

# Designing for Vulnerability: Interpersonal Relations and Design

**Abstract** Vulnerability is the feeling of being exposed and unable to withstand the effects of a hostile environment – something we typically wish to avoid. This study aims to develop and propose vulnerability as an asset when designing for interpersonal interactions. Initiatives investigating how design can foster social resilience, developed for the Central Saint Martins, University of the Arts London Cultures of Resilience project, serve a reference to analyze how designers can address interpersonal vulnerability in design practices. I identify various enablers of vulnerability for each initiative and analyze them in relation to the theoretical framework I propose. The main benefit of designing for vulnerability that it enables the possible emergence of *I-You* relations between participants. The *I-You* relations are considered one of a human being's most distinctive features.

## Keywords

Design  
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1 Editorial note: while the body text conforms to U.S. English, all project titles and institution names adopt British English where appropriate.

2 University of the Arts London, "Cultures of Resilience (CoR)," *Cultures of Resilience*, accessed March 22, 2018, <http://culturesofresilience.org>.

3 Ezio Manzini, "Weaving People and Places: What Art and Design Can Do to (Re)Build Communities-in-Place," *Cultures of Resilience*, accessed March 22, 2018, <http://culturesofresilience.org/weaving-people-and-places/>.

4 John Friedmann, "Place and Place-Making in Cities: A Global Perspective," abstract, *Planning Theory & Practice* 11, no. 2 (2010): 149, DOI: <https://doi.org/10.1080/14649351003759573>.

5 John T. Cacioppo, Harry T. Reis, and Alex J. Zautra, "Social Resilience: The Value of Social Fitness with an Application to the Military," *American Psychologist* 66, no. 1 (2011): 44, DOI: <https://doi.org/10.1037/a0021419>.

6 For more on the concept of vulnerability, see Carla M. Cipolla, "Tourist or Guest: Designing Tourism Experiences or Hospitality Relations?," *Design Philosophy Papers* 2, no. 2 (2004): 103–13, DOI: <https://doi.org/10.2752/144871304X13966215067912>. For more on the application of Martin Buber's philosophy to design, see Carla Cipolla and Ezio Manzini, "Relational Services," *Knowledge, Technology & Policy* 22, no. 1 (2009): 45–50, DOI: <https://doi.org/10.1007/s12130-009-9066-z>; and Carla Cipolla and Roberto Bartholo, "Empathy or Inclusion: A Dialogical Approach to Socially Responsible Design," *International Journal of Design* 8, no. 2 (2014): 87–100, available at <http://www.ijdesign.org/index.php/IJDesign/article/view/1255>.

7 Ezio Manzini, "Afterword: Weaving People and Places Seminar," *Cultures of Resilience*, accessed March 22, 2018, <http://culturesofresilience.org/afterword-2/>.

## Introduction

This study is part of an effort to understand how design can contribute to social resilience and community building.<sup>1</sup> It relates results from the Cultures of Resilience (CoR) program: a set of design and research activities carried out at the University of the Arts London (UAL) from January 2014 to July 2016. The goal of the project was to "build a 'multiple vision' on the cultural side of resilience by putting together a set of narratives, values, ideas, and projects that – directly or indirectly – collaborate in improving the resilience of the sociotechnical systems which they refer to."<sup>2</sup>

One of the main aims of this program was to explore the social aspects of resilience and how to foster communities-in-place. "Social resilience requires the existence of communities-in-place: groups of people who interact and collaborate in a physical context. Proximity and relationships with a place are what enable a community-in-place to self-organize and solve problems in a crisis."<sup>3</sup>

The program considered the definition of community-in-place embedded in the broader concept of social resilience. The concept of community-in-place "encompasses both a physical/built environment at the neighborhood scale and the subjective feelings its inhabitants harbor towards each other as an emplaced community."<sup>4</sup> Social resilience is defined as "the capacity to foster, engage in, and sustain positive relationships.... [It is] the transformation of adversity into personal, relational, and collective growth through strengthening existing social engagements and developing new relationships with creative collective actions." Its positive effects obtain through "meaning-making, social engagement, and coordinated social responses to challenging situations."<sup>5</sup>

The CoR program recognized the role of creativity and meaning-making in social resilience and placed its focus on exploring art and design in that context. Because social engagements and relationships are core aspects that contribute to increasing social resilience in a specific place, the projects comprised a set of artistic interventions and design solutions and processes that gathered people, groups, and communities, usually in a specific local context. The projects took place on a neighborhood scale, and sometimes focused on a specific community institution.

This article draws from previous studies related to interpersonal relations and design theory and practices based on the philosophical framework of Martin Buber. The concept of vulnerability has been described elsewhere as an essential element to be designed to nurture and favor interpersonal relations.<sup>6</sup> Based on this theoretical framework, I analyze the CoR projects to identify the principles adopted and explore how interpersonal vulnerability was designed in each one.

The original contribution of this study is to take a step further in understanding how designers can deal with interpersonal relations in their practices by considering Martin Buber's theoretical framework. Based on this framework and successive interpretations suggesting that interpersonal relations cannot be directly designed, I frame design for vulnerability in terms of *enablers* that favor the emergence of vulnerable interpersonal relations.

This article expressly places its focus on the design field and does not extend its analysis to the field of art. However, it does benefit from the participation of artists in the CoR program, which may support further analysis by specialists in art.

A statement given by the coordinator of the CoR program supports the present study, confirming that interpersonal encounters that took place during CoR project research "happen out of the involved actors' comfort zones. In fact, an encounter with someone who appears to be very diverse requires taking a risk: the risk of opening yourself to an unknown person and, doing so, becoming more vulnerable."<sup>7</sup>

## Theoretical Background: Vulnerability and Design

Academics from a variety of fields have studied vulnerability. Some examples include the vulnerability of elected politicians;<sup>8</sup> vulnerability as a psychological disorder;<sup>9</sup> the vulnerability of components, circuits, devices, systems,<sup>10</sup> and software;<sup>11</sup> vulnerability in engineering and design, including buildings;<sup>12</sup> economic vulnerability;<sup>13</sup> and vulnerability indicators, parameters, and tools to cope with natural risks.<sup>14</sup> All are related to the emergence of the vulnerability paradigm that emerged in the 1970s, promoted by the environmentalist movement,<sup>15</sup> that defined vulnerability as a “reduced capacity to anticipate, cope with, resist, and recover from the impact of natural hazard.”<sup>16</sup> In this, vulnerability appears to be in opposition to the notion of resilience, particularly in urban contexts – “resilience is the result of an ongoing process of vulnerability emergence, identification and assessment” that has gradually evolved from “being a merely descriptive concept to one which increasingly denotes a normative orientation of systemic development.” It is “a necessary way of dealing with sustainability challenges” that include long-term flexibility and uncertainty.<sup>17</sup>

Vulnerability appears to be socially constructed,<sup>18</sup> given that it is often interpreted in terms of specific communities, groups, and other stakeholders. As a social construct, it may be overdeveloped – “the vulnerability paradigm has emerged from a Western cultural imagination that regards the world as a more and more out of control and dangerous place” but “when faced with hazards, communities usually demonstrate a capacity to cope with them. This is why the local communities that are diagnosed as vulnerable by aid agencies have ‘no concept of ‘vulnerability.’”<sup>19</sup> Also, a state of vulnerability is sometimes presented as an intrinsic attribute – “an essential property of individuals” – or an attribute of specific demographics, including women, the elderly, the poor, and the disabled.<sup>20</sup>

In all these approaches, vulnerability is construed as something negative; it represents overexposure to the effects of a hostile environment or, on a personal and interpersonal level, the possibility of physical or emotional harm.

Similarly, in the literature vulnerability is not usually interpreted positively,<sup>21</sup> particularly when related to design or engineering. Carla Cipolla<sup>22</sup> frames the importance of vulnerability associated with design by referring to Martin Buber’s masterpiece, *I and Thou*, originally published in 1923. Buber proposed an interpretative framework on which *I-It* experiences and *I-You*<sup>23</sup> relations are two polarities that define the range of our interpersonal encounters. Buber employs the terms *I-You* and *I-It* to cover every possible kind of encounter. It also applies to any and all forms of *between*.<sup>24</sup>

The *I-You* relation is the most unique feature of being human. When I relate to *You*, I always have before me a person whom I do not know entirely, and whom I will never know unless I listen to what the person’s presence tells me and what that person lets me know of themselves. The relation between an *I* and a *You* is immediate; the interaction between them happens without the interposition of any concept, any imagination, or any fantasy. Each one is, for the other, a pure presence.

When I interact with *It*, I always confront someone that I have known as an *It*, and about whom I might wish to know more through my actions of knowledge. The *I-It* belongs to the past – it has been anticipated by preconceptions that each one had previously about the other. The *I* in an *It* relation is not in front of a presence but in front of an object that the *I* defined and evaluated previously.

Positive accounts of vulnerability exist in these polarities. The concept of vulnerability is intrinsic to Buber’s philosophy of dialogue<sup>25</sup> that “seeks to elucidate a notion of the self who is not wholly autonomous but who is dependent on others and responsive to the vulnerability of others.”<sup>26</sup> According to Buber, the Self’s primal notion is not as a subject, it is a vulnerability to otherness. The individual

8 Lorelei K. Moosbrugger, *The Vulnerability Thesis: Interest Group Influence and Institutional Design* (New Haven: Yale University Press, 2012).

9 John H. Riskind and Lauren B. Alloy, “Cognitive Vulnerability to Psychological Disorders: Overview of Theory, Design, and Methods,” *Journal of Social and Clinical Psychology* 25, no. 7 (2006): 705–25, DOI: <https://doi.org/10.1521/jscp.2006.25.7.705>.

10 Jongeun Lee and Aviral Shrivastava, “Static Analysis of Register File Vulnerability,” *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* 30, no. 4 (2011): 607–16, DOI: <https://doi.org/10.1109/TCAD.2010.2095630>.

11 Alka Agrawal and Raeesahmad Khan, “Impact of Inheritance on Vulnerability Propagation at Design Phase,” *ACM SIGSOFT Software Engineering Notes* 34, no. 4 (2009): 1–5, DOI: <https://doi.org/10.1145/1543405.1543411>.

12 Kyung-Yeon Kang and Kyung-Hoon Lee, “Vulnerability Assessment Model for Cost Efficient Anti-Terrorism Design of Super High-Rise Buildings,” *Journal of Asian Architecture and Building Engineering* 13, no. 2 (2014): 413, DOI: <https://doi.org/10.3130/jaabe.13.413>.

13 Patrick Guillaumont, “An Economic Vulnerability Index: Its Design and Use for International Development Policy,” *Oxford Development Studies* 37, no. 3 (2009): 193–228, DOI: <https://doi.org/10.1080/13600810903089901>.

14 Scira Menoni et al., “Assessing Multifaceted Vulnerability and Resilience in Order to Design Risk-Mitigation Strategies,” *Natural Hazards* 64, no. 3 (2012): 2057–82, DOI: <https://doi.org/10.1007/s11069-012-0134-4>.

15 Frank Furedi, “Our Overdeveloped Sense of Vulnerability,” *Architectural Design* 76, no. 1 (2006): 72–76, DOI: <https://doi.org/10.1002/ad.213>.

16 Ben Wisner, Piers Blaikie, Terry Cannon, and Ian Davis, *At Risk: Natural Hazards, People’s Vulnerability, and Disasters* (London: Routledge, 1994), 9.

17 Marc Wolfram and Rico Vogel, “Governance and Design of Urban Infrastructures: Analysing Key

Socio-Technical Systems for the Vulnerability and Resilience of Cities,” *Raumforsch und Raumordn* 70, no. 4 (2012): 325–26, DOI: <https://doi.org/10.1007/s13147-012-0169-8>.

18 Wiebe E. Bijker, “Vulnerability in Technological Cultures” (speech, Maastricht University, January 8, 2009, Maastricht, The Netherlands), accessed March 22, 2018, <http://digitalarchive.maastrichtuniversity.nl/fedora/getguid:0c4da4e2-a0ed-4d56-af24-0fa2cce01c4b/ASSET1>.

19 Furedi, “Our Overdeveloped Sense of Vulnerability,” 75.

20 Ibid.

21 In 2010, Brené Brown offered a positive account of vulnerability, relating it to creativity and innovation, in a TED talk that has received more than twenty-six million hits. Brené Brown, “The Power of Vulnerability,” TED video, 20:19, filmed by TEDxHouston in June 2010, [https://www.ted.com/talks/brene\\_brown\\_on\\_vulnerability](https://www.ted.com/talks/brene_brown_on_vulnerability).

22 Cipolla, “Tourist or Guest.”

23 I interpret Buber’s notion of *Ich und Du* in line with Walter Kaufmann, who translates it as *I and You* rather than (the more familiar) *I and Thou*. “What lovers or friends say *Thou* to one another? *Thou* is scarcely ever said spontaneously.... *Thou* can mean many things, but it has no place whatever in the language of direct, nonliterary, spontaneous human relationships. If one could liberate *I-Thou* from affectation, the price for that would still involve reducing it to a mere formula, to jargon. But suppose a man wrote a book about direct relationships and tried to get away from the formulas of theologians and philosophers: a theologian would translate it and turn *Ich und Du* into *I and Thou*.” Martin Buber and Walter Arnold Kaufmann, *I and Thou: A New Translation with a Prologue “I and You” and Notes*, 2nd ed. (New York: Touchstone, 1996), 15.

24 Martin Buber, *Between Man and Man* (1947; New York: Routledge, 2006).

25 Roberto Bartholo, *Passagens: Ensaio entre Teologia e Filosofia* (Rio de Janeiro: Garamond, 2002).

26 Leora Batnitzky, “Dependency and Vulnerability: Jewish and

becomes a person when he is opened and available to establish *I-You* relations with other human presences. For Buber, to be in relation is central to our personal identity as humans: “I require a *You* to become; becoming *I*, I say *You*. All actual life is encounter.”<sup>27</sup>

### **Openness, Vulnerability, and Risk**

Buber did not explicitly use the word vulnerability in his writings, and neither do his reviewers and commentators, who often use “openness” to refer to the reciprocal attitude that may allow *I-You* relations to emerge. The two words are intrinsically related, however. Openness is defined as “having no enclosing or confining barrier: accessible on all or nearly all sides,” “being in a position or adjustment to permit passage,” “completely free from concealment,” or “exposed or vulnerable to attack or question.”<sup>28</sup> The notion of vulnerability contains within it the idea of openness in the sense of exposure. I deliberately adopt the definition of vulnerability as the “quality or state of being exposed to the possibility of being attacked or harmed, either physically or emotionally”<sup>29</sup> in this theoretical framework to encompass the risk embedded in interpersonal encounters.

It is also important to highlight that, for Buber, “The *You* encounters me by grace – it cannot be found by seeking.”<sup>30</sup> Interpersonal vulnerability is not a question of “saying to the other everything that occurs to us, but of allowing the person with whom we communicate to partake of our being.”<sup>31</sup> The risk emerges in the sphere of the *between*, in the very relation between person and person.<sup>32</sup> Using the Buberian theoretical framework, that risk becomes the possibility to expand the *I-It* realm via one’s own openness, and what is revealed in the process. The increased exposure to *You* – the other – corresponds to an increased possibility of others describing, classifying, judging and over-simplifying the *I* in a renewed and more powerful way.

Buber exemplifies this exposure to otherness by describing the work of the artist, which “risks exposing subjectivity in its nakedness,” and “can be enough to set him [the artist] apart, even make him suspect ... for in exposing himself he can expose all men to themselves, by showing them subjectivity in all its profundity. They may curse him long before they praise him, and they may turn their backs on him abruptly.”<sup>33</sup> However, the artist is called to be exposed to this risk and cannot do otherwise. “The risk: the basic word can only be spoken with one’s whole being; whosoever commits himself may not hold back part of himself. The work does not permit me ... to seek relaxation in the *I-It* world.”<sup>34</sup>

Risk is important in enabling encounters but, for Buber, the risk of the openness seems to be rewarded with an *I-You* relation when it is mutual: “The *You* encounters me. But I enter into a direct relationship to it. Thus the relationship is election and electing, passive and active at once.”<sup>35</sup> There is no expectation of a precise and secure outcome, but a promising opportunity.

### **Designing for Vulnerability: Enabling Interpersonal Relations**

Designing for vulnerability implies recognizing the usual barriers that exist between people. “It is no easy thing to be confirmed by the other in our being; therefore, we seek to get confirmed through what we appear to be.”<sup>36</sup> It also implies an effort to overcome these limitations, which involves a necessary risk: “Only when I risk and reveal myself as she risks and reveals herself will I grasp her uniqueness and she, mine.”<sup>37</sup>

Designing for vulnerability is an opportunity for designers to address *I-You* relations by enabling interpersonal encounters to happen. “The basic word *I-You* can be spoken only with the one’s whole being. The concentration and fusion into a whole being can never be accomplished by me, can never be accomplished without me.”<sup>38</sup>

It is to design for a possibility that may or may not happen. In practical terms, it means placing a person in front of the other by designing a situation, process, structure, product, or service that enables or – at least – does not prevent this possibility from happening.<sup>39</sup>

The concept of designer as *enabler* of relation calls to mind the concept of boundary objects.<sup>40</sup> “All objects of human social experience are boundary objects, since they are performed by participants in a common experience,” and help them to cooperate despite their differences.<sup>41</sup> Boundary objects join actors around a common goal and “contribute to creating their shared memory, giving sense to the actors’ common experiences.”<sup>42</sup> The term enabler was adopted in this study to reinforce that, in this context, designed boundary objects make interpersonal *I-You* relations “possible”<sup>43</sup> by creating the conditions for these relations to emerge.

## Methodological Approach

The Culture of Resilience (CoR) program aimed to build a multifaceted vision of the role of culture and design culture<sup>44</sup> in the creation of resilient systems. Thirteen initiatives – including not only design solutions and processes, but also artistic interventions – were developed through interactions between the UAL and external actors and communities within the framework of the CoR program. Each initiative presented different stages and levels of development and involved more than twenty teachers and researchers from the university.

CoR was defined as a “cultural experiment” and summarized thusly: “Take the community of academics ... of art and design. Launch a discussion on a socially relevant topic, in this case, the ‘Cultures of Resilience’ and register its results, in terms of ideas, projects, and mutual exchange.”<sup>45</sup> A base text – that functioned as a theoretical framework – guided project program discussions and project selection.

Although the CoR program is highly exploratory, and its research rigor debatable, the research I present here benefitted from it significantly. The final seminar of CoR, “Weaving People and Places,” proposed the following question: “How, at the granular scale, can our actions as a designer or as an artist generate ways to recreate fabric between different people and between people and place?”<sup>46</sup> Participants were invited to “revisit a specific magic moment of encounter during their project that was pivotal in forming a new connection between one person and another or between people and a place.”<sup>47</sup> That question converged neatly with the central inquiry of the present study, namely, in each CoR project, what aspect (materialized as an artifact, product, service, interaction, process) acted as the specific enabler of interpersonal vulnerability? The CoR results synthesized in the final seminar provided me with a unique opportunity to identify and analyze the different enablers employed by each project to foster interpersonal relations between participants based on the designers’ or artists’ points of view. In the coming sections, I will discuss CoR findings in terms of how they relate to the theory I advance here: design for vulnerability is to design enablers that favor – in users and audiences – *I-You* relations to happen.

Each CoR project yielded (1) a short project presentation; (2) written commentary on the project’s role in the community-in-place building process; and (3) written commentary by project team members and external guests on the kind of interpersonal encounters generated by the project.<sup>48</sup>

I base the present study on my analysis of the keywords – verbs (actions) and nouns (artifacts) – that the authors of those documents used to describe the enablers set up by them in each project.

The very open, exploratory approach adopted in the CoR program defined the methodological framework and limitations of this study. The CoR program was

Feminism Existentialist Constructions of the Human,” in *Women and Gender in Jewish Philosophy*, ed. Hava Tirosh-Samuelson (Bloomington: Indiana University Press, 2004), 128.

27 Buber and Kaufmann, *I and Thou*, 62.

28 Merriam-Webster, s.v. “openness (n.),” accessed March 22, 2018, <https://www.merriam-webster.com/dictionary/openness>.

29 Oxford Dictionaries Online (US English), s.v. “vulnerability (n.),” accessed March 22, 2018, [http://www.oxforddictionaries.com/definition/american\\_english/vulnerability](http://www.oxforddictionaries.com/definition/american_english/vulnerability).

30 Buber and Kaufmann, *I and Thou*, 62.

31 Peter Atterton, Matthew Calarco, and Maurice Friedman, *Levinas and Buber: Dialogue and Difference* (Pittsburgh, Pennsylvania: Duquesne University Press, 2004), 4.

32 Buber, *Between Man and Man*.

33 Paul Arthur Schilpp, Maurice Friedman, and Martion Buber, *The Philosophy of Martin Buber* (Carbondale: The Library of Living Philosophers, 1967), 619.

34 Buber and Kaufmann, *I and Thou*, 60.

35 *Ibid.*, 62.

36 Atterton et al., *Levinas and Buber*, 4.

37 *Ibid.*, 3.

38 Buber and Kaufmann, *I and Thou*, 11, italics mine.

39 Carla Cipolla, “Tourist or Guest,” 111.

40 Geoffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge, MA: MIT Press, 1999).

41 Thomas Binder et al., *Design Things* (Cambridge: MIT Press, 2011), 55.

42 *Ibid.*, 56.

43 Merriam-Webster, s.v. “enable (v.),” accessed March 22, 2018, <https://www.merriam-webster.com/dictionary/enable>.

44 Ezio Manzini, “Design Culture and Dialogic Design,” *Design Issues* 32, no. 1 (2016): 52–59, DOI: [https://doi.org/10.1162/DESI\\_a\\_00364](https://doi.org/10.1162/DESI_a_00364).

45 “A Cultural Experiment,” *Cultures of Resilience*, accessed March

22, 2018, <http://www.culturesofresilience.org>.

46 Ezio Manzini, "Weaving People and Places. Introduction by Ezio Manzini," video, 2:28, filmed by Culture of Resilience in July 2016, <http://culturesofresilience.org/events/>.

47 Cultures of Resilience Program, "Weaving People and Places," accessed March 22, 2018, <http://culturesofresilience.org/wp-content/uploads/2016/08/CoR-Weaving-People-and-Places-booklet.pdf>.

48 Cultures of Resilience Program, "Weaving People and Places"

carried out by research teams in collaboration with various social actors in different zones of London, but the final CoR seminar included only the participation of the professors, lecturers, and researchers from UAL. This study exclusively considers the materials produced by the CoR team in the final seminar, which represents a limitation of this study. Other limitations are the lack of interviews with various actors and participant observations, which would have increased the rigor of this work and provided for a more extensive analysis.

### Results: Vulnerability in CoR Projects

Among the thirteen project descriptions in total, I selected eight for this study because: (a) their documentation presents verbs or nouns that explicitly describe an enabler used to foster vulnerability; and (b) the rich variety of enablers they describe articulates the arguments I put forth here. I offer a short introduction to each initiative emphasizing what is most relevant to this study<sup>49</sup> in Table 1, including excerpts I selected from the written documentation for each project.

Table 1. Summary of selected initiatives developed for the CoR program.

| Rethinking an Institution  | #Transacting: A Market of Values  | Elastic Lives  | Superannuates and Tenderfeet  |
|--|---|--|---|
| <ul style="list-style-type: none"> <li>- Moves "from the single issue of fossil fuel divestment to the broader goal of envisioning UAL as cooperative social enterprise."</li> <li>- "Creatively engages with psychological and institutional obstacles to the transition to a post-carbon society."</li> <li>- Brought "staff and students together across the university."</li> </ul>              | <ul style="list-style-type: none"> <li>- A "flea-market like event that hosted diverse communities of evaluation."</li> <li>- "Evaluation" indicates "judgment and assessment as social processes. Values beyond the financial were transacted and celebrated."</li> <li>- Gathered permaculturists, skillsharers, alternative art schools, economists, and others.</li> </ul>    | <ul style="list-style-type: none"> <li>- Focused on a "range of voluntary practices" to understand "how social relations are constituted through and by the material world."</li> <li>- Considered key practices of "collecting donations, sorting and distributing used clothing, and developing capacities for maintenance and repair."</li> </ul> | <ul style="list-style-type: none"> <li>- Created a "space for connections between art students and older members of the local community."</li> <li>- Participants tested "possibilities of exchange and mutual production" and "examined the value of dialogic practice for everyone involved."</li> <li>- Participants invited to "bring their ongoing artistic concerns to these conversations and potential processes."</li> </ul> |
| Carry on Making  | Reciprocal Loops: Uncritical Care   | Millbank Stories   | Habit(AT)-Chrisp Street   |
| <ul style="list-style-type: none"> <li>- Focused on creating "a range of anti-theft bags, co-designed by inmates."</li> <li>- Employed a collaborative design process that included designers, students, inmates, and other volunteers.</li> <li>- The project activities may have moved inmates "towards reflective self-knowledge, positive change and the finding of a 'higher self.'"</li> </ul> | <ul style="list-style-type: none"> <li>- A project highlighting empathy.</li> <li>- Examined episodes of hospital clinic splenic palpitation and a performative experience of hand cleansing as a vector of encounter via touch.</li> <li>- This type of encounter "was in contrast to the hustle and bustle of the clinical activities that take place" at hospitals.</li> </ul> | <ul style="list-style-type: none"> <li>- Aimed to collect and share local stories.</li> <li>- Employed "storytelling 'devices'; 'storytelling parades'; and the exhibition space to make existing communities visible and create spaces for new encounters to take place."</li> </ul>  | <ul style="list-style-type: none"> <li>- A "pop-up exhibition in a disused shoe shop."</li> <li>- Project space and setting was "classed as deficient in providing access to nature for its citizens."</li> <li>- Explored the "community's thoughts and ideas about nature and biodiversity, using fashion as a means to facilitate a dialogue."</li> </ul>  |

My analysis of the initiatives (based on the descriptions produced by their authors) revealed several different vulnerability enablers, which I summarize in [Table 2](#).

**Table 2. List of vulnerability enablers identified in the initiatives undertaken in the CoR program (framed as “nouns”).**

| Initiative                   | Enabler                     |
|------------------------------|-----------------------------|
| Rethinking an Institution    | A performance: the “die-in” |
| #Transacting                 | A tool: the builder’s jig   |
| Elastic Lives                | A donation                  |
| Superannuates and Tenderfeet | A pairing                   |
| Carry on Making              | A visiting                  |
| Reciprocal Loops             | A touch                     |
| Millbank Stories             | A story                     |
| Habit(AT)–Crisp Street       | A locality                  |

In the coming paragraphs I offer a more detailed analysis of each initiative and its respective enabler.<sup>50</sup>

### ***Rethinking an Institution***

Participating students physically simulated being dead, during a “die-in” protest, which was the enabler for vulnerability in this project. The author declares, “I have seen public ‘die-ins’ involving many more people, but I was moved by these students’ solidarity and courage. Enacted in a place where they are well known, their gesture as a minority was to put themselves in a position of symbolic vulnerability.” The act did not presuppose interactive, interpersonal relations with passers-by, but – as I stress in my theoretical framework – such relations do not require the intermediation of concepts expressed in words.

### ***#Transacting: A Market of Values***

Volunteer participants took turns using a jig – a type of tool used to support replication and accuracy – that enabled them to assemble “pre-cut components” of market stalls. The jig “facilitated and coordinated work amongst disparate people.” Participation in the building process “with limited knowledge of the overall design, or its intention” thanks to the jigs and components allowed people with modest DIY skills to take part. Despite the well-designed tools to support the process, participants were exposed to their own limited skills and those of the others. According to the author, the use of the jig enabled vulnerability by favoring “powerful relational qualities to emerge.” Participants “also (re)discovered something about themselves.”

### ***Elastic Lives***

Through the gesture of clothes donation – a medium for direct mutual-knowledge between those giving and those receiving the gifts – served to enable vulnerability by revealing ambiguous attitudes. On the one hand, there were “the conflicting values of the refugees’ hosts exposed through their material offerings (which include clothing that may be dirty and some bags that seem full of rubbish,” and the refugees on the other, “exerting agency ... only tak[ing] what they wanted, or simply discarding donations previously taken, lacking washing machines or

<sup>49</sup> The citations contained in the table I extracted from reports of the initiatives presented during the CoR final seminar. Cultures of Resilience Program, “Discussion,” accessed 12 January, 2017, <http://culturesofresilience.org/discussion/>.

<sup>50</sup> The quoted passages in the coming paragraphs I extracted from the reports produced by the authors of the initiatives, written in preparation for and as a result of the CoR final seminar. Cultures of Resilience Program, “Discussion,” March 22, 2018, <http://culturesofresilience.org/discussion/>.

51 “Offenders are one of the most stigmatized groups in society, yet the large body of research on stigma rarely considers offenders.” Kelly Moore, Jeffrey Stuewig, and June Tangney, “Jail Inmates’ Perceived and Anticipated Stigma: Implications for Post-Release Functioning,” *Self and Identity* 12, no. 5 (2013): 527–47, DOI: <https://doi.org/10.1080/15298868.2012.702425>.

storage.” In the authors’ words, “The act of giving (time and materials) and the relationship with those receiving – the tensions and ambiguities – are exposed through face-to-face exchanges and the materiality of the gift.”

### ***Superannuates and Tenderfeet***

Pairing people “who might not normally meet” was the enabler of vulnerability for this project. Matchmaking, and the mutual exposure to one another’s presence, were equally confronting experiences, given that the participants were so diverse, with different ages and lifestyles. After the initial interactions, “some hesitancy from nearly everyone” was identified and “the pairings were postponed ... to allow further group sessions that extended the initial conversations through doing things together, for example drawing each other.” This proved to be successful: “the pairs have now been doing things together locally and further afield for six weeks, including going for walks, visiting exhibitions, exchanging techniques, [and] writing each other letters.”

### ***Carry on Making***

Vulnerability was enabled by visits to a prison<sup>51</sup> by students and volunteers who engaged in “sharing personal space in a place where it is uncommon to do so.” The inmates and project visitors engaged in collaborative design activities. “Listening to each other’s goals and means, helping each other to get a greater understanding of what will work – creates intimacy.” The authors reported, “sharing our imaginings makes us vulnerable to each other and brings us closer. Working on the body – fitting and draping – demands close proximity, and permission.” The visits generated self-knowledge and uncertainty in the visitors, as observed in the discussions after the workshops. My analysis also relies on a participant observation by the author of this study; however, the effect of these encounters on the offenders was not reported.

### ***Reciprocal Loops: Uncritical Care***

In this project, vulnerability was enabled by touch, and drawing. The project report’s author defines touch as a space characterized by, “authenticity, equality, intimacy, dialogue, and non-hierarchy that involves a dance in which leadership and followership are passed back and forth. It often happens at a time of crisis and/or after trust has been built over a period of time. It often requires patience to look for or recognize the moment of opportunity to apply ‘touch’ to open up the space of encounter and nurturing.”

### ***Millbank Stories***

Here, storytelling was the enabler of vulnerability. The multiple stories collected by the students created “a local ecosystem of momentary, serendipitous encounters through objects that broker relationships.” Telling a story is an act of personal revelation and vulnerability that can be intense or not, depending on different factors, including the choice of what, how, where, and when to tell the story, and to whom it is being told.

### ***Habit(AT) – Chrisp Street***

Vulnerability was enabled by a locality where “pop-up encounters” could take place. The project report stresses that the characteristics of the place were considered important for participant engagement. “The aesthetic of the pop-up, (unfinished, not-polished), can be implicitly identified as opportunity for interaction, and it more easily inspired participative feelings and the desire to explore.”

This brief analysis of the documents produced by the authors regarding each initiative reveals further characteristics of the enablers, including

- The main place(s): the characteristics of the space in which the enabler was set up;
- The main artifact(s): the main object or process that supports the enabled experience;
- Time/frequency: the frequency that the enabler is activated indicates the intensity with which participants are being exposed to interactions with each other;
- Main personal process(es): the subjective processes that are being set up by the enabler, at an individual level; and
- Main interpersonal process(es): the result(s) produced by the enabler regarding the interpersonal relations produced by participants.

I present the results of this analysis in [Table 3](#).

**Table 3. Map of main enablers and their specific attributes in each initiative.**

|  | <b>Main Enabler</b>        | <b>Main Place(s)</b>                   | <b>Main Artifact(s)</b>                           | <b>Frequency/ Time</b>                | <b>Main Personal Process(es)</b>                       | <b>Main Interpersonal Process(es)</b>                   |
|--|----------------------------|--|---|---------------------------------------|--|---|
| <b>Rethinking an Institution</b>               | A performance (a “die-in”) | A semi-public space (floor)            | Human bodies                                      | Occasional                            | Simulation (own death)                                 | Act of protest  |
| <b>#Transacting: A Market of Values</b>        | An object (the “jig”)      | Public space: the square               | Stalls (for the market)                           | Once                                  | Learning (new skills)                                  | Collaboration (building)                                |
| <b>Elastic Lives</b>                           | A donation                 | Charity shop simulation                | Clothes (mainly)                                  | Asynchronous (mediated by volunteers) | Reciprocity (or lack thereof)                          | Revelation (each other’s dispositions)                  |
| <b>Superannuates and Tenderfeet</b>            | A pairing                  | Art studios                            | Artworks, crafts                                  | Sequential (towards an end)           | Acceptance (during the matchmaking process)            | Exchange, mutual acceptance                             |
| <b>Carry on Making</b>                         | A visit (workshop)         | A prison                               | Machines and tools (sewing)                       | Sequential (towards an end)           | Self-knowledge (of personal limitations and potential) | Overcoming (barriers, prejudices, personal limitations) |
| <b>Reciprocal Loops: Uncritical Care</b>       | Touch                      | A hospital                             | Liquid  | Once                                  | Physical (via touch)                                   | Intimacy  |
| <b>Millbank Stories</b>                        | A story                    | A neighborhood                         | “Stalls on wheels” (to collect and share stories) | Sequential (towards an end)           | Memory   | Encounter (serendipitous), shared identity              |
| <b>Habit(AT) – I Stood up at Chrisp Street</b> | A locality                 | An empty shop (unfinished, unpolished) | An exhibition (unfinished, unpolished)            | Unique                                | Curiosity  | Encounter (serendipitous), shared identity              |

## Discussion: Designing for Vulnerability

I begin with a synthesis of the defining features of vulnerability put forth in my theoretical framework.

- *I-You* relations – the qualitative guideline for the quality of interpersonal

relations – can only be intended as a possibility. *I-You* relations are serendipitous: for Buber, they happen through “grace;”<sup>52</sup>

- *I-You* relations do not presuppose intensive and highly demanding interpersonal effort, and are not directly designable (only enabled);
- If a state of vulnerability is fostered between participants, the probability of *I-You* relations will be increased;
- *I-You* relations are not abstract, not mediated by words, concepts, or ideas about the other (as *I-It* encounters are) – they are concrete, and presuppose mutual presence, at a specific place and time, and involvement in actual communication; and
- Reinforcement of an *I-It* realm may happen, presumably, when a participant’s own subjectivity is exposed to be defined, classified, judged, refused, criticized, and so on.

The analysis of the initiatives supports and confirms this theoretical framework. Different enablers were identified that foster a state of vulnerability between participants exposed to each other via different situations, places, artifacts, and processes. The authors’ descriptions of their initiatives reveal that vulnerability – supported by specific enablers – was designed in different ways.

#### ***Unintentionally Designed Vulnerability***

Certain researchers designed their initiatives as experiments or movements, and describe – with surprise, at times – the interpersonal results their initiatives achieved, which indicates that these results may not have been intended. An example of unintentionally enabling vulnerability was the result achieved during the “die-in” performance that was part of *Rethinking an Institution*.

#### ***Intentionally Designed Vulnerability***

Some researchers based their initiatives on interpersonal encounters, for example between inmates and visitors in *Carry on Making*. As part of their participation in the design workshop, the inmates were invited to cultivate empathy for the proposed users of the designs they were contributing to. This cultivation was potentially challenging, as perhaps those imaginary users had been inmates’ victims. This cultivation led to insights as well collaboration and communication skills development during the encounters (workshops) with the visitors (the design team and the volunteers).

#### ***Vulnerability Shifts from a Secondary Aspect to a Primary One***

Other researchers designed their initiatives to benefit persons in need – for example refugees in *Elastic Lives* – and as such the primary focus of the intervention was not interpersonal relations. However, vulnerable relational dynamics emerged as an important aspect of the initiative. Some exchanges revealed unforeseen difficulties, for example donations management uncovered tensions between donors and refugees, eventually generating positive results in mutual- and self-knowledge among participants.

#### ***A Probability of Vulnerable Interpersonal Relations Existed, Which was Difficult to Realize***

One initiative, *Superannuates and Tenderfeet*, was intentionally designed to foster improbable or serendipitous interpersonal encounters. It did so by overcoming difficulties in its “matchmaking” process.

I classify enablers, by virtue of their mechanism of effect, into the following four categories:

- An **artifactual enabler** is designed to mediate collaboration and interpersonal relations,
- An **attitudinal enabler** is designed to facilitate expression of personal attitudes or feelings to others,
- A **processual enabler** is designed to foster interpersonal relations through a sequence of steps, and
- A **narrative enabler** is designed to stimulate interpersonal relations via a personal interpretation of incidents or events, or an organized, assembled fictional narrative.

Artifactual and processual enablers are clearly designed – in other words, they rely on design expertise such as product and service design. Attitudinal enablers may include this expertise but are more related to open-ended design processes and design activism. Narrative enablers rely on communication design and storytelling. All types of enablers are oriented to achieving sociocultural and political change at different levels.

Different enablers can be mixed in the same initiative, such as in the case of *Millbank Stories*, in which the stories (narrative enabler) were collected and shown on a “stall on wheels” (artifactual enabler).

I present each enabler’s distinctive characteristics regarding personal and interpersonal processes in [Table 3](#). Characteristics are specific to each case and not generalizable as outcomes of this study. However, their analysis reveals the consequences of the use of each type of enabler.

One important discussion in this study is the issue of time and frequency of interpersonal encounters. The theoretical background of the CoR program advocated what were called “weak ties” and “light encounters.” The main hypothesis was that the multiplicity of these encounters – enabled by art and design initiatives – would increase the intensity and quality of the social interactions in each local context and, thus, bolster social resilience.

This study observed that the initiatives developed as part of the CoR program relied mainly on occasional and unique encounters, or a number of sequential encounters developed towards a clearly defined end (see [Table 3](#)). Therefore, the initiatives can be considered as light, in terms of personal effort and time spent.

The theoretical framework I use in this study stresses that *I-You* relations, qualitatively established as the higher interpersonal level of interpersonal encounters, do not require any personal effort and cannot be designed, only facilitated. Consequently, it is possible to claim that the kind of tie developed between people (weak or strong) is not related to the frequency of their meetings, the personal effort or time spent, and can also be manifested in a very brief, accidental, or otherwise “light” encounter.

## Conclusions

As the literature review indicated, vulnerability is mainly considered by design disciplines, including engineering and architecture, as a feature to be avoided or a problem to be solved.

Yet the theoretical framework I present opens the possibility for vulnerability to be a positive aspect of design. According to Buber’s thinking, *I-You* relations are one of a human being’s most distinctive features; to Buber, our individual humanity is defined by interpersonal *I-You* encounters, which are necessarily devoid of objectifying preconceptions. I chose to interpret vulnerability as an asset in design because when participants are exposed to otherness, there are more possibilities for *I-You* relations to emerge – although designing this way is no guarantee

of their emergence. This exposure to the other necessarily encompasses a risk that I describe as the renewed and powerful expansion of the *I-It* realm over one's own revealed subjectivity. Clearly, enabling this kind of interpersonal vulnerability comes with the risk of people being misunderstood, described, classified or judged – the potential reinforcement of the *I-It* realm. Designing for vulnerability is to design for mutual exposure – a risk that the designer assumes as a possibility. I argue that the benefits outweigh any possible negative aspects. The main benefit of designing for vulnerability that it enables the possible emergence of *I-You* relations, directly or indirectly, via different artifacts and processes. This definition of vulnerability, a contribution of this study, might serve as a possible design guideline when interpersonal relations are implied by a design or its use.

I identified and described the enablers of vulnerability – defined here as convergent with the concept of boundary objects – for each CoR project, which I based on my analysis of the researchers' reports and a participatory observation of one of the projects. I observed and described how vulnerability was used as a design guideline, even if not explicitly stated by the authors. This is another contribution of this study, indicating how design for vulnerability can be considered in practice when designing for interpersonal encounters.

One limitation of the present study was my use of the reports prepared by authors for the CoR final event, because my analysis only takes the designers' accounts into consideration. However, I intended this study as an initial analysis. I followed an exploratory approach in articulating Martin Buber's philosophy and design with the aim of tracing specific characteristics of designing for vulnerability. Further investigation on vulnerability enablers is required, including the use of qualitative methods to gather feedback from other project participants. Further study might also include a literature review about boundary objects, with a focus on identifying the specific characteristics of those involved in fostering interpersonal vulnerability.

Also, this study lacks a detailed analysis of enablers and artifacts – the body, the gift, or the touch, for example – that have been extensively developed in the literature and which are critical for understanding how to foster vulnerability.

Another limitation of this study is its lack of discussion about the role of art and the artist. The boundaries between art and design may be tenuous, but the issue of vulnerability explored in this study is not only closely connected with art, but also with sociology, psychology, and philosophy – exemplified here by placing it within the theoretical framework of Martin Buber.

Vulnerability is proposed here as an important issue for designers, and one that increases in importance when dealing with the social aspects of resilience, as outlined in the CoR program.

However, design for vulnerability presupposes an acceptance that design is oriented only to attaining a possible result. If we agree that interpersonal relations cannot be designed, then new design knowledge is required that enables designers to frame these relations and can serve to guide the design process when delicate human issues, including vulnerability, are at stake. Designing for vulnerability requires an acceptance of the unpredictability of the outcomes, including the lack of control in the design process and results. Vulnerability, as a design intent, is also proposed here as a way to stimulate the conversation about new frontiers of design practice today.