections through online networks, our results revealed that the size and development of an online network can increase the risk of online victimization (Danah, 2011; Haythornthwaite, 2005). Further, we found that the interactions that take place on a SNS and within an adolescent's network can also impact the risk of online victimization. Moreover, the high proportion of respondents in our sample that reported flirting and sexting via a SNS might suggest a general unawareness of the risks of SNS participation and of risky SNS behaviors among adolescents. These findings can be used to promote awareness about the risk involved in having large SNS networks and certain online behaviors and interactions. Through awareness and educational programs, adolescents may begin to see large networks as a risk rather than a way to build self-esteem or an outlet for self-promotion.

In the RAT framework, opportunity for victimization can be expected when a motivated offender has access to a suitable target in the absence of capable guardians (Cohen and Felson, 1979). Offender motivation is largely left to other criminological theories by RAT models. Therefore, two remaining interpretations might include target suitability (access or vulnerability) and the presence of guardians (such as parents or bystanders).One pos-

Table 4. Sex x parenting interactions

Variable	Model 4. Sex x Parental Monitoring			Model 5. Sex x Parental Talk		
	b	SE	OR	b	SE	OR
Adolescent Variables						
Age	0.040	0.102	1.041	0.005	0.102	1.005
Race (White)						
Black	-0.016	0.439	0.984	0.012	0.439	1.012
Hispanic	0.424	0.305	1.529	0.388	0.305	1.474
Sex	0.121	0.577	1.129	1.103	0.271	3.012*
Facebook User	-0.783	0.454	0.457+	-0.986	0.464	0.373*
Internet Accessible Device	0.178	0.642	1.194	0.109	0.647	1.115
Meet Strangers from Web	0.315	0.108	1.371*	0.301	0.109	1.351*
Sexting	0.961	0.415	2.615*	0.979	0.415	2.663*
Liked SNS Users	0.699	0.361	2.011+	0.625	0.359	1.867+
Friended SNS Users	0.562	0.378	1.754	0.665	0.377	1.944+
Connected with SNS Users	0.660	0.298	1.936*	0.698	0.301	2.010*
Number of Facebook Friends	0.001	< 0.001	1.001+	0.001	< 0.001	1.001+
Parent Variables						
Facebook User	-0.436	0.447	0.646	-0.384	0.448	0.681
Friends with Adolescent on Facebook	0.443	0.384	1.557	0.449	0.383	1.566
Mobile Device	-0.048	0.488	0.953	-0.111	0.489	0.895
Parental Monitoring	-0.155	0.152	0.857	0.048	0.100	1.049
Parental Talk	0.281	0.154	1.324+	0.246	0.222	1.278
Sex x Parental Monitoring	0.324	0.182	1.382+	-	-	-
Sex x Parental Talk	-	-	-	0.081	0.279	1.085

Note: * = p < 0.05; + = p < 0.10; Reference categories in parentheses

sible source for both of these interpretations could be parents. The 2014 Pew TRS data included adolescent-parent dyads, which allowed us to include both parental monitoring and socialization in our models. The results demonstrated that parental monitoring moderated some of an adolescent's risk of online harassment. We suspected that parents who attempted to train their adolescents to be more cautious in their online activities would encourage target hardening. Additionally, parents who were more actively engaged in their adolescent's online activities, either as a viewer or an obstacle, might attenuate risk of victimization established at the adolescent level. Although adolescent risk of victimization was not conditioned by parental attempts at socialization, focused attempts at parental monitoring did attenuate the riskiness associated with large Facebook networks. These findings may suggest that lessons learned from conversations with parents were less effective at reducing an adolescent's existing risk of online harassment than direct involvement. That said, due to limitations in both the time order and details in these variables (e.g., methods for establishing the parent's presence online), additional research is still needed to clarify the role of parental guardianship in online settings.

Adolescent activity online has the most direct relationship with online harassment. Therefore, we may be able to curb the risk of online harassment by educating adolescents about risky online behaviors and security features available to them. The limited role of parents in this analysis should not be taken to mean that parental online behaviors are irrelevant. Rather, this analysis may help parents to reconsider and tailor their approach to online guardianship. For example, parents may have more impact through more direct guardianship (e.g., monitoring rather than talk/preparation). However, there is also an argument for "doing more with less" in monitoring tactics, especially with adolescent girls. Limitations and Implications

The results provided evidence of the existence of this relationship and identified specific behaviors that increase the risk of online harassment, but this study is not without limitations. Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) adolescents were not included in the analysis due to the small number of participants. Also, Black participants were underrepresented in this study. LGBTQ and non-White teens have been identified as a common target of online harassment which warrants future research (Hinduja and Patchin, 2011; Ngo and Paternoster, 2011). Future research that includes a more diverse sample of adolescents will further our understanding of online harassment and the role of social media behaviors.

The speed at which data on social media can change makes keeping research current difficult. This study only included adolescents who used Facebook. However, Facebook has dropped in popularity among adolescents since the 2014 Teen Relationship Survey. Today, Snapchat, Instagram, and YouTube are among the most popular social media sites among adolescents (Anderson and Jiang, 2018).

The novelty of social media limits the data available to students and scholars. Collecting data that helps to better distinguish between the various types of social media behaviors, would broaden our knowledge base of SNS

Table 5. Meeting strangers x parenting interactions

Variable	Model 6. Meeting Strangers x Parental Monitoring			Model 7. Meeting Strangers x Parental Talk		
	b	SE	OR	b	SE	OR
Adolescent Variables						
Age	0.011	0.103	1.011	0.021	0.102	1.021
Race (White)						
Black	-0.041	0.445	0.96	0.003	0.441	1.003
Hispanic	0.369	0.312	1.446	0.332	0.31	1.393
Sex	1.226	0.281	3.408*	1.176	0.277	3.243*
Facebook User	-0.886	0.468	0.412+	-0.934	0.468	0.393*
Internet Accessible Device	0.174	0.664	1.19	0.188	0.661	1.207
Meet Strangers from Web	0.418	0.218	1.519+	0.301	0.11	1.351*
Sexting	0.945	0.422	2.573*	0.928	0.425	2.529*
Liked SNS Users	0.713	0.368	2.039+	0.702	0.365	2.018+
Friended SNS Users	0.682	0.38	1.977+	0.706	0.38	2.026+
Connected with SNS Users	0.703	0.303	2.020*	0.693	0.301	2.000*
Number of Facebook Friends	0.001	<0.001	1.001+	0.001	<0.001	1.001+
Parent Variables						
Facebook User	-0.206	0.452	0.814	-0.327	0.451	0.721
Friends with Adolescent on Facebook	0.295	0.387	1.342	0.376	0.388	1.457
Mobile Device	-0.125	0.507	0.883	-0.111	0.501	0.895
Parental Monitoring	0.019	0.16	1.02	0.044	0.101	1.045
Parental Talk	0.316	0.158	1.372*	0.327	0.286	1.387
Meeting Strangers (None) x Parental Monitoring						
One	0.156	0.346	1.168	-	-	-
Two to Five	0.217	0.228	1.243	-	-	-
Five or More	-0.121	0.207	0.886	-	-	-
Meeting Strangers x Parental Talk						
One	-	-	-	0.024	0.62	1.024
Two to Five	-	-	-	-0.056	0.359	0.945
Five or More	-	-	-	0.018	0.36	1.018

Note: * = p < 0.05; $^+$ = p < 0.10; Reference categories in parentheses

online harassment. For example, if an adolescent liberally adds strangers to their SNS network but does not have personal information posted and does not communicate with strangers might not be at risk for victimization.

Despite these limitations, our research identified certain behaviors that increase the risk of online harassment, which hold implications for future efforts to reduce cybervictimization, especially from parents and educators. In accordance with RAT, which has been demonstrated to be useful for explaining cybercrime rates (Leukfeldt, 2014; Reyns et al., 2011), our findings suggest that guardianship and target hardening that originates with adults may be able to deflect opportunities to victimize adolescents online in a limited way. Consequently, an implication (and future research direction) may be that guardianship and target hardening should come from the adolescents. Indeed, adolescents might prove to be their own most effective guardian by using caution taking steps to become better prepared for attacks online.

Although the findings did not provide evidence that parents demonstrated capable guardianship by just being on Facebook, parents may be able to help reduce their child's suitability as a target of harassment based on this study's findings. For example, parents can use this information to teach their adolescents to use caution when developing their online networks. Additionally, the findings help educators and parents understand the behaviors that increase the risk of victimization, which can allow them to better educate adolescents about risky SNS behaviors.

This study also adds to existing literature using the RAT framework to understand online victimization. Though there was support for the concept of suitable targets, the role of capable guardians needs additional research.

The results showed that parental monitoring had different moderating effects on risk of online harassment for male and females. As adolescents are participating on the same SNS, differences in females and males behavior on social media likely play a role in victimization risks. Future research should delve deeper into the relationship between gender and social media victimization. The ineffectiveness of parents on social media might be specific to Facebook given that adolescents use Snapchat, Instagram, and YouTube more frequently (Anderson and Jiang, 2018). Future research would benefit from examining parental guardianship on other SNS platforms. As parents understand their influence on social media they may begin to find alternative ways of protecting their teens online. Online harassment is unlike traditional criminal events where parents do have the ability to be effective guardians (Finkelhor and Asdigian, 1996).

7   Conclusion

Online harassment cannot be combated in the same manner as traditional crime. As deviant and criminal behavior takes place online, victims can experience a wide variety of negative repercussions, ranging from decreased self-esteem to becoming suicidal. Public awareness of

the repercussions and risky behaviors that connect to online harassment is critical for lowering rates of online harassment. The novelty and rapid evolution of SNSs make it difficult to comprehensively study this popular form of online participation. As a field of research still in its infancy, there has been little information available to the public and practitioners to make them aware of the benefits and risks of online socialization. As a result, parents have few resources to educate their teenagers on appropriate social media behaviors. Further, teenagers heavily engaged in SNS networks may be unintentionally inviting risk. This line of research was important to learn more about risky SNS behaviors and, through public awareness and interventions, contribute to reduced online victimization rates.

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RESEARCH ARTICLE

On the evolution of the architectural style of Tao Fong Shan

Hong Shen

Abstract: The characteristic architectural style of Tao Fong Shan in Hong Kong is unique in the sense that this Christian institution looks exactly like a traditional Chinese Buddhist monastery. What kind of secret exists behind this seemingly uncoordinated appearance? The two names of Karl Ludvig Reichelt and Johannes Prip-Møller are closely connected with Tao Fong Shan buildings, but few people know how exactly the Norwegian founder of The Christian Church for China's Buddhists met and cooperated with the Danish architect in designing these buildings. The present paper is an effort to retrace the initial vision of architectural style for Tao Fong Shan shared by Reichelt and Prip-Møller, as well as the evolution of the later designs at different stages. Reichelt found many common features between Chinese Buddhism and the Gospel of John in New Testament. In order to promote the missionary work among China's Buddhists, he tried to create an environment in which the inquiring Buddhists would find it comfortable and at ease. Reichelt's another contribution is in raising money for the construction of Tao Fung Shan buildings. His method of crowd funding proved to be practical and effective. Prip-Møller had ten years' experiences of working in China and was a top-notch expert in China's Buddhist architecture. His professional expertise has ensured that Reichelt's idea of combining the traditional Chinese Buddhist architectural style and the Christian nature of Tao Fong Shan buildings could be eventually realized.

Keywords: Karl Ludvig Reichelt, Johannes Prip-Møller, Tao Fung Shan, architectural style

Tao Fong Shan Ecumenical Center, with its red-pillared, tile-roofed building on top of a hill, surrounded by thick woods, is now one of the few rare scenic spots in Hong Kong (Figure 1). It is a favorite place not only for common hikers, but also for those who try to escape from the madding crowds of the metropolitan city and spend a couple of nights for contemplation in a secluded room on this hill of natural beauty. The characteristic architectural style of Tao Fong Shan is unique in the sense that this Christian institution looks exactly like a traditional Chinese Buddhist monastery. What kind of secret exists behind this seemingly uncoordinated appearance? The two names of Karl Ludvig Reichelt (Figure 2) and Johannes Prip-Møller (Figure 4) are closely connected with Tao Fong Shan buildings, but few people know how exactly the Norwegian founder of The Christian Church for China's Buddhists met and cooperated with the Danish architect in designing these buildings. The present paper is an effort to retrace the initial vision of architectural style for Tao Fong Shan shared by Reichelt and Prip-Møller,

as well as the evolution of the later designs at different stages.

1 New home of the Christian Mission for Buddhists

To really understand the reason why Tao Fong Shan buildings look like a Buddhist temple, we have to start from the very beginning.

Karl Ludvig Reichelt joined Norwegian Missionary Society and was sent to China in 1903. After studying the Chinese language for about a year in Changsha, the capital of Hunan Province, he then went alone to Ningxiang to set up a missionary station in that small town. At that time, Western Protestant missionaries in China as a whole had very negative view of Buddhism, not only regarding its religion as superstitious and repellent, but also its monks as ignorant and even immoral. Nevertheless, through one of his personal experiences, Reichelt found them otherwise.

By chance, Reichelt visited the great monastery of Weishan in 1905 and spent a few days with the Buddhist monks there. While witnessing the Buddhist service and prayers, he realized, to his own surprise, that the solemn atmosphere in that Buddhist temple was somewhat similar to a Christian church, he also found some of the Buddhist monks there pious in nature, or even learned. Yet at the

Figure 1. Tao Fong Shan during June-August, 2017 (The 12 colored photographs here were taken by the author himself in Hong Kong, June to August, 2017)

same time, he was troubled by the fact that it was almost impossible for him to communicate with the monks there, because they had a whole set of subtle and specialized terminology which Reichelt could not understand, neither did they understand what Reichelt was telling them about Christianity. On the very day he left there, he had a vision on top of the hill behind the Buddhist temple, in which he felt that God had provided him with glimpses of truth in Mayahana Buddhism, as well as the "points of contact" between Mayahana Buddhism and Christianity. Since then, Reichelt was determined to study and understand Mayahana Buddhism, and in a number of years, he successfully became one of the top specialists in the West on Chinese Buddhism. His first book, *China's Religions* (*Kina's religioner*) was published in 1913, the year he began his teaching career at the Lutheran Theological College in Shekow.

It was his dream to create a Christian mission among China's Buddhist monks, for he believed that since there were many similarities between the Gospel of John and Mayahana Buddhism, e. g. the concept of the Tao and that of the Logos, the Buddhist notions of trinity, etc., it would be easier for Chinese Buddhist monks to understand Christianity.

For this reason, he would not lose any chance to visit the Buddhist temples and monasteries in China and talked to the Buddhist priests he met there. In 1919, Reichelt met a young monk named Kuantu (Figure 3) in Nanjing and found him enthusiastic in learning Christian doctrines. Under his close attention and great care, as well as the support of a senior monk named Penchong, Kuantu was given the chance to attend a summer program with the missionaries in Kikung hills in Henan Province. A few months later, Kuantu was baptized at the Lutheran Theological College in Shekow, on Christmas Day of the same year.

Kuantu's conversion to Christianity was an encouragement to Reichelt, and it gave a great impetus to his dream cause of establishing a special Christian mission for Buddhists, because Kuantu was the best example to prove to the world that his theory about the "points of contact" between Mayahana Buddhism and Christianity was right. On January 4, 1920, only nine days after Kuantu had been baptized, "The Christian Brotherhood for China's Buddhists" (*Kristne broderskap blandt Kinas Buddhister*) was actually founded in Shekou, Hubei Province. According to the draft constitution of this brotherhood, written by Reichelt himself a year before, the object of setting up such a Christian brotherhood was to "lead Buddhists of all the classes and parties to a living faith in Jesus Christ in whom the deepest ideas of higher Buddhism find their full resolution. [II:1] ... All parts of Tripitaka which

Figure 2. K.L. Reichelt (*B.M.*, May 1926)

Figure 3. Kuantu (*B.M.*, Nov. 1926)

are in accordance with Christian teachings are recognized and may be used in both the ritual and educational work. [III: 4]." (Sharpe 60)

With permission from Norwegian Missionary Society, Karl Ludvig Rechelt and his co-worker, Notto Normann Thelle, set up a home for "The Christian Brotherhood for China's Buddhists" in Nanjing in November, 1922. They named it "Ching Fong Shan", which is a common Buddhist name, meaning "favorable wind blowing from the hill." Within a few years, a fairly large number (c. 5000) of Buddhists were attracted to this place, and a school was established for their Christian education. Quite a few of these Buddhists later received baptism and became Christians. In order to create an atmosphere of home for the newcomers, Reichelt adopted the strategy of accommodation and combined many Buddhist elements into

his Christian service, as well as the interior decoration of his chapel. Because of this, he was questioned or even attacked by many conservative co-workers in Norwegian Missionary Society. Eventually, at the end of 1925, Reichelt was forced to separate his Christian Brotherhood for China's Buddhists from Norwegian Missionary Society, and renamed it "The Christian Church for China's Buddhists."

In March, 1927, Reichelt and his followers suffered another catastrophe—the buildings of Ching Fong Shan were burned to the ground and two members of his church were killed by the Southern Army. Reichelt and Thelle had been forced to go into hiding before they could escape from Nanjing (Thelle 189). For the next three years, The Christian Church for China's Buddhists had only a temporary base in Shanghai and Reichelt was constantly looking for a new home for his church, because Shanghai was a big metropolitan city, not an ideal place for contemplation and spiritual cultivation. For this purpose, he had visited Japan, but failed in finding a place that could meet his standards. His next targets would be Taiwan and Singapore, yet for some reason, his scheduled journey to Taiwan was unexpectedly delayed. Reichelt and his new assistant Axel G. Hamre arrived in Hong Kong instead on December 31, 1930.

Accidently, on a reconnoiter visit to Shatin on February 11, 1931, Reichelt found a secluded hill located in an isolated area, about eight miles from Kowloon. He immediately realized that this nameless hill might become the most ideal site for a new home of the Christian Church for China's Buddhists. Therefore Reichelt hurried back to Nanjing to secure the Republican government's compensation for the damage of Ching Fong Shan buildings and, with that amount of money, he was able to bid successfully for the hill-top site he had chosen from the government of Hong Kong. He renamed this newly-acquired hill "Tao Fong Shan", meaning "Wind of Holy Spirit Blowing over the Hill." This hilltop is like a white paper on which K. L. Reichelt and Johannes Prip-Møller were able to draw the blueprints of the future Tao Fong Shan buildings.

2 The acquaintance and co-operation between Reichelt and Prip-Møller

Karl Ludvig Reichelt became acquainted with Johannes Prip-Møller, the Danish architect, in 1920, soon after the founding of The Christian Brotherhood for China's Buddhists. However, it was not until almost ten years later that they had the first opportunity to co-operate with each other in designing the Tao Fong Shan buildings.

Prip-Møller was a professional architect closely connected with Danish Missionary Society. He served in

Figure 4. Axel G. Hamre, Johannes Prip-Møller and Antonette Prip-Møller (*B.M.*, No.7 Sept. 1930, cover)

China twice, for almost ten years. The first time of his visit to China was between 1921 and 1926. While working in Moukden, Manchuria, he became infatuated with the traditional Chinese architecture, especially the architectural style of Buddhist temples. He visited some famous Buddhist monasteries in different parts of the country, in the hope that someday he would be able to write a definitive book on the architecture of Buddhist monasteries in the Far East. After returning to Danmark, he succeeded in applying for a research grant from the Carlsberg Foundation for his ambitious research project on Chinese Buddhist architectures. With this research grant, he returned to China in 1929 for another four years. During this period, he was able to visit more famous Buddhist monasteries and other related architectures, as well as designing Buddhist-style buildings for Tao Fong Shan in Hong Kong. The result of this immense research project was published in a definitive book, entitled *Chinese Buddhist Monasteries: Their Plan and Its function as a Setting for Buddhist Monastic Life* (1937).

With such a professional background for the architect of Tao Fong Shan, it is no wonder that Tao Fong Shan building should have an architectural style of Buddhist Temples.

In an article published in a Norwegian journal, *Buddhist Missionen* (*B.M.*), J. Prip-Møller traced the inspiration of his architectural design of Tao Fong Shan buildings back to the time when he first met Reichelt in Brooklyn, New York City, in the summer of 1920. At that time, Reichelt was giving a speaking tour in the United States on his theory of the "points of contact" between Christianity and China's Buddhism.

Naar jeg I disse dag har gaaet her paa Tao Fong Shan og tænkt paa planerne for Broderhjemmet, er min tanke ofte gaaet tilbage til summeren 1920, hfor jeg under et studieophold i Amerika, den forste Sondag jeg var i landet, traf Reichelt ude i den norske kirke i Brooklyn. Her fremlagde han ved aftenmodet sine planer om arbejdet blandt Chinas Buddhister og omtalte ogsaa byggeplanerne for

det fremtidige insitut. Da jeg efter modet fik lejloghed til at hilse paa ham personligt og han horte om mine planer om at gaa til China som Architect, fik jeg straks en varm indbydelse til næste dag at komme ud til hans bopæl og se de forskellig tegninge som ingenior Kiær havde udarbejdet for rammerne om dette nye missionaebejde. (*B.M.*, No. 7, 1930, p.110)

Till this day, I often recall the time when I was studying in the U.S.A., on the first Sunday after I arrived there, I met Reichelt of Tao Fong Shan outside the Norwegian church in Brooklyn. When we met again in the evening, he told me about his plan to carry out missionary work among China's Buddhists. He also mentions the Christian Mission for Buddhists he wants to create in the future. After that, we had more opportunities for private talks, and he also learned about my plan to go to China as an architect. On the next day, I receive a warm invitation from Reichelt to look at various architectural designs drawn by the engineer Kiær for the future Christian Mission for Buddhists. (*B.M.*, No. 7, 1930, 110)

From that time on, Prip-Møller had already understood Reichelt's dream of establishing a Christian mission for China's Buddhists. He also had a visual impression of the Buddhist architectural style in Reichelt's mind. This is the reason why when Reichelt invited him to design Tao Fong Shan buildings about ten years later, Prip-Møller readily accepted his invitation and immediately devoted himself to doing this tremendous work.

3 The evolution of the architectural style of Tao Fong Shan

Johannes Prip-Møller accepted Reichelt's invitation to design the Tao Fong Shan buildings in May 1930. At that time, Reichelt had just acquired the hill-top site of Tao Fong Shan in an auction in Hong Kong, and Prip-Møller himself was collecting materials for his ambitious research project and visiting various Buddhist monasteries in China. The first task Reichelt gave Prip-Møller was to draw an over-all design of the new home of The Christian Church for China's Buddhists.

In the above-quoted article in *Buddhist Missionen*, Prip-Møller mentions that Reichelt had many requirements for the architectural style of the future Tao Fong Shan buildings, one of which was that the outward appearance of Tao Fong Shan buildings must adopt as many Buddhist patterns and symbols as possible, so that the visiting believers might feel comfortable and at home. And this does not concern only the cosiness of life inside the buildings, but also the principle that external appearance should correspond to the internal spiritual life.

Prip-Møller fully agreed with Reichelt's concept of

Figure 5. Tao Fong Shan during June-August, 2017

(a)

(b)

Figure 6. Prip-Møller's two overall designs of Tao Fong Shan buildings ((**a**) *B.M.*, No.3, Mars 1930, 30; (**b**) *B.M.*, No.9 Nov. 1930, 146)

architectural design. In order to understand the functions, concepts and details of China's Buddhist architectural design, he visited many famous Buddhist monasteries in China. Wherever he went, he would record faithfully the environment and atmosphere of those places, not only with words and sketches, but also with measuring tape and camera. He believed that an ideal religious architecture must make people feel free from worldly cares, at the same time feel like returning home. It should be not only fresh and elegant, but also entertaining and relaxing. A successful design of religious architecture must have these characteristics.

Nevertheless, Prip-Møller's first overall design for Tao Fong Shan buildings (Figure 6(a)) was purely imaginary and unpractical, because at that time he has not yet visited the real site of Tao Fong Shan in Hong Kong. Therefore, though his conceptual design contains all the component parts of the future Tao Fong Shan buildings—porticos, Yun Shui Tang (Hall of Cloud and Water), Holy Temple, Institute of Religious Studies, etc., these buildings are arranged in such a perfectly symmetrical order in a monastery of three courtyards that it is impossible to put this plan into practice on the hill-top site of Tao Fong Shan. It was not until after he visited Hong Kong and
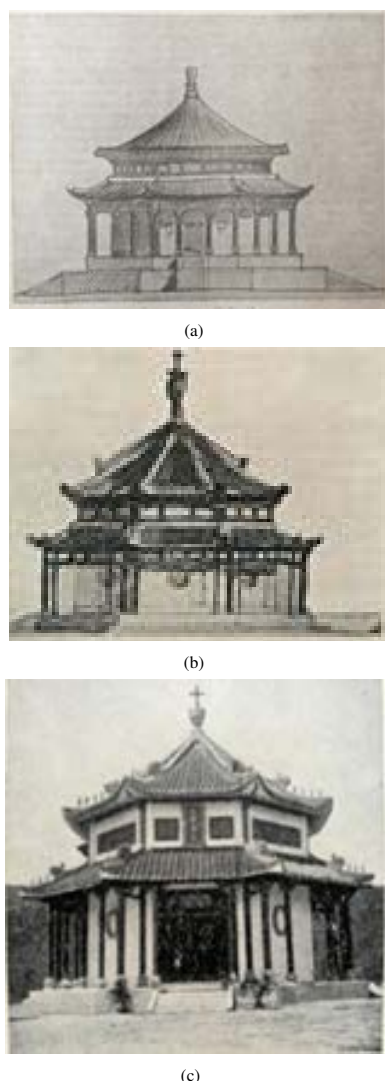
(a)

(b)

(c)

Figure 7. The evolution of the Holy Temple design

surveyed the hill-top site in Shatin carefully that he was able to draw a second overall design of Tao Fong Shan buildings (Figure 6(b)) that fit better the terrain of the newly-acquired hill-top site.

Generally speaking, after Prip-Møller drew the initial design draft, he would request comments and suggestions from Reichelt and others, and make modification of the design. A very good example is the process of designing Holy Temple, the core building of the Tao Fong Shan building cluster. When the first design draft of the Holy Temple (Figure 7(a)) was published on the cover of No. 7, 1930's issue of *Buddhist Missionen*, the circular shape of its roof is the same with that of Huang Qiong Yu in the Temple of Heaven, Beijing. When its second design draft (Figure 7(b)) appeared on the cover of No.5, 1934's issue of the same journal, there were already several modifications: the circular shape of its roof had been changed into an octagon one, a cross had been added on top of the roof, and the distance between the columns had been

extended, etc. In the photograph of the physical building, which was completed at the end of 1934, there are further modifications, e.g. the ground floor had been heightened to increase its internal space, the walls between the double eaves had also been heighted, and glass windows had been added to increase the daylight effect of the upper floor. (Figure 7(c) *B.M.* No.2, Feb. 1935, 35)

Being a spiritual leader of the Christian Mission for China's Buddhists and founder of its new home on Tao Fong Shan, Reichelt's influence on the evolution of its architectural style is on multiple levels. Apart from those requirements he had stipulated at the beginning for the future home of The Christian Church for China's Buddhists, and the comments and suggestions he gave to Prop-Møller, Reichelt's greatest contribution was perhaps made in the field of raising fund for the Tao Fong Shan's architectural construction. In this respect, Reichelt displayed fully his intelligence and capability. There is the well-known and legendary anecdote that he managed to acquire the hill-top site of Tao Fong Shan for practically nothing. The fact is that after the Ching Fong Shan buildings in Nanjing had been burnt down by the Southern army in 1927, Reichelt made consistent efforts to demand compensations from the Republican government of Nanjing. In February, 1930, he eventually secured more than 3,690 Mexican dollars from Nanjing municipal government as compensations for the burnt-down Ching Fong Shan buildings. On May 23, 1930, he was able to acquire the hill-top site of Tao Fong Shan with 3,705 Mexican dollars in an auction from Hong Kong government. (Yeung 217)

After being separated from Norwegian Missionary Society, The Christian Church for China's Buddhists had great difficulties in keeping the balance of its expenditures. After acquiring the hill-top site in Shatin, Hong Kong, Reichelt had to face the serious problem of raising money to cover the construction costs of the future Tao Fong Shan buildings. He figured out, however, an ingenious way to solve this problem. When Pip-Møller drew the first overall design draft of Tao Fong Shan buildings, Reichelt managed to redraw it into a planimetric map (Figure 8), estimated the construction costs as about 35,000 Norwegian Crowns, and then divided the map into one hundred squares of equal size, each having the value of 350 Norwegian crowns. Then he published this planimetric map in the journal of *Buddhist Missionen*, calling the readers to pledge donations on these individual squares. This method of crowd funding proved to be very effective. Within one year's time, all the estimated construction costs had been pledged by enthusiastic donors. To ensure the double security, Reichelt called a meeting for the leaders of the Norwegian, Danish, and Swedish missions

within The Christian Church for East Asia's Buddhists, and distribute the construction costs among these three missions. For example, the Swedish mission had to pay 10,000 crowns for the construction of the Holy Temple; the Norwegian mission had to pay 15,000 crowns for the construction of roads and wells, etc. After the target of the first round of fund-raising had been met, Rechelt immediately started the second round of fund-raising of 150,000 Norwegian crowns. Once again, the second target was met in May, 1934 (Buddhist Mission, No.7 July 1934, p.115). With this method of crowd funding, Reichelt had miraculously solved the problem of fund raising.
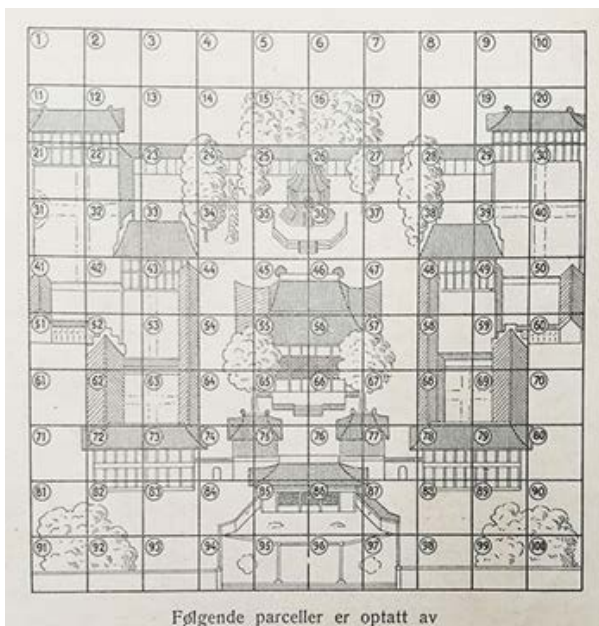

Figure 8. The planimetric map to raise fund (*B.M.*, No.4 April 1930, 63)

Reichelt made frequent journeys to various Buddhist monasteries in different parts of China and wrote down his observations and impressions of these places. In order to attract the attention of the Scandinavian readers so that they could make generous donations for the construction of Tao Fong Shan buildings, he published vivid stories of his travel in almost every issue of *Buddhist Missionen*, The two most impressive series of stories are respectively one about the Tibetan journey made together by Reichelt and the Prip-Møllers during June through October, 1932 , and the other about Reichelt's journey to Mongolia and North China in 1935. During the first of the above-mentioned journeys, Reichelt and the Prip-Møllers first sailed by steamship from Hong Kong to Shanghai, and then sailed from Shanghai to the upper reaches of the Yangtze River, passing by Nanjing, Wuhan, Yichang, Wanxian, Chongqing, Kiating Fu, Omei Mountains, and Tatsianlu. Everywhere they went, they would visit some

Figure 9. Tao Fong Shan during June-August, 2017

local Buddhist monasteries. Reichelt would describe in details those monasteries, measure the size of their great halls, comment on their architectural style, and compare their architectural style with that of Tao Fong Shan. The reason why he traveled together with the Prip-Møllers was perhaps that they thought it would be easier for them to exchange ideas on how to improve and perfect Tao Fong Shan's architectural style. The second journey was almost as marvelous as the first. After visiting the Lama temples in Inner Mongolia, Reichelt also visited many famous Buddhist temples on Wutaishan Mountains, one of the four sacred lands of China's Buddhism. Then they went on to visit the Nestorian Tablet in Xian, and other scenic spots of Huashan Mountains, and Longmen Gottos. On their way back to Hong Kong, they passed by Hankou, Nanjing, Shanghai, and made a special visit to Hangzhou, where Reichelt visited Lingyin Monastery for the fourth time, where he also met S. D. Sturton, superintendent of the CMS hospital, and Robert Ferris Fitch, vice president of Hangchow Christian College.

4   Conclusion

From the above review and analysis, we understand that the original idea of having a Buddhist architectural style for the Christian ecumenical center came from Karl Ludvig Reichelt. As a scholar of comparative religions, he found many common features between Chinese Buddhism and the Gospel of John in New Testament. In order to promote the missionary work among China's Buddhists, he tried to create an environment in which the inquiring Buddhists would find it comfortable and at ease. Reichelt's another contribution is in raising money for the construction of Tao Fung Shan buildings. His method of

crowd funding proved to be practical and effective.

The co-operation between Reichelt and the Danish architect Johannes Prip-Møller is the most important factor for the evolution of architectural style of Tao Fong Shan. Prip-Møller had ten years' experiences of working in China and was a top-notch expert in China's Buddhist architecture. His professional expertise has ensured that Karl Ludvig Reichelt's idea of combining the traditional Chinese Buddhist architectural style and the Christian nature of Tao Fong Shan buildings could be eventually realized.

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