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Working paper

Uncertain 'tropical' grounds: histories of entanglement of social inequalities in Latin American earthquake disaster management(s)

Abstract

As the earthquakes in Haiti and Chile have illustrated recently, natural disasters reveal hidden structures of social inequalities in societies. At the same time, the social response to disasters is made responsible for producing new or deepening gaps that already exist between social groups in the affected areas.

Especially Latin American countries are not only sites of deep social inequalities, but are also frequently subjected to natural disasters. Thus, the disaster management regimes in the aftermath of Latin American catastrophes are of major importance for the study of social inequality.

Such regimes are heterogenous, complex figurations of local, national and international agents, who themselves are unequally endowed with resources and capacities of access. Moreover, in post-colonial countries those power asymmetries between actors on different scales involved in a disaster management regime reflect the interdependent entanglements between former colony and metropolis. If transnational and international emergency aid reduces or perpetuates social inequality it must be analyzed in this context. Knowledge about local conditions plays a decisive role in this process. What is recognized as relevant knowledge about the affected societies by local, national and international agents? How is knowledge bargained between those agents? How do perceptions of the self and the other influence the deliberation of knowledge?

The purpose of this paper is to approach this set of questions and thereby the influence of disaster management regimes on social inequality, presenting a historical sociology of knowledge research design focusing on the earthquakes in Nicaragua in 1972, in Mexico-City in 1985 and in Haiti in 2010.?

Introduction

Migration, climate change, environmental conservation or the global allocation of resources – several major questions of contemporary interest in a globalized world are linked to natural disasters and are also entangled with questions of social inequality. Research on disasters, their consequences and possible prevention in relation to the studies of social inequalities is therefore an increasingly important issue of academic enquiry in social sciences.

Especially post-colonial countries of the 'tropics' are in the focus of disaster research due to their relatively high amount of hazard-related casualties. In particular Latin American countries face persistent social inequality as well as frequently occurring natural disasters.

Here, a disaster opens a window of opportunity for transnational and international agents to cooperate with local agents in countries which have a long history of foreign interventions. Together they form a disaster regime, an *ad hoc* type of governance

during the first weeks and months after a disaster.

Recently, media coverage of the Haiti earthquake has highlighted the asymmetry in resources and power between international and transnational agents on the one hand and national authorities and local organizations on the other side. In addition to such unequal conditions *inside* a disaster regime, all of its agents must cope with social inequalities in the affected societies and can be judged by the effects of their disaster related management efforts on reducing or perpetuating it. The relation between the inequalities “inside and outside” of a disaster management is the aim of the research presented in this paper. The analysis of knowledge circulations in the case of a disaster is its entry point.

Problem statement

Knowledge circulation between the agents of a disaster management has often been stated as crucial for a working disaster regime (Wisner 1995; Sobel/Leeson 2007). On the local level, a functioning exchange of knowledge is considered vital for the immediate rescue, the distribution of help and the mitigation and prevention of a disaster in general.

However, knowledge is also perceived as a valuable resource for transnational insurance companies specialized in covering disasters. Furthermore, international organizations as well as transactional NGOs rely on knowledge in order to assess the local situation and evaluate their own efforts. The efficient flow and gathering of knowledge is for those reason the main concern of most of the investigations of knowledge and disasters. Knowledge is correspondently frequently perceived as a resource or a good, isolated from social and cultural practices.

Asymmetries in the access and use of knowledge and especially the embeddedness of local agents of a specific disaster regime in a regional and global macrostructure of professionalized disaster management institutions and rules are rarely addressed. The majority of studies of disasters and social inequality focus exclusively on the potential risks of becoming a victim and obscure the role of foreign intervention, hegemonic agents and unequal capacities in the circulation of knowledge before and after a catastrophe. The intention of this paper is therefore to raise the question what knowledge circulates between the agents of a disaster regime and how this knowledge reflects existing patterns of social inequality on a transregional scale. Such an analysis

enables an understanding of disaster as an unfolding political history of a global regime and its respective implications on a local level.
The following research questions should guide such a historical sociology of knowledge research on major Latin American earthquakes.

> What is recognized as relevant knowledge about the affected societies by local, national, transnational and international agents?
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> How is knowledge bargained between those agents?
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> Which knowledge is circulating between the agents?
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> Which forms knowledge is not accessible and how is monopolizing it?
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> How do perceptions of the 'self' and the 'other' influence the deliberation of knowledge?

Conceptual Framework

From Consent action to Vulnerability

Research on disasters initially developed during the 1920s and peaked within the 1950s when they were triggered by the Cold War and fears of nuclear strikes. The main emphasis then was on degrees of organization of social groups facing a catastrophe. “Quick Response” studies followed major disasters, analyzing the response of groups and communities. Most findings accentuated the consent behavior of actors adapting to a catastrophe. Social cohesion seemed to be the widespread reaction to disasters. The main purpose of those early investigations was to directly improve the performance of agents, institutions and politics after a disaster (Tierney 2006).
During the 1970s, a major paradigm shift occurred towards social constructive explanatory models, mainly influenced by the article *Taking the Naturalness out of Natural Disasters* by O'Keefe et al. (1976). The authors argued, based on quantitative evidence from third world countries, that the root causes of casualties in disasters were socio-economic structures. The unequal distribution of disaster-related casualties in

countries of the center and in those at the periphery of the world system functioned as the main argument considering disasters as merely social facts. The effects of a physical hazard were consequentially degraded to the role of a trigger or even just to an event associated with the post-disaster situation. Today this is the common perspective amongst sociological scholars of disasters. ”We now assert that most natural disasters are more explainable in (...) conditions of inequality and subordination in the society rather than the accidental geophysical features of a place“ (Oliver-Smith 2009: 17). The social condition before the catastrophe and its inequalities therefore gained importance for scholars of social sciences. Since then studies on social inequality and on disasters have been narrowly connected.

In order to describe the unequal preconditions of social groups or countries which result in being more affected by natural hazards, O’Keefe et al introduced the concept of vulnerability as the inability to withstand the effects of a disaster. In contrast to the former emphasis on consensual action, vulnerability studies highlight the diverse disaster-related experiences of social groups.

The purpose of vulnerability studies is thus to identify patterns which explain why some social groups are more affected by disasters than others. Findings of research based on the vulnerability paradigm strongly indicate that the patterns of social inequality in a post-disaster situation reflect the stratification of a given society in a 'normal' state. “Disaster research (...) developed the concept of vulnerability to frame how social systems generate the conditions that place different kinds of people, often differentiated along axes of class, race, ethnic, gender, or age, at different levels of risk” (Ibid.: 18).

Cannon et al. (1994) later refined the vulnerability concept introducing the influential *Pressure and Release Model*, which defines disaster as an intersection between social pressure and a releasing physical exposure. Social pressure consists of root causes like limited access to power, structures and resources in relation to the limitations of a society’s economic and political systems. But it is also shaped by dynamic pressures, like ecological degradations and demographic changes and by unsafe conditions, like the physical environmental. The model operationalises the outcome of a disaster as a combination of vulnerability and risk. Vulnerability studies are for this reason also linked to the study of risks (Beck 1995).

Critics of Vulnerability

Critics of vulnerability approaches have argued that it perceives social groups as passive victims and underestimates intersubjective interpretative patterns of disasters (Hewitt 1983). “As risk and vulnerability are socially distributed, disasters are also both socially constructed and experienced differently by different groups, (...) entangled and fundamentally bound up with social practices and their characteristic modes of cultural representation” (MacNaghten/Urry 1998: 30). In reaction to this objection it has been recognized by several scholars that disaster studies must consider the interdependent mechanisms behind vulnerability and its modes of representation. Disasters “are brought about by multiple complex and intersecting forces acting together in a specific social context that is complex in its own right. These linkages and interdependencies are often referred to as coupling processes between social and ecological systems. The functioning or operation of these coupling processes in the context of crises and catastrophes is now a major research challenge” (Oliver Smith 2009: 16).

Although interdependencies become partly integrated in research agendas, they are still located *in* the affected society. “Vulnerability research framed disasters as inevitable outcomes of the functioning of particular configurations of a society” (Ibid.: 17) and rarely as a result of a transnational disaster regimes. Moreover, although it is widely recognized that transnational and international agents play an important role in disaster regime(s), the perception and interpretation of natural hazards beyond methodological nationalism is still a major void in disaster studies. The purpose of the research proposed in this paper is therefore to clarify the transnational interdependencies in disaster regimes by adapting a transregional perspective.

A transregional perspective on disaster management

Based on the higher or lesser relevance given to the 'naturalness' of natural disasters, Cannon et al. (1994) distinguish between realistic, weak constructionist and deconstructive approaches towards disasters. While most of the studies can be situated in a realistic or a weak constructionist research paradigm, there are only few authors who argue out of a deconstructivist position.

From a deconstructivist perspective influenced by postcolonial theory, Nature and Society aren't different entities any more, but must be seen as a specific Western narrative, in which natural hazards since the 19th century have been associated with

unsafe and wild places. In the field of disaster studies, Bankoff (2001) employed such a perspective to describe the perception of vulnerability in disaster management as a neocolonial discourse. Even if vulnerability is socially distributed, it is its localization in former colonies that perpetuates the image of the 'unhealthy tropics'. By classifying “some regions of the globe as more dangerous than others” (ibid: 25) the focus is on the incapability of 'underdeveloped' countries to recover and withstand disasters. Vulnerability replaces in his opinion today the 'tropicality' of the 19th century and the 'underdevelopment' of modernization theory. Foreign intervention that has been perceived as 'colonialism' in the past and as 'aid' in the postwar period currently takes the appearance of 'relief'. Referring to the regions of the 'global South' Hewitt calls them “defenseless spaces” (1983: 164) and Watts and Bohle speak of “spaces of vulnerability” (1993: 121).

Deconstructivist studies blame vulnerability to be similarly deterministic as technical approaches that root disasters in the lack of knowledge to predict them. Both require knowledge to be exported in order to modernize disaster prevention. The main criticism towards vulnerability based disaster research is after all that it obscures the unequal relations between former colony and Western societies. “By extension, international efforts to 'manage' aspects of the impacts of hurricanes, droughts and volcanoes on behalf of poor, former colonial countries could also be considered a form of ecological modernization. However, the fatal flaw in ecological modernization is that it never deals with root causes. It is therefore never-ending and self-perpetuating” (Cannon et al. 1994: 18).

Although vulnerability was useful to accent the social background of 'natural' disasters, it must be adjusted by a transregional postcolonial perspective. The proposed research has for this reason a double transregional approach: Instead of focusing only on the victims of a disaster, it analyses local *and* foreign agents of a disaster regimes. At the same time it investigates the perceptions of knowledge of disaster regime agents using a methodology informed by postcolonial thought.

A disaster is in this context understood as the interaction between a developing global system of institutions and rules and local agency. The aim of the research presented in this paper is to show how knowledge is mutually, but under unequal conditions transferred amongst those levels of analysis in the unfolding of a global disaster regime.

The importance of knowledge

Although deconstructivist approaches have been considered useful for the appraisal of disasters, most of the scholars of disaster studies “part company with strong social constructionist approaches because we believe they do not lead, in any direct way to an improvement in practice” (Wisner/Blaikie/Cannon/Davis 1994: 19). Despite this allegation, this paper is based on the assumption that the problem described here is of particular interest to other scholars or practitioners in the field, because it can contribute to the practice of disaster regimes. Since earthquakes as a natural hazard cannot be easily associated with human activity like hurricanes with climate change, there exists a certain affinity between earthquakes and realistic approaches. Hence it is of particular importance to develop a deconstructivist approach on earthquakes. Moreover, since knowledge is considered indispensable for the functioning of a disaster regime, a better understanding of social and cultural embeddedness of knowledge circulating in disasters regimes will have a considerable effect on the agents' practices.

Knowledge is here understood based on Schareika (2004: 32) as a “process of generation, communication and application” of shared perceptions. The research follows debates on knowledge in development studies and anthropology, where critique of deterministic methods is more established than in disaster studies (Escobar 1995). Here, reception of the classical sociology of knowledge approach that situates knowledge in a specific socio-historical context has influenced the debates on local, indigenous or traditional knowledge. Whereas it is highly contested if it is possible to determine what is meant by 'local', 'indigenous' or 'traditional', there has been a fruitful debate about the power asymmetries in the handling and perception of knowledge. Most notably the concept of otherness posed the question of who is framed as a knowledge carrier and what is considered to be knowledge. Both reflect structures of social inequality. Instead of producing a new taxonomy of vulnerability based on the dependencies of social groups, the research presented in this paper will follow an alternative approach to inequality and disaster using the concepts of otherness and knowledge.

Choice of Cases

The research drafted in this paper proposes a an investigation of knowledge circulations after three major Latin American earthquakes: 1972 in Nicaragua, 1985 in Mexico and 2010 in Haiti:

The cases chosen for this research are relevant for this study for four reasons. First, the choice of cases allows the investigation of the specific patterns of a transregional disaster regime beyond a national narrative. Although the chosen countries are very different in many aspects, they share a common history of colonialism and frequent interventions. Together they depict the development of a professionalized global disaster management structure. The 1972 Nicaragua Earthquake and the 1985 Mexican Earthquake, because of their enormous international media echo, were important steps for the implementation of global institution building, the formation of transnational NGOs and the setting of economic practices concerning disasters. A machinery, which is used in the Haiti of 2010.

Second, each of them is associated with the narration of a fundamental social change for Latin American societies. The 1972 Nicaragua Earthquake stands for the end of US supported modernist dictatorships, the 1985 Mexico Earthquake reflects the 'lost decade' of the eighties in Latin America and the beginning of neoliberal adjustments and the 2010 Haiti earthquake is taken as an example for the nation-building discourses of the late nineties and the new millennium. Since the deconstructivist and diachronic approach of the presented research project wants to reconstruct similarities and interdependencies between the cases, those very different disaster-narratives are appropriated contexts for the proposed investigation.

Third, there is a tendency to narrate disasters as part of event history. The choice of the cases covers a large time frame, which does allow conclusions about the *longevity* of Latin American disaster regimes.

Fourth, the Managua and the Mexico D.F. earthquakes are frequently used examples in disaster studies to illustrate how a disaster can trigger a national change. (Pelling/Dill 2009; Olson/Gavronski 2003) The media coverage of the Port-au-Prince earthquake as well emphasizes its impact on the change of the path dependency of the Caribbean country. The analysis of transregional knowledge circulations challenges this perception.

The 1972 Nicaragua Earthquake

Two seismic shocks hit Managua the day before Christmas in 1972. 5,000 inhabitants were killed, 20,000 injured and 250,000 left homeless. Two thirds of the capital's population was displaced and almost the entire city was destroyed. 25 countries approved aid for the reconstruction process, but even today parts of the old city center

have not been reconstructed yet. Most of the resources were transferred to the governing Somoza family. The extremely unequal disaster regime is often held responsible for triggering the Nicaraguan Revolution. The disaster is of particular interest in the context of the Cold War constellation and modernization theory. The struggle of the two superpowers created new kinds of policies to “win the heart and minds of the people who lived in these regions (...), Western investment and aid policies effectively divided the world (...) between donor and recipient nations” (Bankoff 2001: 22). In the context of the research presented in this paper the Nicaraguan earthquake marks the beginning of a global disaster management structure. The broad solidarity all over the world triggered an institution building on the global level, which has been influenced by the Somoza disaster management.

The 1985 Mexico-City Earthquake

During almost two minutes, the grounds of Mexico-City were shaking in the earthquake on September 19, 1985. Despite the fact that only a small part of the city was affected, the damage in the city center was disastrous. 10,000 persons died and 700,000 became homeless. Particularly the solidarity and self-organization of the civil society facing this disaster has often been stated, but also the malfunctioning of the executive of the Mexican state. The reconstruction of the city center lead to the reconfiguration of the social structure of the whole city. The intervention of transnational and international agents is generally neglected in this case; however hundreds of volunteers and considerable amounts of foreign aid reached the country. The disaster is mostly interpreted as a wholly national event, in which the process of democratic transition began. The earthquake also opened a new field for the testing of a global disaster management studies and new market for privatized disaster mitigation and for the recalibration of policies of insurance companies.

The 2010 Haiti Earthquake

The fatal earthquake hit Port-au-Prince on January 12, 2010. 230,000 persons died, 300,000 were injured and an estimated million Haitians lost their home. There has been enormous attention of mass media which have frequently been framing the country as a failed state. The involvement of US military forces and transnational NGOs and their intentions to (re-)build the nation has also been widely noticed. The intrusion of foreign

military forces and institutions has prompted critics to talk of neocolonial structures and unequal allocation of emergency resources. The Haiti earthquake provides a perfect testing ground for the conglomerate of institutions and organizations active in the field of disaster management.

Methodology

The discomfort in social sciences and historical studies about methodological nationalism in a world more and more perceived as deeply connected has led to a turn towards the invention of new methodologies and methods with the focus on exchanges, transfers and interdependencies. The concepts of Connected History (Subrahmanyam 2005), Entangled Modernities (Conrad/Randeria 2002), Transnational Social Inequalities (Berger/Weiß 2008), Histoire Croisée (Zimmermann/Werner 2006), Transnational History (Osterhammel/Conrad 2004) or the study of circulations (Solomon 2008) are examples of such a recalibration of epistemic tools. At the same time the levels of analysis in historical studies are transformed into more globally focussed investigations. Concepts like World History (Mazlih 1998), Global History (Berg 2007) try to connect a global view with local perspectives. The research presented in this paper wants to follow up on these debates, proposing a synthesis of the postcolonial history of entanglement and the methodologically very precise histoire croisée. As already described, a transregional methodology provides a vital antidote to a victim-centered understanding of disaster regimes.

History of Entanglement

The concept of entangled history is an alternative to comparative history, as it avoids Eurocentric implications. It criticizes the conception of European history as autonomous and homogenous and rejects the role model function of European modernity and the binary perception of a 'self' and an 'other' embedded in Western thinking. Instead it highlights the entanglements between different societies, but mostly between colony and periphery, and the interdependent diffusion of knowledge. Non-European countries are not any longer perceived as objects of knowledge, but the knowledge itself is re-situated in an entangled modernity, since the accentuation of entanglement alone does not reveal the modes of interaction. Randeria therefore demands concrete studies of gradual entanglements (Conrad/Randeria 2002: 18). The proposed research adapts this

demand for the study of disaster regimes.

Histoire Crosée

The Histoire Croisée as well as Randeria's approach try to avoid a nationally bound perspective. It investigates mutual transfers by comparing several objects of analysis. In this case a diachronic comparison of three different earthquake disaster managements provides on different modes of knowledge circulation. At the same time the cases are related to a developing global structure of disaster management. By using more than one observation point, the method allows also the reconstruction of this large historical processes of reciprocal exertion of influence. Each of the cases enables the analysis of knowledge transfers and circulations within the local disaster management and between the global structure of emergency aid and the local level.

Methods

For this purpose the first step of the analysis is the mapping of the agents of the chosen disaster managements. The agents will then be conceptualized in reference to Long (32001) as *knowledge brokers* who are negotiating in a *knowledge interface*. Second, the institution, organizations and companies of the global disaster management regime will be identified. Their development will be ordered chronologically.

The interdependent negotiation of knowledge is analyzed using narrative interviews and primary textual sources, like handbooks of emergency management, reports of NGOs, or military instructions. The information provided by transnational insurance companies like the Zürich and Munich Re will also be an important cornerstone of the empirical analysis. The identification of discursive patterns of otherness will together with an analysis of practices of knowledge circulation provide insights into interdependent configurations of social inequality, power and knowledge.

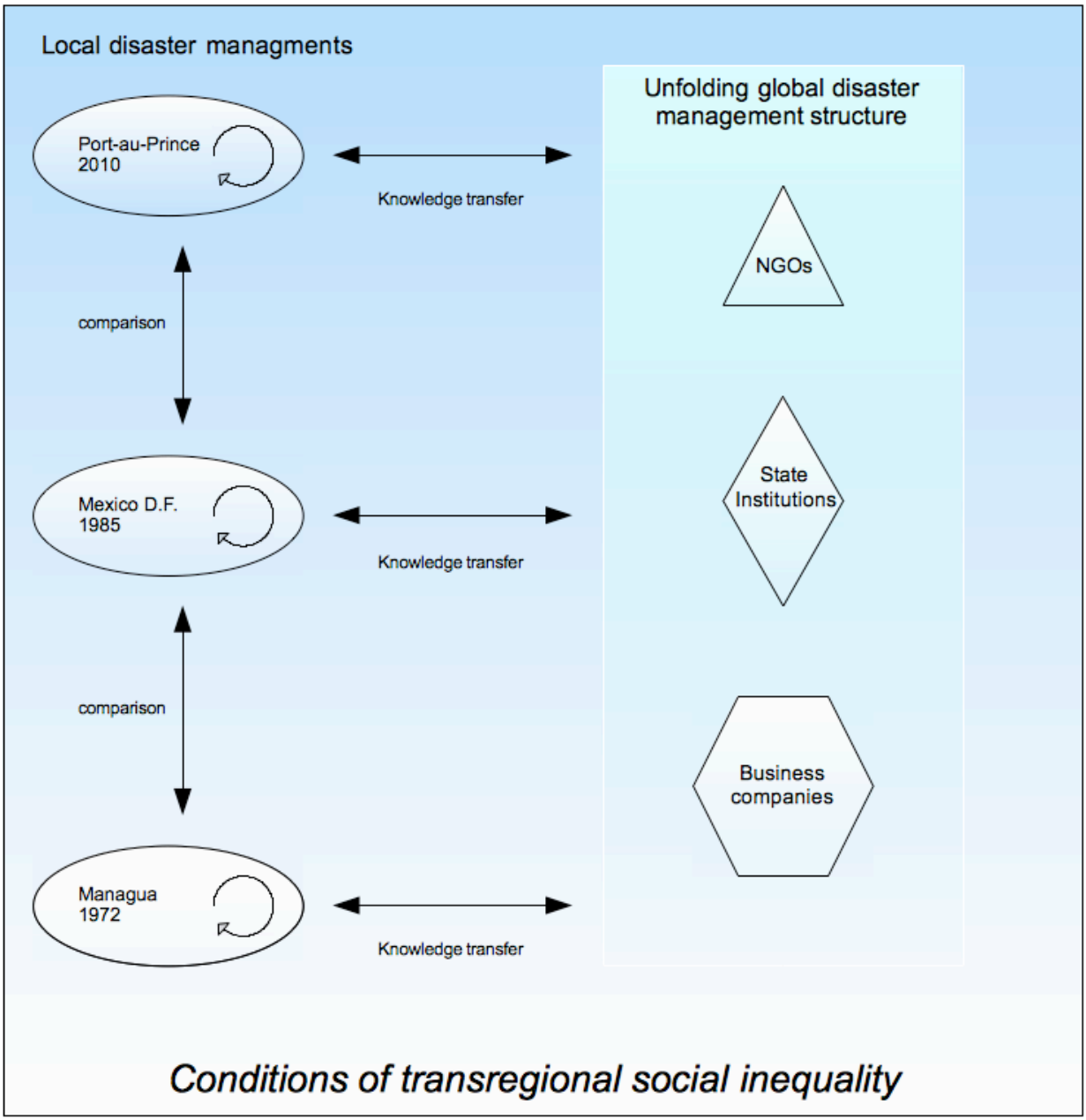

Figure 1: A schematic of the research proposed in this paper

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