



Penn State Harrisburg

Methods to integrate considerations on culture, ethical aspects and citizen acceptance into resilience-enhancing urban infrastructure planning and increased societal security

Global Forum on Urban and Regional Resilience at Virginia Tech

Conference Series: New Perspectives on Resilience

Normative Dimension of Resilience

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Background

- Now: Professor of Homeland Security and Chair of the inter-college Master of Professional Studies Program in Homeland Security (iMPS-HLS), Penn State Harrisburg
- Was: Professor of Security Research at Sigmund Freud University Vienna and a principal investigator in the EU co-funded security research project VITRUV: Vulnerability Identification Tools for Resilience Enhancements of Urban Environments
- Interested in: Using VITRUV results in homeland and civil security research and for curriculum enhancement and internationalization



iMPS-HLS program

- Master of Professional Studies in Homeland Security, based on an all-hazard and civil security research approach
- One program taught in a common core module and five different options
- 6 colleges working together
- Delivered exclusively online by Penn State World Campus

iMPS-HLS vision

- Achieve excellence in higher education within the emerging and growing homeland security discipline to serve the future leaders of the homeland security enterprise, as well as those who seek to become leading future scholars in the field.
- Give full consideration the requirements of employability and workforce transformation in the homeland security enterprise while teaching to the state of the art of the field.
- Combine research with curriculum evolution to enhance student employability and meet the needs of the homeland security end-user, i.e., employers in both the public and private sectors.
- [...]

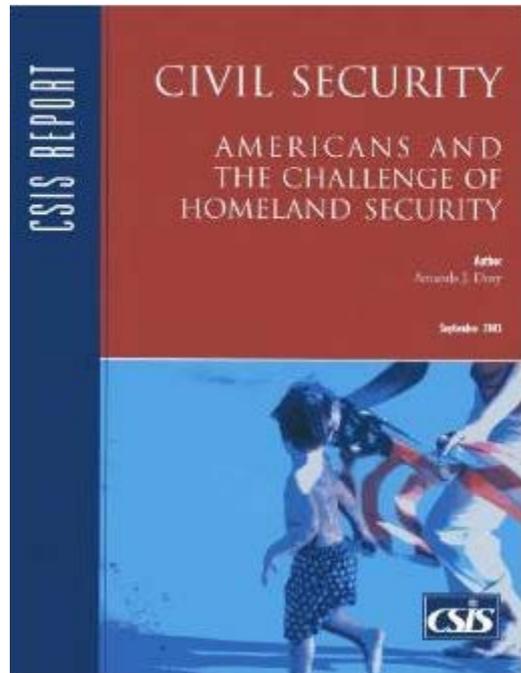
Study plans

- 33 credits, 9-credit common core curriculum
- In addition to the common core curriculum, students choose:
 - the Base Program in Homeland Security, or
 - one of currently four Options:
 - Public Health Preparedness
 - Geospatial Intelligence
 - Information Security and Forensics
 - Agricultural Biosecurity and Food Defense
- New: International track

Unifying goals and objectives

- Understand major policies and legislation that shapes homeland security in a globalized society.
- Become familiar with organizations that play a key role in the implementation of homeland security policies and administration, and recognize the interactions among them.
- Understand the way in which a person or group responds to a set of conditions so as to prevent and respond to incidents and catastrophic events when needed.
- Recognize the impact that catastrophic events, both natural and man-made, have on society and the domestic and global economy.
- **Identify and assess potential threats, vulnerabilities, and consequences.**
- Apply leadership skills and principles that are necessary for producing and acting on information of value within a collaborative setting.
- Communicate effectively in the context of particular institutional cultures.
- **Use, conduct, and interpret research and data effectively in decision-making.**
- **Practice ethics and integrity as a foundation for analytical debate and conclusion.**
- Develop an appreciation of **the cultural, social, psychological, political, and legal aspects** of terrorism and counterterrorism.

Civil Security Research



The European Security Research Advisory Board (ESRAB) defined Security Research as “research activities that aim at identifying, preventing, deterring, preparing and protecting against unlawful or intentional malicious acts harming European societies; human beings, organisations or structures, material and immaterial goods and infrastructures, including mitigation and operational continuity after such an attack (also applicable after natural/industrial disasters).”

(ESRAB Report: Meeting the Challenge: the European Security Research Agenda - A report from the European Security Research Advisory Board, September 2006, p. 20)

U.S. HSE and SR functions

The first Quadrennial Homeland Security Review (2010) and previous work established the Homeland Security Enterprise (HSE) as an, “Enterprise with a shared responsibility of federal, state, local, tribal, territorial, nongovernmental, and private-sector partners—as well as individuals, families, and communities. Diverse and widely distributed, spanning the country and including international partners, the homeland security enterprise jointly builds capabilities and carries out **homeland security functions**”.

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Security research core approach

- Analysis of a part of society and its material (e.g. critical infrastructure) and non-material (e.g. resilience) foundations
- Identification of risks and threats to which the object of analysis is exposed
- Deduction of “security gaps”
- Development of research questions based on the identified “gaps”; typical topics include:
 - Harmonization of different security systems
 - Collaboration at system transition points (such as public – private)
 - Distribution effects of security interventions
 - Citizen acceptance of security technologies and interventions
 - Early identification/warning of “security gaps”
- Prioritization by negative security impact of each “gap”
- The objective is to develop capabilities to close the “security gaps”

The VITRUV toolsuite

www.vitruv-project.eu



Quick risk assessment tool



Online urban security
knowledge base



User manual for SecuRbAn
and Securipedia

The VITRUV project

- “Vulnerability Identification Tools for Resilience Enhancements of Urban Environments”, FP7 SECURITY, 2011-2014
- <http://www.vitruv-project.eu>
- VITRUV is a security research project
- *“The Security Research & Innovation programme’s primary goal is to protect Europe’s citizens and society from harm, while enabling its economy to recover from man-made or natural disasters.” (EC)*



EU'S FOUR MAIN SECURITY MISSIONS

Crisis Management Cycle

- In urban environments, all phases can occur at the same time.
- Security research and urban planning = integral and essential part of the mitigation and preparation phase for crisis, response and recovery.
- VITRUV focus on mitigation and preparation (preparedness).



Resilience (Securipedia)

- Incorporating both safety and security consideration in the process of urban planning can contribute substantially to the resilience of an urban environment, by reducing potential vulnerabilities and impacts and supporting effective crisis management.
- Planning can contribute to building a system (of both social and of built environment) **“to either absorb or respond to negative external influences or to more generalized experiences of perturbation.”**
(Coaffee/Wood/Rogers 2009: 122)

New Security Studies – Focus on Societal Security

New Security studies as Shifts in Four Key Areas

Based on J. Peter Burgess (ed.):

The Routledge Handbook of New Security Studies, 2010

- **New security concepts**

Hybrid threats, civilizational security, human security, comprehensive approach, smart security, etc.

- **New security subjects**

Biopolitics of security, Financial Security, Security as Ethics, etc.

- **New security objects**

Environmental Security, Food Security, Financial Security, CyberSecurity, Pandemic Security, etc. → **Urban Security**

- **New security practices**

Migration and Insecurity, Security Technologies, Commercial Security Practices, etc.

Societal security perspective

- While security aspects do not always figure prominently in urban planning, much of that planning has effects on citizens' security.
- *New Urbanism* and the “socio-spatial perspective”: urban space and society interact and “social space operates as both a product and a producer of changes in the metropolitan environment” (Gottdiener/Hutchinson 2011).
- Putting one focus on ‘soft’, such as cultural, aspects in urban planning will help urban planners identify how their planning decisions may directly or indirectly affect societal security.
- Where security means: a high level of safeguard for the infrastructure, the supply of goods and services as well as for the commonly acquired values of a community.

Focus of own contribution

- Addressing security aspects in strategic urban planning;
- Integrating and representing state of the art;
- Working towards conclusions/recommendations for addressing security aspects in urban planning that go beyond state of the art;
- **Normative dimension of resilience** - Methods to integrate security-relevant considerations on **culture aspects**, **ethics aspects** and **citizen acceptance** as they relate to resilience-enhancing urban planning into conceptual planning urban planning;
- Methods how this can be done in a citizen involving/activating way.

VITRUV tools for resilient cities

- Conceptual tool/knowledge base (*“Securipedia”*): wiki-based.
- Urban Risk Assessment tool (*“SECURBAN”*): based on checklists and assessments that integrate qualitative and quantitative data.
- Other tools.
- Overarching tools.
- Input to work-package level tools:
 - Contribute content based on its expertise (other partners contribute content from their expertise; i.e. the tools are not culture/ethics tools but this is one aspect/dimension of content among others)
 - Results of a study based on literature review, desktop research and external experts assessments.
 - By identifying and validating practical methods to integrate social and cultural aspects in an urban planning tool, project results will facilitate the consideration of the multiple dimensions of threats and vulnerabilities in their context of urban planning.

Selected state of the art

- The way in which built environment is changed and developed influences the security of infrastructures and of society as a whole (cf. Boisteau 2006).
- Built environment is intrinsically meaningful, it has its particular “semiotics” (Gottdiener/Hutchinson 2011: 394) that also tell about security and e.g. affect public perception of built environment and its susceptibility to risk.
- While urban sociology and urban planning have gained much insight on environments such as “pleasant”, “calming” or “exciting” (cf. Nasar 2011: 168), “secure environments” have been addressed to a far lesser extent.
- The “ecological” perspective (Michelson 2011) in urban sociology explores what happens in social terms as a consequence of the exposure of people to built environment.
- Possible consequences include social exclusion of specific parts of the public, as reprimanded by cultural criminology (cf. Garland 2001).

Culture aspects (1/5)

- Structural and social dimensions of a public area overlap each other; therefore, a public space is also a social place; this sets limits on approaches such as “designing out” crime:
“New Urbanists, like many architects, believe that social goals [...] can be achieved through the physical means of design and construction. This is a fallacy. Residents of communities do not behave in certain ways simply because well-known architects direct them to do so.”
(Gottdiener/Hutchinson 2011: 331; cf. also Whitzman 2011)
- Urban planning is increasingly considering the fact that public spaces are used by different types of people, with different usage and needs.
- This awareness is important both from the researcher’s and the practitioner’s point of view, since it contributes to resilience-enhancing planning, considering the multidimensionality of threats and vulnerabilities present in urban space.

Culture aspects (2/5)

- Conceptions of risk, security and solutions to security problems vary according to the organization of political and social relations.
- Risks are selected as important because they reinforce established interpretations and relations within a culture, thus reproducing the symbolic foundations of a community: *“Common values lead to common fears [...] There is no gap between perception and reality.”* (Douglas/Wildavsky 1982: 8)
- In other words, there is no risk ‘out there’, but risk is always selected from within a society, based on cultural backgrounds: Risk is a ‘social construct’ and cannot sensibly be assessed against an ‘objective’ or ‘factual’ notion of the concept.
- The identification of “weak points” in urban environments thus has to be seen as socially negotiated and constructed sense-making that takes place in cultural contexts (Falkheimer/Heide 2006).

Culture aspects (3/5): Conclusions

- *Get to know culture:* Familiarize with public security cultures, which influence citizens' acceptance of built environment and urban security.
- *Mind cultural meaning:* Consider the influence of culture on urban structure and of urban planning on culture, bearing in mind that culture aspects go beyond preserving historic artefacts and protecting the traditional image of the city.
- *Analyze risks comprehensively:* Use the culture of risk of a society in order to determine security aspects in urban planning and needs to protect that may be overlooked by technological approaches to risk analysis.
- *Integrate cultural components of resilience:* societal preparedness, social networks, etc. Planning should work with – not over or against – those aspects. Resilience as capability to learn and adapt to changing environment essentially involves societal characteristics.

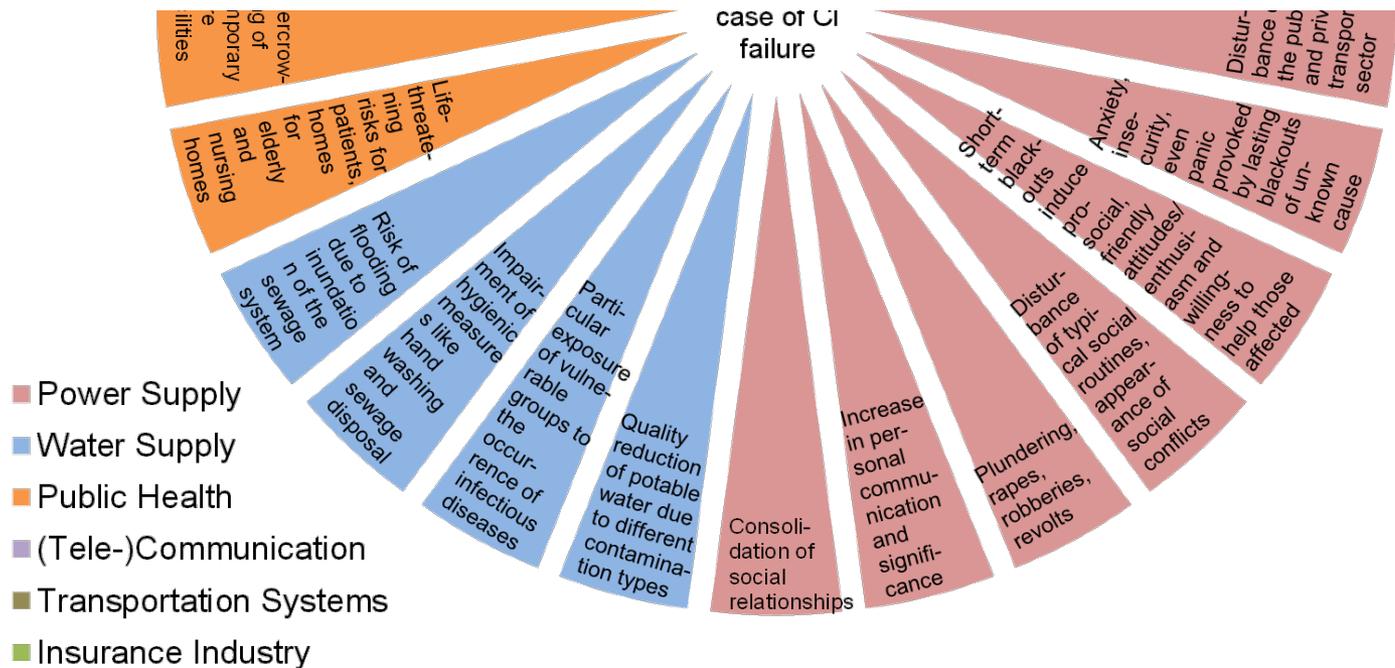
Culture aspects (4/5): Tool-level (1/2)

- List of indicators to assess citizens' felt risks to urban infrastructure and needs to protect it

Indicator	Effects on citizens' felt risks to urban infrastructure and needs to protect	Methods to determine the effects
Experienced/ expected extent/duration/ season of harm to infrastructure	Multiplication of breakdown consequences (e.g. power breakdown in winter season; disruption of passenger transport) increase citizens' felt risks to urban infrastructure and needs to protect.	Interviews and surveys; analyses of available case-studies (e.g. on power breakdowns)
Direct experience of harm to infrastructure	Visibility and direct experience increase citizens' felt risks to urban infrastructure and needs to protect.	Analyses of available case-studies (e.g. on nuclear accidents or on supply)
...

Culture aspects (5/5): Tool-level (2/2)

- Social impacts of urban critical infrastructure failure



Ethics aspects (1/3)

- It is neither undisputed nor easy to address citizens by built infrastructure in order to influence their behaviour. The reason for this is that citizens 'read' built urban environment in different ways (cf. Nasar 2011).
- “Designing out” approaches have been criticized for an infrastructure-based “clubbing of private security”, which contributes to the deconstruction of security as a public good to the benefit of a short-sighted approach of mere physical risk reduction (Hope 2001: 216).
- Others have criticized the production of security by use of exclusionary practices (Hughes 2007) and called for communitarian reasoning to reconcile the idea of security with that of community (Loader/Walker 2007).
- Desire for security should not lead urban planning to contributing to threatening citizens' lawful rights of expression and dissent, owing to the old principle that city air should make people free, rather than constrain them (cf. Whitzman 2011: 670-671).

Ethics aspects (2/3): Conclusions

- *Address ethics aspects in an investigative way:* Decisions about how to configure and live within the built environment have ethics dimensions that are sometimes hard to see.
- *Critically address planning requirements, including identified culture aspects of security, in the light of ethics aspects:* Security by design should be checked against risks of deconstructing security as a public good (such as common accessibility of public space).
- *Identify risks of creating uneven distribution of security in society:* Urban design addressing security aspects may contribute to selective delivery of security, contributing to making secure or wealthy citizens more secure, and vulnerable or less prosperous citizens more vulnerable.
- *Actively contribute to limiting potential for (e.g. criminal or terrorist) abuse of sensitive planning information and data.*
- *Involve citizens in planning decisions:* This not only increases legitimacy of planning decisions, but it is also a requirement from comprehensive consideration of resilience.
- *Consider the various situations, perceptions of (in)security, needs and perspectives of men and women*

Ethics aspects (3/3): Tool-level

- Checklists, covering aspects such as:
 - Distributive justice (idea of same security [level] for all)
 - Sustainability
 - Citizen rights
 - Personal data protection
 - Gender perspectives
 - Acceptability of planning decisions

Citizen acceptance aspects (1/2)

- Checklists such as on factors that affect citizens' perception of risk
- Information integration and checklists on types of citizen participation for use in urban planning consultation processes

Method	Description of the method	Security considerations for planning of public spaces	How does the method work?	Source
<p><i>Activating opinion survey</i></p> 	<p>In an activating opinion survey residents are asked about their views and attitudes; at the same time, they are encouraged to stand up for their interests and to take part in developing solutions for their surroundings.</p> <p><i>Process:</i> Key individuals and residents are interviewed, material is evaluated and observations are made.</p> <p>Residents are informed in writing about the actual survey in advance; trained interviewers use an interview skeleton with open questions to do one-to-one interviews.</p>	<p>The aim is to identify the residents' fears, wishes and worries; at the same time, they are asked what solutions occur to them, and how interested they would be in taking part in implementing the ideas in question. Suitable for finding out the interests and needs of people living in a particular area.</p>	<p>The survey is evaluated and the results presented to the residents, with the aim of defining steps toward realization. Interest or action groups are formed with a view to this.</p>	<p>Austrian Federal Ministry of Agriculture, Forestry, Environment and Water, http://www.participation.at/activating-opinion.html</p>

Citizen acceptance aspects (2/2): Tool-level

- Summary of security-related missions in urban planning, addressing societal security aspects – and assigned practical, citizen-activating methods to meet the challenge

Security-related mission	Example/illustration	Tool/method to meet the challenge	Source/reference
Address/design in responses to citizens' felt risks to urban infrastructure and needs to protect	Certain artefacts as present in urban areas can distract citizens' perception of risk from the more 'objective' level of risk. For example, citizens tend to perceive monumental infrastructure as more critical than less conspicuous infrastructure, sometimes irrespective of its known function.	List of indicators derived from risk research to determine relevant kinds of infrastructure and properly address the issue of perceived criticality in urban planning.	KIRAS project SFI@SFU: http://www.sfi-sfu.eu
Match built environment with citizen user cultures	The planning process of urban environments should consider that public space is used by different social groups. Value conflicts and security problems accumulated in specific areas negatively impact planning and everyday use.	Discursive strategies and related public communication measures, like Advocacy Planning, Participatory Diagnosis, Local Dialogue or Dynamic Facilitation, are important assets in reducing public disorder phenomena.	Participation and sustainable development in Europe: http://www.partizipation.at/
Protect crowded places

Conclusions on societal resilience in the urban context

- While there are various conceptions of resilience, urban studies have linked resilience back to its ecological origins and also applied it as a concept within the context of environmental psychology.
- **Resilience** is not an equilibrium state but a **dynamic property or process**, changing and being variable over time.
- In security research, **resilience** is an evolving concept and most often used as a descriptor for a **state of capability and mid** of a system (e.g., a community) **as a whole**.
- Based on the acknowledgement that public urban space is about living and evolving, not about being watched and observed, planning decisions should **provide sufficient space for later changes and adaptations**.
- Urban research should contribute to identifying individual as well as group-specific vulnerabilities and methods to increase resilience **on a continuous basis**.

Towards a prioritization of security-related missions in urban planning, derived from the expert consultation, t.b.c. (13 experts across Europe)

1. Zoning of functional areas in the city without creating unequal levels of security in different areas (→ “new urbanism”)

2. Preventing emotional and radical reactions to “privatized” public spaces

3. Designing out crime

4. Consideration of ethics aspects in urban planning

- Protection of personal data
- Citizens’ rights
- Distributive justice (idea of same security [level] for all)
- Sustainability
- Legitimacy
- Acceptability of planning decisions



Conclusions for urban research

- **Urban research** and planning on the one hand and **security research** and security policies on the other should become more reciprocally engaged.
- Consider that even the best planning decisions, appropriately addressing the security dimension, and their implementation, are not self-enforcing but need to be embedded in **citizen acceptance**.
- **Do not apply a 'one size fits all' approach to citizen acceptance:** Each city and community is distinct, with specific population characteristics, physical spaces, government structures, values and history. Each will thus have its particular security problems and public security cultures that co-determine whether urban design will be accepted by citizens and used appropriately.
- Addressing of security aspects in urban planning should be grounded on a **holistic view/comprehensive approach**.
- **Respond to citizens needs:** Citizens always assess risks, threats and uncertainties on a subjective and individual basis.
- **Resilience essentially includes societal resilience**, and this is linked to citizens' acceptance of security-enhancing measures.

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<http://www.vitruv-project.eu>

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