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# Designing with the Dialogic Self: A Framework for a Polyphonic Practice of Architectural Design

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**Abstract:** This paper questions the degree of inclusivity and equity in the treatment of voices at play in the architectural design process and advocates for an approach whereby architecture can be realized as a harmonious and polyphonic composition of multiple voices and values. Based on a dialogic ontology, the paper examines how a designer's sense of self can contribute to their method of practice and proposes a new methodology (Narrative-based Dialogic Design-NDD) that can allow a decentralization of the sense of self to facilitate the uptake of narrative positions of others.

**Keywords:** dialogue; polyphony; inclusive; narrative; design; participation; architecture

## 1. Introduction

Using the structure of a polyphonic novel, this paper presents a novel narrative-based design methodology that can scaffold a participatory mindset and a polyphonic (multi-voiced) space for brief formulation and idea generation in architectural design. A participatory mindset in this work means that a designer can realize their ideas as being authored by them but simultaneously belonging to multiple others distributed across time and space. Therefore, regardless of the physical presence of others in the process of practice, they can be sensitive to establishing dialogic relationships with plural possibilities and narratives of design. This way of viewing the space of practice at its core is a reflection on one's sense of self, which to the best knowledge of the author has not yet been researched in disciplinary fields of participatory design, architectural practice, or education. This paper scratches the surface of how the proposed Narrative-based Dialogic Design (NDD) methodology can open a space for revaluating the relationship with the self, the role of the designer, and associated senses of authorship and ownership over the process as well as managing the power relations between voices at play. Through situating the methodology in the context of a final-year undergraduate architecture design studio and drawing on students' reflections, the paper assesses whether the methodology has promise in scaffolding a participatory mindset and a polyphonic space for practice. The present paper reports on learnings from the first round of action research piloting the methodology. In this introductory section, the paper first presents the key argument and premise underlying the project.

As architecture is a practice that involves multiple individuals in all aspects of conception, production, and use, the *inclusion* of multiple voices has been an issue of attention in contemporary discourse. In moving towards empowerment of voices and democratizing the design process, traditions of participatory design and co-design have promised a more cooperative space for practice, that blurs the divide between *designer* and *user* and values shared authorship, ownership, and representation of the collective voice [1–3]. This usually involves situating others (e.g., end-users) in the space of practice so that decisions are made collaboratively, and beneficiaries of design all play a role in its formation. However, as this paper argues, whilst working with others naturally affords dialogue, negotiation, reflection, etc., and in principle may be supportive of a democratic process, it does not suffice

in managing power dynamics and ensuring each voice is represented in full and with equity. Ultimately, how the voices are treated plays a crucial role in establishing a feeling of inclusion, representation, and belonging. As explained by Luck, the treatment of voices involved may take on either a dialectic or dialogical form, where "a dialectical position assumes that 'the truth' can be found through logical deductions in reasoned argument, [and] a dialogical position assumes that there are different positions to debate" [2] (p. 145). Nonetheless, this dialectic/dialogical paradox remains to be an under-resolved area of participatory design discourse.

Drawing on the seminal writings of Mikhail Bakhtin, the premise of this paper is that the space of practice should have a *polyphonic* (multi-voiced) texture, wherein different positions are juxtaposed to create a harmonious composition. The idea in a Bakhtinian dialogical position is that ethical and inclusive practice, rests on the reflection of each voice *in full* and a resistance towards finding meaning and value in the convergence of voices: "Take a dialogue and remove the voices (the partitioning of voices), remove the intonations (emotional and individualizing ones), carve out abstract concepts and judgments from living words and responses, cram everything into one abstract consciousness- and that's how you get dialectics" [4] (p.147).

Notably, Bakhtin [4,5] has an ontological take on dialogue, that interlaces human consciousness with the presence of multiple others and frames being as ontologically social, extending dialogue beyond a tool of communication. Therefore, there is no 'I' that lives or can be defined independent of others and it is in communicating with others that the 'I', *the self*, is realized. On this basis, to strive towards a more polyphonic space for architectural practice, the treatment of voices should start with a treatment of the self. The premise here is that if one can realize their self as dialogic, fertile ground is created for the subsequent dialogic treatment of others. With this mindset, a dialogic designer would seek to fully experience the positions of others in order to compose a space where plural possibilities, however disparate or conflicting, can be co-located and reflected upon what is produced: the design. Experiencing voices in full means experiencing stories, narratives, and temporal unfolding of events that incrementally deepen the understanding of values held by each voice and in so doing also enables the designer to further understand their own self. Therefore, piecemeal interactions with others and reducing the identities and values of the voices to *user profiles* or *user types*, that arguably maintain an individualistic sense of self, are regarded as prohibitive to facilitating a polyphonic space for practice.

The research reported in this paper examined how a dialogic position can be best implemented into architectural education, as the context where future architects' attitudes and values of design are first formed. Regardless of the conventions of architectural education which have been criticized for their linearity and flattening of a pluralized ways of practice and navigation of the architectural education experience [6], it is also a discipline that operates and mirrors much of contemporary values and expectations of teaching and learning in higher education. Notably, there is an emphasis on the ownership of learning, that is "the degree to which learners are able to make learning their own" [7] (p. vii). Whilst on the one hand this has great benefits such as encouraging self-efficacy [8] and motivating and empowering the learner to drive and take an active role in how they learn [9], on the other hand, it can carry a sense of prudence respective to the extent to which *others* are perceived to have agency in what and how a learner learns. As Tahsiri [10] explains, in the context of studio-based architectural design education, this manifests in a space of interaction and feedback between the learner and others (e.g., tutors) that is contingent on *work* having been first produced by the learner. Attributing sole agency to the learner can place a weighting on the development of an individualistic sense of ownership over what is produced, which is often semantically manifested through singular possessive pronouns ascribing the design to an individual. This attribution is in itself problematic, in that although the learner may have an agency over implementing knowledge to the work, the ownership of the knowledge, values, and meanings, from the perspective of dialogic ontology is never individualistic and separate from the world around them.

Whilst scholarly discourse in design and architecture reflects upon the Bakhtinian dialogic position [11–14], there remains to be a gap in the development of a framework for a polyphonic practice of architecture. This paper, therefore, reports on action research, within which the Narrative-based Dialogic Design (NDD) methodology reflective of the dialogic ontology, was developed and exercised in the context of an architectural design studio, leading to a trinary framework for polyphonic practice. Structurally, the paper here on forth will follow by elaborating how the dialogic self can be realized, justifying the tenets of the NDD methodology, before reporting on the different stages of the action research applied.

## 2. The Dialogic Self and the Move towards a Decentralized Narrative Space for Architectural Design

The "self is a psychological construct that guides cognition shapes behavioral elicitation, and provides stability and continuity to the ebb and flow of subjective experience" [15] (p. 125). In its primitive form, the self is a non-reflective and intuitive state of consciousness that comes about as a result of having a physical body. Owning a body creates an inference that any action executed by my body would be intended by me [16,17]. The acting body and by extension whatever enters the bodily schema of an individual, allows the self to exert agency (authorship) over action. The body plays such a critical role in the sense of agency, that studies show when there is a compatibility between intention for an outcome and the actual outcome, even if the action is not executed by the individual, the action and the components executing that action are embodied by the individual to the extent that it creates an illusionary sense of agency [18]. This intuitive immediate sense of self that permits us to physically exist and is devoid of any temporal or social extensions is known as the minimal self [19].

As Gallaghar explains, as soon as we step beyond the realm of intuition and enter a realm of reflection, we go through a process of matching up first-person experiences with criteria through which we can assess those experiences to be ours and in so doing construct what we realize as our identity [19]. The self that is experienced here is a narrative self which is "extended in time to included memories of the past and intentions towards the future" [19] (p. 15). This narrative space brings an element of abstraction to how one observes their experiences not just across time but also in relation to others. Whilst one cannot evade the centrality of the intuitive minimal self, it is in how the narrative self is conceptualized and approached that notions of shared authorship or ownership become possible.

Here, we can conceptualize two overarching possibilities for the socially situated self within the narrative space: a centralized narrative space (following Dennett's 1992 idea of the self as the centre of narrative gravity) and a decentralized distributed narrative space (following Ricoeur's 1984 idea that one's own narrative is intertwined with narratives of others). Drawing an analogy from music, in a centralized narrative space, the sense of self arguably takes on a homophonic texture, where a centralized narrative determines the main melody and other narratives are organized to support and strengthen the central narrative and form a harmonious backdrop. In a decentralized narrative space, on the other hand, the removal of one main narrative, allows multiple melodies to occur simultaneously in the same composition and therefore each narrative can be experienced in full, creating a richer polyphonic texture for the sense of self.

Arguably a centralized narrative space preserves the egocentricity of the minimal self and therefore is more immediately accessible; it allows the self to maintain its position, and for different narratives to be organized and be positioned in relation to the self. Whereas a decentralized distributed narrative space requires the self to move about within the space and occupy different narrative positions in order to establish links between them. If it can be said that the self which is experienced in a decentralized distributed narrative space is a dialogical one, Hermans' [20] conception of a dialogical self provides a fitting description of how the self can be seen to construct itself:

"The I fluctuates among different and even opposed positions, and has the capacity imaginatively to endow each position with a voice so that dialogical relations between positions can be established. The voices function like interacting characters in a story, involved in a process of question and answer, agreement and disagreement. Each of them has a story to tell about his or her own experiences from his or her own stance. As different voices, these characters exchange information about their respective Me's, resulting in a complex, narratively structured self". [20] (p. 248)

The primacy of the minimal self and its alignment with a centralized narrative sense of self means that accessing the dialogical self requires a conscious effort on part of the designer and change in the way design is approached, wherein the designer can (1) create and occupy different narrative possibilities, (2) look for meaning and value not in the commonalities of different narratives or through their convergence, but in their nuances and in how they can relate to one another, (3) appreciate that the emerging design belongs to multiple individuals distributed across time and space whose experiences come to bear upon the design. These three tenets lie at the heart of the NDD methodology. Moving forward, the paper introduces the NDD methodology and assesses whether it has grounds for providing access to the dialogic self and facilitating a polyphonic space for architectural practice, by reflecting on its impact on the sense of authorship, ownership, and design values of a group of final-year undergraduate students at a UK-based school of architecture.

## 3. Methodology

Methodologically, action research "implies a process of people interacting together and learning with and from one another in order to understand their practices and situation" [21] (p. 25). It is a type of research that requires a plural structure to accommodate multiple viewpoints of those involved in the practice and therefore recognizes that the meaning of the phenomenon under study arises from the relations between the viewpoints, which can inherently change throughout the course of the research [22]. Therefore, the methodology invites active observation and reflection during the course of the practice itself. McNiff frames action research as "an enquiry by the self into the self" [21] (p. 23), and if this is the case, similar to the decentralized distributed narrative sense of the self that was described earlier, action research has a capacity to allow the researcher to occupy different readings/positions about the phenomenon under study in better understanding the space of practice. In such a sense, the author considered action research as the most fitting methodology for capturing the situated experience created for design practice by the NDD methodology.

In reporting on the first cycle of this action research, as will follow, the research comprised three phases: (1) planning the NDD methodology, (2) observing the methodology in practice, and (3) reflecting on the practice toward conceiving dimensions of a framework for an inclusive and polyphonic practice of architectural design.

## 4. The Action Research

### 4.1. Planning: Designing the Narrative-Based Dialogic Design (NDD) Methodology

4.1.1. Adopting the Structure of the Polyphonic Novel

To create a space for a design where multiple narratives can intersect and be experienced in full, the research drew on the structural make-up of a polyphonic novel [23]. The novel, similar to architectural design acts as a medium for authoring experiences presented by and encapsulated within a building or a book, which are subsequently adopted and lived by an audience. Whilst in a novel, the text-based product of a book allows direct access to the characters and their experiences, the same cannot be said for the product of architectural design that in itself only provides an abstract composition of the ideas of all those involved in its making. Nonetheless, the focus in making this comparison between the novel and architectural design is not on the end product, but rather on the authorial process. From this authorial process-oriented perspective, both architectural design and

the novel follow the unfolding of a plot that communicates a specific temporal and spatial ordering of events, enacted by a number of characters, and narrated in some material form (be that a text or a built entity).

The polyphonic novel, in comparison to other novel genres, rests on a plot composition wherein the characters and their positions are not performed or exclusively determined by the plot, and in so doing characters of a story are not only "objects of authorial discourse but also subjects of their own directly signifying discourse" [23] (p. 7). The polyphonic novel realizes the dialogic consciousness that Bakhtin advocates and is most notably epitomized within the works of Dostoevsky. As Bakhtin explains, plot-wise, Dostoevsky's work links with traditions of the European Adventure novel, wherein the plot acts as clothing that is draped over the character, and this clothing can change [23]. As such, when the plot does not precede the interrelations of characters, it can facilitate an organic ordering of events that may not conform to what is pragmatic or expected. Bakhtin further elaborates that Dostoevsky's polyphonic novel combines the Adventure plot with the posing of a "profound and acute problem" [23] (p. 105). Rather than a tool for organizing events and distributing characters and roles, the plot in the polyphonic novel serves as a tool for testing ideas by "placing a person in extraordinary positions that expose and provoke him, it connects him and makes him collide with other people under unusual and unexpected conditions" [23] (p. 105). Bakhtin, therefore, argues that the polyphonic novel illustrates a special kind of artistic thinking that extends beyond the realms of the novel itself; a model of thinking that makes available "the thinking human consciousness and its dialogic sphere of existence" [23] (p. 170).

On the basis of the above, the polyphonic novel's approach to plot and treatment of characters was adopted and applied to formulating a design methodology that can be exercised by students within a final-year undergraduate architecture design studio. The Narrative-based Dialogic Design (NDD) methodology foregrounds the production of narratives that incrementally and organically realize a spatial and temporal clustering of events. In doing so, it seeks for the validity of design in production to emerge internally from the dialogical relationships between different narrative positions, rather than what may become superimposed upon the design by pragmatics and conventions of architectural form and function, and/or subjective values resting outside the network of narrative positions itself.

Each narrative position depicted through a character allows a particular rendition of events to actualize and for the exploration of temporal and spatial relationships of these character-based events to create a composition that in turn realizes functionality and form for the design. The narrative positions can belong to real, fictional characters, or a combination of both. Other than the temporal-spatial relationship between narrative positions, each character's narrative can explore or follow a particular temporal-spatial structuring that may be linear or non-linear, allowing events to surface and be elaborated in a way that best suits the narrative in production. Certain events can be portrayed longer or shorter and presented in an order other than the raw chronological order of the story (fabula). Therefore, as depicted in Figure 1 there are two levels at which the artistry of the designer as an author is performed: once in the structuring of narratives (horizontally) and then in the polyphonic overlaying and intersecting of narratives (vertically).

The NDD methodology thus invites designers to develop design through creating character-based architectural scenes as different aspects of the narrative position(s) become known to them, however, fragmented or disparate at the outset. These scenic fragments are then arranged horizontally and vertically into a plot which acts as a temporal-spatial foundation for the design (product).
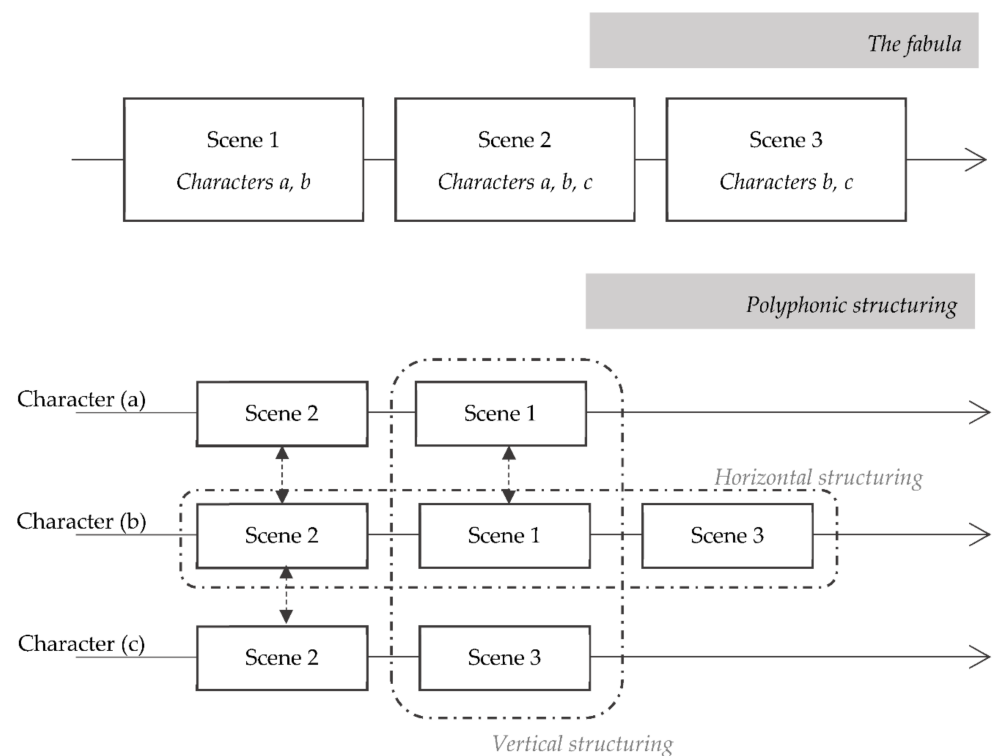
**Figure 1.** The polyphonic structuring of character-based scenes (author).

4.1.2. Implementing the NDD Methodology

An initial run of the NDD methodology was piloted as part of the final-year under-graduate Architecture and Design Studio 3 module at the University of the West of England. This module is a year-long module (20 weeks), where students develop one design project in response to an open-ended brief, and in compliance with the criteria of the UK Architects' Registration Board (ARB). The project is assessed at the end of the year through the submission of a portfolio.

The topic of the brief for the 20–21 academic year was Responsive Bristol: Spike Island 2030. Students had to examine and explore the meaning of responsiveness, develop a manifesto for a responsive Bristol in 2030, and by proposing a site on Bristol's Spike Island area, develop a project with a work, play, or learning nature that realizes the aspirations for a responsive city. The studio was structured into four cluster groups, each leading the design under a different theme: narrative production; biological adaption; computational thinking, and tectonic experimentation. Students chose their cluster group based on descriptive texts about the themes. The narrative production theme focused on the lived memories and experiences of the context, as a way of building a foundation for composing narrative(s) through the medium of architecture. The NDD methodology was executed with a group of 14 students within the narrative production cluster.

In implementing the NDD methodology, a storybook element was introduced, as a tool for developing scenes, giving voice to different narrative positions, and examining the plot that students were asked to keep in parallel to their conventional architectural sketchbook, where drawings such as plans, sections, and elevations would be developed (see Figure 2 for example). Each scene was regarded to anchor onto a site a particular event and for the design to be built bottom-up through the unfolding of the overall story.

Students were also asked to think of three characters (one of which could be themselves). However, with the exception of the character representing the student's self, characters were not to be defined at the outset of the process, but rather through the research and studies students conduct. The students initiated the design process, by visiting the site and using the character representing themselves to interrogate and analyze the site (Figure 2 provides an example). In tutorials, through scrutinizing the qualities and

components of each scene drawn in the storybook, the sequencing of events, as well as use of the Socratic questioning technique [24], students were guided to better understand each character and the context. Often in tutorials, the discussion focused on situating fragments from one scene into another, examining new forms of interaction and sequences, and questioning what the character(s) would think about particular interventions. The aim here was to use the plot as a tool for testing ideas by bringing light to Bakhtin's idea of "placing a person in extraordinary positions that expose and provoke him" [23] (p. 105).

**Excerpt from the storybook: Studying the site/context**

'Lost in Spike Island'
Accompanying me, the musician and I walked along the harbour. Carried away with the conversation, we seem to have lost our way. A brick yard and tower-like structure appeared at the corner of my eye.
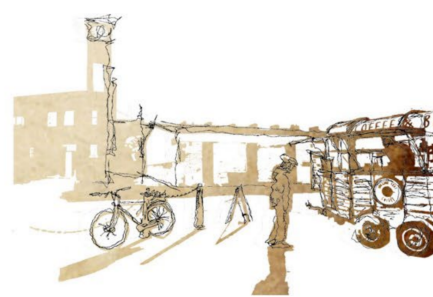
Following the road and the cyclists that lead us, we found ourselves in what seemed to be a neglected area, From a distance we could catch a glimpse of artwork of a veiled woman.

Catching a closer look of the artwork which rendered the abandoned alley, we encountered a few art students on their sketching trip.

Taking interest in the art they produced, we conversed over a cup of coffee and enjoyed the sunny day.

**Excerpt from the sketchbook: Analyzing the site/context**

residential parking scheme
residential scheme
improvement of cycle and pedestrian routes
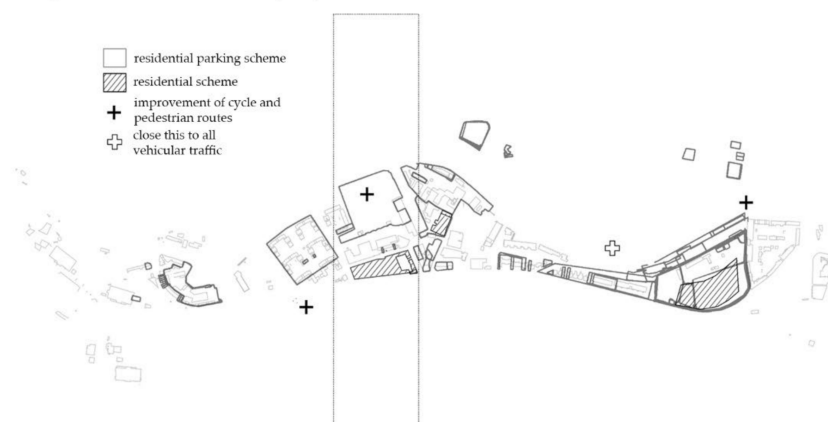close this to all vehicular traffic

**Figure 2.** Excerpts from a student's storybook and sketchbook in the preliminary stages of studying and analyzing the site/context (Student work, 2021).

*4.2. Observing: Three Readings*

4.2.1. Data Collection and Analysis

From the 14 students that were supervised by the author in using the NDD methodology, six students provided consent for their anonymized work and reflections to be drawn upon in this paper. The study used a mixture of reflective notes of the author, documents and feedback provided in weekly tutorials, discussion from a group interview conducted at the end of the academic year, and independent reflections of the students. Through the course of the studio, the author chose not to explicitly place emphasis on issues of authorship and ownership, relationship building amongst characters, and approach towards form and function at the outset to allow the methodology to unfold organically. Questions about authorship, ownership, ethics, and designerly positions in the space of practice were asked post reflectively at the end of the academic year in a group semi-structured interview and independent students' reflections. There are specific ethical considerations when teaching practitioners to study their own context which was prioritized in the approach to this study [25]. Two decisions impacted how students were involved in the research process. Firstly, it was important that students did not feel that by choosing to work under this methodology they are obliged to also be research participants. Secondly, it was important that students did not feel that their performance or reflections will impact their grades in the module. Therefore, the interview was carried out after the completion of the studio and awarding of grades. The questions that shaped the semi-structured interview were:

- How did you find the methodological approach?
- How did the methodology affect the way you think about architecture (form of a building/function of a building/process/aesthetics/etc.)?
- How did the methodology affect the way you think about your role as a designer? How has storytelling and narrative building affected the way you think about authorship and ownership in design?
- How did the methodology affect the way you think about others (e.g., users)?
- In moving towards a more shared and inclusive ownership/authorship of architecture, how would narrative and storytelling help?

The interview was summarized and confirmed by the students and used as a basis for looking at the material produced throughout the year, categorizing, and housing the data into a number of thematic readings.

Methodically the research opted for thematic analysis with a semantic approach [26] in reaching the thematic readings. The analysis was interested in identifying conceptual openings by triangulating the data, in order to group and read the implications of NDD methodology based on different possibilities of semantic categorization of concepts. These categories were reiteratively revised against the data, leading to three overall themes, as depicted in Figure 3.

4.2.2. Reading 1: In Search of Collective Voices, Memories and Values

The first reading that emerged through this process was how the unfolding of the characters' journeys uprooted certain socio-cultural events distributed across time and place and contextualized them onto the site of the project; each character thus brought into light a series of memories related to these events that in part belonged to the character, but in part spoke of a larger collective experience that brought certain groups of people together in some form of solidarity.
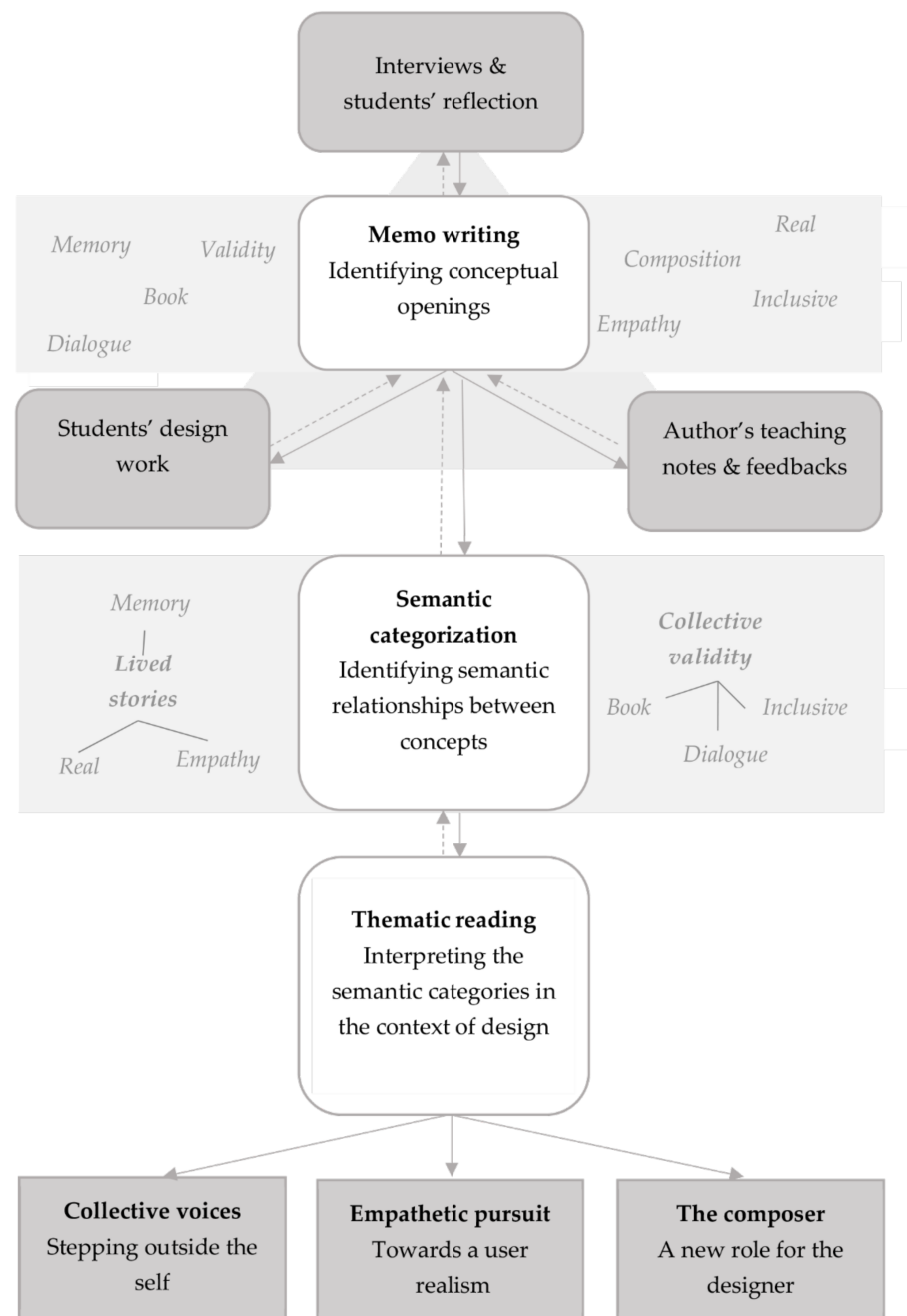
**Figure 3.** The structure of the study's thematic analysis (author).

In one student's narrative production, an initial visit to the site and the coincidental downpour of rain requiring seeking refuge from the elements where shelter was scarce, brought to the fore a character that extends the notion of refuge from the elements to voice the cultures of those who have sought refuge and have gone underrepresented. In another student's narrative, a seemingly isolated character that enjoys running in the night soon developed a need for seeking familiarity and a sense of home and security. This sense encouraged a search for those whose sense of home may be precarious (e.g., street artists) and extended the narrative of the runner from merely enjoying the solitude of the running in the silent hours of the night to one that finds themselves at the heart of a home for street artists. In both these examples, the narrative began from a place of immediate experiences of a character that in some capacity resonates with the student designer, but each experience acts as a threshold for a metaphoric reading of a larger collective voice that is reincarnated in forms of a character and their subsequent actions told during the narrative. In some

instances, the collective voice represented by a character also extended in time, into the past and future. For one student, one character was deceased, as a reminder of the silencing of skills and voices of a group of artists who used to occupy the site. So, although the character had no literal voice, they carried the collective memories of what was said and experienced in another time, into the current context. For another student, two renditions of the narrative of one character within the now (the year 2020) and a future (the year 2030) state, allowed the experiences of the now to shape memories of that which may be experienced in the future towards shaping a collective value. For example, the breakage of a chair experienced by the character in the present pulled on the arts and skills-based memories of the context in which the building was to be situated in, carrying this communal identity and value forward in reviving a maker mentality and attitude towards production and consumption (Figures 4 and 5 shows parts of this narrative and curation of scenes reflecting the narrative position of one character).
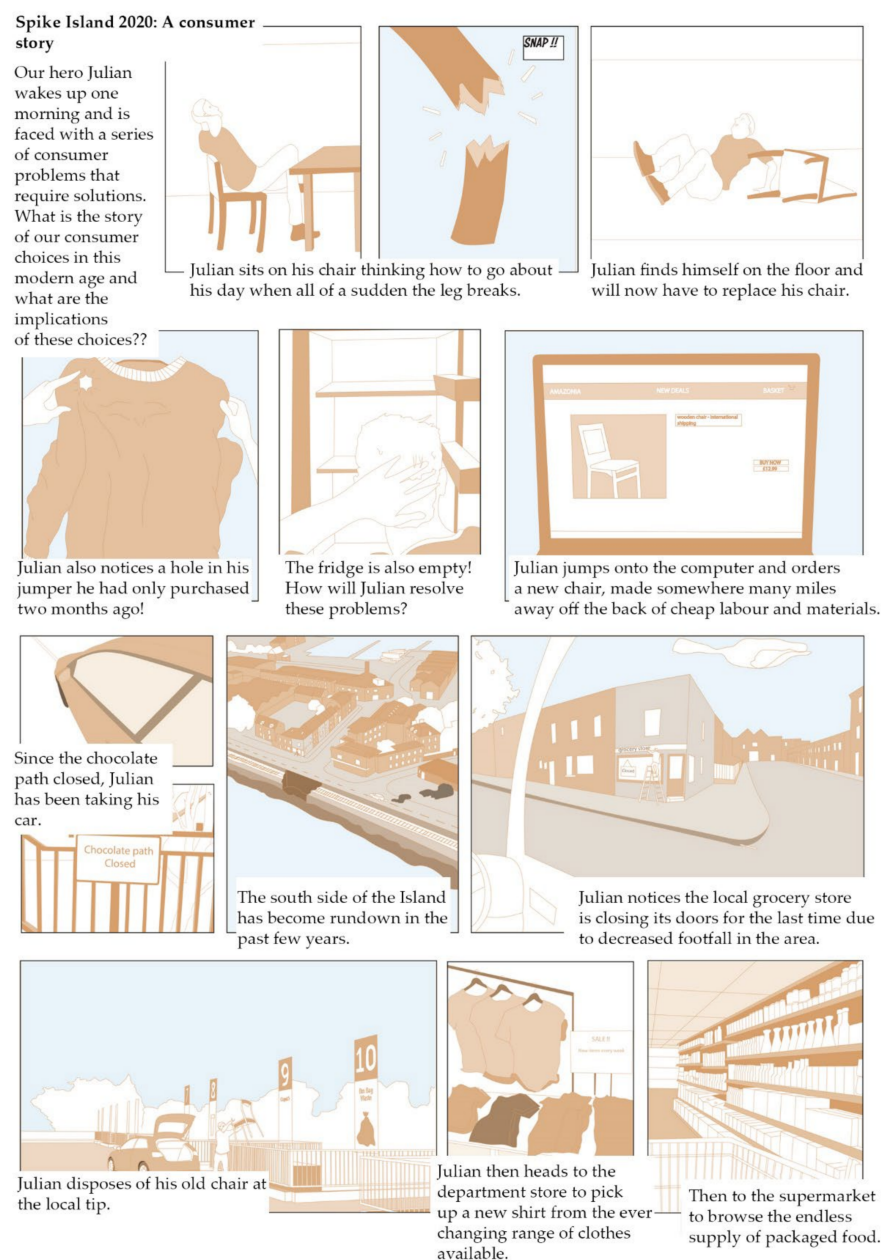


**Figure 4.** Narrative of a character's experience of consumerism within a now state-year 2020 (Student work, 2021).
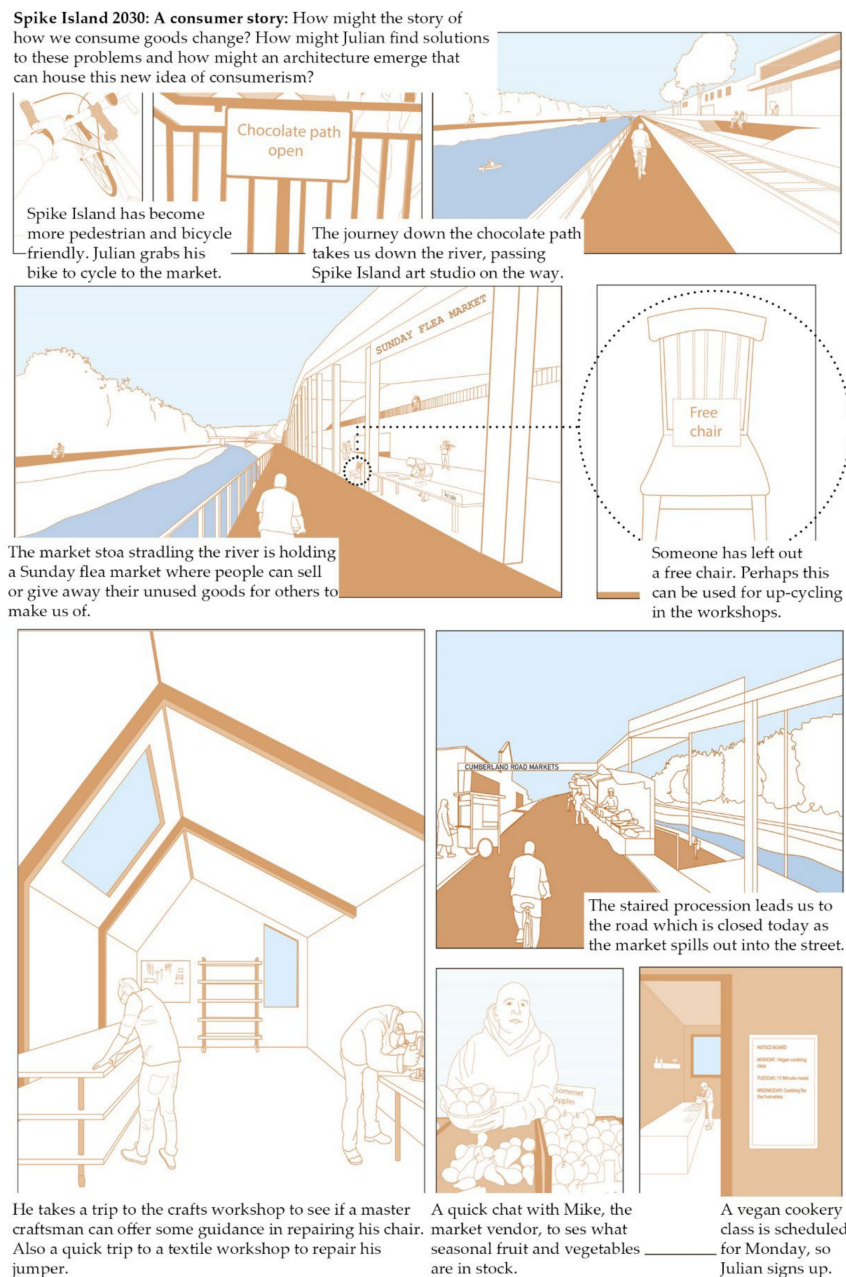
**Figure 5.** Narrative of a character's experience of consumerism within a future state-year 2030 (Student work, 2021).

Through the practice of defining and working with characters, a link between the individual-collective-context appeared, suggesting that understanding an individual calls on simultaneously reading the collective and the context in which they are situated. This triangulation, as reflected by one student, allowed an enriched response to the user:

"From the beginning of the project, the attempt to understand the existing collective memories which shape an individual's story was an enjoyable experience and made me feel attached to the project. This year by focusing on the story of the context, brought to light a narrative to weave the design into. I think narrative and storytelling can continue to be used in the design to draw on the memories through the user's sensory experience. This can inform the materials and how they are detailed. On reflection, from approaching the design with narrative and storytelling as tools I have become concerned that if I had not been using narrative and storytelling in this project would I still see users more akin to a statistic

rather than the full characters whose experience of their environment I would be changing. I envisage that in the future I will use these tools in the design process and to evaluate the success of a design by how this new narrative when woven with the existing/past contributes to the whole". (Student reflection, 2021)

This notion that each character can unveil and represent within its voice multiple other voices and perspectives extended across time echoes Bakhtin's [5] framing of language as heteroglossic, meaning "to speak or write is always to reveal the influence of, refer to, or take up in some way, what has been said/written before, and simultaneously to anticipate the responses of actual potential imagined reader/listeners" [27] (p. 92); challenging the idea that each voice exclusively belongs to who voices it. In effect, what was experienced through the NDD methodology, was that by giving characters a voice, a platform for accessing or establishing dialogic relationships between those involved in events past and future become possible. However, although a possibility, the definition of characters alone did not guarantee the establishment of dialogues or the continuity of dialogue throughout the whole process. As evidenced and reflected in the interview, the students noted that the approach to working with characters in this experience ranged from defining user types that help in analyzing the experiences of spaces, to personas that lead a story through their everyday activities, however mundane. Each approach was regarded to enable a different level of interrogation of spatial qualities and sequences of activities; nevertheless, it was also noted that where (a) the voice of the characters was more developed, (b) the characters led the story, and (c) the designer approached the design by occupying the various narrative positions, a better opportunity for pushing the design forward was created.

In limiting the definition of characters to user types, the individual and collective voices, and nuances that lie in their experiences move to the background, foregrounding attributes that enable a pragmatic assessment of the functionality and suitability of an idea. For example, an isolated attribute of bodily dimensions may suffice to decide on the size of spaces and requirements for spatial interactions. On the other hand, when characters are treated as personas with pronounced voices, each character-driven narrative is experienced in full, and it is not possible or meaningful to reduce the character to isolated attributes. The pronounced voices, supplement the design with an enriched backdrop of the memories and values each narrative carries and in so doing deepen the possibilities for intervention. However, in the Bakhtinian account, as Sidrokin explains, residing continuously in a realm of dialogue (being attentive to the multi-voiced nature of events and experiences) is not a sustainable way of life. Nonetheless, the possibility of living with "moments of full in mind" can be "readily accessible to anyone for short time periods and in some special circumstances" [28] (p. 19).

Furthermore, the student groups' reflection that the validity of design is something that rests within a collective rather than attributed to an individual, suggests that the NDD methodology in some capacity, however temporary, supported access to the dialogic self and searching for values of design that rest outside the immediate self of the designer. If as brought to light in this initial reading, designing with a dialogic self was made possible when characters were embodied by the designer rather than used as a tool, an area of further work would be to understand what conditions and stages of the design better lend themselves to such embodiment? In this preliminary run of the NDD methodology, the earlier stages of the design process that involve reading and analyzing the site, and conceptual development seemed to create a better space for this. However, as the design moved further into the stages of technical development and compliance with various standards and regulations, the notion of *the building as an object* rather than *the building as an experience* dominated the space of thinking and most noticeably silenced working with characters and development of the narrative. The *building as experience* was accessed again once the *building as object* seemed to work. In this initial run, all the characters defined by the students were envisaged to be in some capacity beneficiaries of the final design, and no character was defined that is involved in the processes of making and construction. Therefore, this opens up the scope for examining how future runs of the methodology

can be adapted to encourage the definition of characters that can be involved in the entire design process, from the conception of the building through to its use.

### 4.2.3. Reading 2: Empathetic Pursuit

Students' reflections accounted for empathy—the ability to share the feelings of another—as a key by-product of taking up different narrative positions:

"Narrative can be a strong influence on a design and the outcome of a project. It allows a designer to experience the journey through a new pair of eyes, the user's eyes. This influences the design in a way that will ensure the product is fit for use. Using narrative has helped me understand users in a way that I previously did not, and the process made me more empathetic to the users creating a space that ultimately resonates with people. The technique of narrative and storytelling is an underrated skill when it comes to design; both literature and design have lots of similarities and it's often forgotten. So, when a design is formed around a narrative, then the ties to the purpose can be seen throughout the design". (Student reflection, 2021)

"Creating a story through design plays a role in making deliberate design decisions that are informed by the journey we intend to create for each individual who will use the space. It helps to consider every single thing they may require and not just a one size fits all accommodation of spaces". (Student reflection, 2021)

The acknowledgement of one size not fitting all, speaks of a space where nuances and differences are attended to. Collectively, through the interview, the students noted that ultimately it is the actual use of the building and how people establish a sense of belonging and develop a sense of ownership that should be the prime focus of architecture. For this, the designer need not only to listen to the voices of others, or take up the role of another, but to relive the experience of another. Respectively, students reflected that although the characters were fictional, they developed a connection with the characters and a sense of realism, in that the design was responding to events, behaviors, and emotions rather than abstract ideals. The students discussed that the storybook, in that it captures the realism of experiences through character-based scenes, itself is a good tool for assisting communication and connection with non-architects and beneficiaries of design.

From a psychological point of view, the process of empathizing has been regarded to include stepping in and out of another's experience; commencing with first perceiving someone's past experience, then becoming immersed in the experience, and finally withdrawing from the experience to allow action to be taken. To facilitate this, in design literature, a range of techniques from direct contact, communication (when direct contact is not feasible) and simulation and imagination have been accounted for achieving emphatic design [29–31]. Whilst the NDD methodology did not actively prescribe these techniques, the temporality component of the narrative presented itself as a key driver for emphatic development. In particular as observed, in cases where the characters were not used as tools but as subjects of the narrative, as the narrative developed so did the characters. In a way, as the characters eased into the narrative, they revealed more and more about themselves and their associations, subsequently and incrementally bringing light to the nuances of their intonations and dispositions. In one student's narrative production, the dialogue between two characters, one acting in a teaching role and another acting in a learner role, showed how the learner gradually changes and puts asides biases and misconceptions as she interacts with the spaces, activities, and the teacher. In another student's narrative production, as the narrative and spaces developed, one character was seen to move from an isolated state to a state where they feel safe to connect and work with others. In cases where a character lived throughout the whole process of design from the initial site study to the final experience of the built output, the temporality of the narrative by itself, arguably allowed for better connections and immersion in the experience(s) of the character without the use of any specific empathy devices.

Additionally, as explained from a psychological point of view, for the process of empathy to be completed, stepping out and objective reflection are needed. Whilst the findings from Reading 1 suggested that being in a constant dialogical state is not sustainable, here we also see that it would not allow the process of empathizing to be complete. In this initial run of the NDD methodology, the focus on decentralizing the design from the designer's self, rested on encouraging students to embody the narrative position of the characters as much as possible. However, the process highlighted that for the empathetic connection to be turned into action (i.e., to design), requires occasional distancing from the narrative. Respectively one student's reflection touches well on how a disembodied examination of the narrative, allows the subsequent development of examined features within the context of the narrative design:

> "Architectural spaces are to be lived and experienced and by using a narrative device I may start to better understand how my proposed spaces will work on several levels from program, materials, functions and so on. Once expanded upon, these features become the story of the project itself with the climax of said story being the proposed outcome of the project". (Student reflection, 2021)

Readings 1 and 2 thus far suggest that the NDD methodology allows a toggling between the centralized and decentralized sense of self, and embodied and disembodied relationships with the process that are user (character) driven, ranging between characters as objects and characters as subjects. The treatment of characters as subjects, assigning them with voices and embodying their experiences that unfold over time, allows the space of design to be pushed towards collective memories and empathetic pursuits. The role of the designer, therefore, becomes an interesting one in traversing this range and is expanded in the next section.

4.2.4. Reading 3: The Composer

In the interview, the group reflected on how the NDD methodology affected their understanding of the role of the designer. The designer was likened to a composer in an orchestra, which led to a discussion around individual members or compositions each having a role/voice to play in the overall composition.

Whilst the idea of involving others in the space of practice has been discussed in architectural literature to support the practice of multiple authorship or the dissolution of singular authorship, that lessens the agency and control of the designer over the design [32–34], students' reflection on the NDD methodology suggested a rather different understanding of the meaning of authorship in a multi-voiced space of practice. Based on their experience, it is possible to maintain sole authorship, without subordinating and subsuming the voices of others. Having used the storybook, they made an analogy to the *book* itself as a physical product that is ultimately written (composed) by one person, but its attributed ownership is immediately passed on when the writing process is complete. Each person that gets hold of the book thus becomes its new owner, in that they gain control in interpreting and understanding the book in their own way, and build their own stories and experiences based on what the book presents. The role of the author from this perspective does not lessen, rather the possibilities for ownership expands. One student explained that whilst they felt very connected to the project, they did not feel they owned it.

Such interpretation by the students, suggests that space for the co-existence of the minimal self and a decentralized narrative self has been created through the NDD methodology. Attributing authorship to the designer here acknowledges the inescapability of the sense of agency and authorship that the designer develops over the design due to their acting body- their minimal self. Nonetheless, working with the characters and establishing dialogic relationships between them has arguably weakened the congruence between the sense of authorship and ownership and allowed for a distancing of the sense of ownership from the designer. Here, the decentralized narrative self, understands that its position is one amongst many and the space of practice is one that will belong to many, therefore

whilst exercising agency through the minimal self, the designer does so by being aware of and attentive to multiple others.

*4.3. Reflecting: The Trinary Dimensions for a Polyphonic Practice of Architectural Design*

In reflecting on the synergies between the readings of this action research, three frames of focus for creating a polyphonic space for architectural practice are thus proposed (Figure 6).
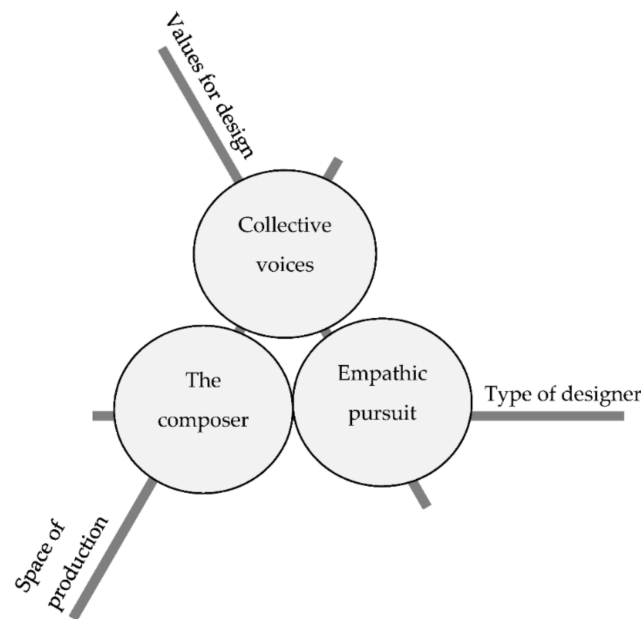


**Figure 6.** The trinary dimensions for a polyphonic practice of architectural design (author).

The first frame is to do with the *space of production*; whereby the design is seen to perform and be produced in the context of a pluralistic space of collective voices. As discussed in the paper, the act of giving voice is what allows the pluralism of the space to be rendered visible and for the voiced entity to enter into a series of dialogical relationships, bringing to attention the social and collective underpinnings and implications of ideas. In this space, the members are subjects of practice rather than objects for practice, and the designer is who renders a particular axiological relation between subjects visible. In other words, the space of production is a social sphere already in motion, which the designer arrives at and unveils specificities in the relationships therein. As was seen in this paper, activities, and methods that can encourage listening and taking up various narrative positions of the social sphere can render the pluralism of the space visible and influence the designer's own relationship with the space of practice, framing it as something that does not solely belong to the designer. Such space liberates the designer—as composer—to actively navigate amongst the collective and listen to narratives and experience various forms of life.

The second frame: *type of designer*, interlinks two characteristics of a designer practicing in a polyphonic space, the designer as a composer and the empathetic designer. As noted, empathy requires the designer to step in and out of others' lives. Methods such as developing storyboards have long acted as a key approach for creating empathy in design, as a way of more realistically placing the design in context and imagining the implications of how it can be used; nonetheless, stories on their own provide a linear and unitary scenario of what could be possible. As experienced in this project, structurally decomposing and recomposing each character's story and examining the different arrangement of events (scenes), can allow different dialogic possibilities between characters and events to be elicited, through which an enriched and arguably more realistic sense of the lives involved can be experienced. Therefore, in a polyphonic space of practice, the designer as an

empathic composer seeks to dismantle and reassemble as a way of accessing deeper levels of meaning for the design. This is in contrast with the perception of a designer as a creator who projects internal thoughts into the space of practice and tests their value and relevance for a particular audience through empathetic pursuits. In the polyphonic space, the empathic composer is very much at the heart of driving and authoring the design, as they exert agency over the composition, but is conscious that what is produced is a composition of all that lies before and so the novelty and creativity of the author is not in what is produced, but rather in the artistry of the type of composition and how it comes to be.

The third fame: *values for design*, places the value of inclusive and polyphonic practice beyond attributions to specific individuals (designer, client, etc.), amongst the collective (all those who have and will come to act upon the space of design) distributed across time and place. The value of design is in its affordance for resonating each voice in full and allowing for different individuals to connect to it at an empathetic level so they can develop a sense of belonging and weave the design into their personal narratives. A design that values both empathy and the collective voice, therefore, looks to highlight nuances and juxtapose differences in a harmonic way within the same composition rather than reducing the focus to the similarities amongst voices that diminishes the intonations which at best can only facilitate a partial emphatic connection. As experienced here, the introduction of characters and examining the design through both the individual character's journeys and also their dialogical relationships harnesses reductionist readings of users, their needs, and behaviors.

## 5. Discussion

### 5.1. Participation before Participation

Neither use of narrative nor the concept of dialogue are new in architectural and pedagogical discourse. However, both have thus far been mainly used as tools of interaction and communication, with the narrative being used to create empathy with others and to understand the applicability and impact of a product on people and dialogue being used to facilitate interactions and engender a more active rather than passive form of participation. In particular, these tools have been in use in participatory design approaches with the aim of including people in the design process, designing with people rather than for people, equalizing and democratizing power relations, and creating opportunities for mutual learning from the process itself [35–37]. In the context of architectural education, to achieve values of participatory design, increasingly approaches which involve real clients and beneficiaries (such as live projects) are being explored as part of architectural curriculums [2,38–40]. As a pedagogic tool, such approaches enhance students' skills in conversing with diverse groups of people, developing empathy, and gaining experiential knowledge. However, as argued in this paper, the physical inclusion of others in itself does not suffice in realizing the values of participatory design. Respectively Bowen, McSeveny, Lockley, Wolstenholme, Cobb, and Dearden's [41] study shows that despite the best efforts of participatory design researchers to create an inclusive space, interviews with participants reveal that they do not necessarily feel as such. This is perhaps because as Bratteteig and Wagner [42] argue, a key issue in participatory design is that power still tends to remain with the key decision-maker. In addressing this issue, this paper added a novel perspective, by bringing attention to how those engaged in the design space (e.g., designers, researchers, participants, etc.) understand their sense of self.

As the paper argued, due to the (neuro)cognitive underpinnings of agency and ownership enacted by our bodies, inevitably humans interact with the world around them with a centralized sense of self. Therefore, in situations that are socially enacted and constructed and a group is to work towards the same objective, the agency and ownership move from one point of centrality to the next. Depending on how relevant the contribution of each individual is to the shared objective, certain ideas can gain prominence, and continue to do so until a unitary idea is reached. Whilst the unitary idea in principle may be representative

of values held by the group, in practice, it has emerged through the gradual construction of a hierarchy amongst the group, which is why the power can inevitably shift towards the key decision-maker. So, to create a space that is genuinely participatory and polyphonic (multi-voiced), the paper proposed structuring the space of practice such that individuals can develop a decentralized sense of self. This is where through the Narrative-based Dialogic Design (NDD) methodology, narrative and dialogue were introduced as structural components for creating a polyphonic space rather than mere tools of interaction and communication. In effect, the aim was to create a structure that allows the designer to obtain a participatory mindset, recognizing the space of design thinking as pluralistic, regardless of whether or not others are physically present in that space; participation before participation if you will.

In adopting the structure of the polyphonic novel, the NDD methodology examined whether this particular structure has scope to support designers in developing a decentralized sense of self over the design in production. To do so, the key feature of this methodology is that it challenged and hindered acts of convergence in the ideation process, as convergence can subsume voices at play into a unitary concept early on in the process [10]. It encouraged the development of parallel possibilities and narratives and the structuring of these parallel possibilities into a meaningful envelope. The observations made during the action research provided indications that the methodology offers a promising structure for creating a polyphonic space of practice. This was assessed through how the students retrospectively evaluated their role as designers having used the methodology. Evidently, the observation revealed that whilst maintaining authorship, the weight of sense of ownership had moved away from the designer to belong to a collective. Additionally, although this process only included a limited number of fictional characters, the design values and ideas emerging were not solely seen to be related to specific personas or the designer but to a collective. This possibility that the acting body of the designer who is authoring the design does not develop a sense of ownership over it, is of key importance and suggests that through this methodological exercise the designer was able to move into a reflective space and traverse beyond the immediate centralized sense of self.

Literature that approaches participatory design from the viewpoint of the designers' or participants' sense of self is scarce. However, in reviewing frameworks and models of empathy in design, Smeenk, Strum, and Eggen [43] developed an empathetic formation compass that can be used to examine how methods of design practice are situated across two spectrums of self-oriented versus other-oriented and affective-oriented versus cognitive oriented. Accordingly, methods that are inclined towards the other-oriented and affective-oriented ends are seen to correspond to a participatory mindset. Mapped against their proposed tool, the NDD methodology as reported in this paper, provided the designer access to the non-self, and led the development of a design through visualizing and experiencing various narrative possibilities, and in so doing can be regarded as having succeeded in scaffolding a participatory mindset.

### 5.2. Implications for Participatory Design Practice

One of the dimensions of participatory design is that it is situation-based [2]. Therefore, researchers generally advise against the use of prescribed methods of work which can impede the natural unfolding of interactions in a participatory space. However, what does this mean for the atmosphere created in a participatory design process? Currently, the weight in guiding the atmosphere is on the facilitator(s) of the session and their expertise plays a significant role [44,45]. The need to provide a capacity within the participatory process to (re)configure and critically reflect on roles, directions, and benefits of participation in a flexible and dynamic way has been discussed by a number of researchers [46–48]. Suggestively, if methods can be integrated into the participatory process that naturally lends themselves to reiterative reflection by all participants, this can reduce the need for facilitators to instigate and manage the atmosphere. The method of work in the NDD methodology, as depicted in Figure 1 is based on reiterative assembly and re-assembly of

ideas, shifting of scenes, and establishing new dialogic relationships amongst characters. In a participatory design scenario, if each participant is to be represented by a character, through enacting dialogues between characters and exploring different sequencing between their interactions, acts of (re)configuring the atmosphere and reflecting on the roles of different participants become embedded into the activities and can support a participant-led evaluation of the process. This paper envisages that such a scaffold can regulate the variation that is discussed to exist in the degree to which different participants participate in the process [49] and contribute to endeavors that involve participants in the evaluation processes of participatory design [36]. Respectively, a future study can examine how scaffolding a participatory design process using the NDD methodology, impacts the degree of participation and unfolding of evaluation processes.

One of the other issues in participatory design is that participation in a specific workshop/participatory session is often limited to small groups of people and at times with limited heterogeneity and representation amongst the group [50,51]. Where projects can afford the time and resources, workshops may be held with multiple small groups or through the facilitation of tools in which people can continue to participate, in a more asynchronous passive format, such as through online maps in some larger public consultation projects. In small group settings, the NDD methodology allows fictional characters to be introduced and work with real characters (participants) in a participatory workshop and in so doing expands the space of issues that can be discussed, which may not otherwise be realized by the group of real participants. Additionally, it can create a better supportive space for the participation of personality types and the process by which different personality types behave in social situations. Respectively, participants can represent themselves as a character within the process or uptake a particular avatar form. As characters can be introduced to the process when needed, it also has the capability for individuals to simultaneously participate in multiple roles depending on their readiness and comfort levels, whereby an individual may start their participation process by taking up the role of a particular character but as trust is built throughout the process and interactions, they may choose to define and introduce a character representative of themselves. As participatory processes are processes that are socially constructed [44], it is important to be cognizant of how the personalities of those involved with the space affect this atmosphere. Research suggests that in animal populations personalities can have a substantial effect on the social functioning and structuring of a group [52–54], nonetheless how different personality types interact with a group and nuances in how the space of participation is impacted by and affects different personality types has not been examined in participatory design literature. Given the plasticity of personalities in social interactions, what is important is that the techniques and methods of participation accommodate this fluidity and dynamism.

### 5.3. Implications for Architectural Design Education

The NDD methodology was devised to explore how a participatory and pluralistic mindset can be created, regardless of physical participation. As a pedagogic tool, it can be used both in a complementary capacity to live projects by providing a scaffold for a polyphonic composition of voices of real participants, but most importantly it can provide a tool for use in a context where the involvement of people is not feasible within the educational context. In such educational context that does not have direct access to real participants, what is often experienced is that the language used around the relationship of people with the design in production, generalizes the end-user. One approach to addressing this problem, as articulated by Tvederbring and Jelić [55] is to collect empirical data of people through field studies and encourage students to use the empirical data to further construct personas with specific characteristics, so that sensitivity to what distinguishes one user from the next is recognized and practiced. The NDD methodology complements such a narrative-based approach that brings attention to nuances amongst voices, but also allows the characters to be developed from the context more broadly. This means that whilst the characters developed can represent particular beneficiaries of design, they can

also represent a personification of an issue or a problem emerging throughout the process. The NDD methodology can therefore be used in architectural education to experiment with a rather nuanced approach of working with characters, where characters are not only "objects of authorial discourse but also subjects of their own directly signifying discourse" [23] (p. 7).

Moreover, when narrative-based techniques are used in architectural education,, they can be limited to the beginning of a project, as an exercise in empathy building. However, what this paper shows is that through a scaffold such as the NDD methodology, there is scope for the narrative of the characters to continue to evolve throughout the project and in addition to facilitating empathy, provide an evaluation tool for assessing the design in production. Often the values used in evaluating a design are defined by functionality, buildability, building regulations, aesthetics, etc. However, as was experienced through this run of the NDD methodology, in tutorials the interrogation of the project drew on the characters' positionality. In effect, the parallel development of the story through the NDD methodology, provided a scaffold to maintain dialogue with the characters and a tool for evaluation of the design that transcended beyond the subjectivity of the student or the tutor.

*5.4. Limitations*

There are two key limitations to this study. Firstly, the paper reports on accounts of a limited number of students who experienced the use of this methodology in its initial pilot round, and, therefore, the findings cannot provide a generalized assessment of the efficacy of the methodology. However, the findings evidenced that the methodology has opened new forms of dialogue and thinking about design and the role of the designer, authorship, and ownership and therefore has promise in acting as a scaffold for a more polyphonic practice of architecture, be it in a professional or educational setting.

The methodology was run within the context of a design studio module with specific learning outcomes and assessment criteria and led by the author of this paper as the group's tutor. There were therefore a number of ethical considerations in the involvement of students as research participants, resulting in the reflections of students being carried out after the completion of studio and awarding of grades. This however created a second limitation for the study in that it does not provide finer-grain details of how the process impacted the nature of participation and dialogue throughout the process and students' learning at different stages of the project. In future runs of the action research, self-assessment tools that encourage students to be more reflective of their own learning can be used alongside the design process. For example, the empathy compass [43] can be used for students to self-assess their design practice, and logbooks and diaries can be kept to document thoughts on the learning process. Upon the completion of the module, the self-assessment documents of students who consent for their work and reflection to be included in the research can be submitted for inclusion in the analysis.

## 6. Conclusions

Drawing on the Bakhtinian dialogic position, this study framed an inclusive process of architectural design, as one that is polyphonic (multi-voiced) and facilitates the representation of each voice, in *full.* The originality of the paper's argument is that the dialogic treatment of voices at play in design first and foremost begins with realizing the self as dialogic and thereby leading to the proposition of the Narrative-based Dialogic Design (NDD) methodology for *designing with the dialogic self*. Through reporting on findings of action research, that puts the methodology to test in the context of a university-based architectural design studio, the study offered novel interpretations for the (a) characteristics of the space for architectural production, (b) the values for design and (c) the type of designer, that collectively provide a trinary framework for a polyphonic practice of architectural design.

**Institutional Review Board Statement:** This research has received full ethical approval from the Faculty of Environment and Technology at the University of the West of England (Ref: FET.21.03.040, on 29 April 2021).

**Informed Consent Statement:** Informed consent was obtained from all participants involved in the study.

**Data Availability Statement:** The data used in this study cannot be shared due to the terms which participants consented to.

**Conflicts of Interest:** The author declares no conflict of interest.

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