BUILDING WITHOUT BIAS: AN ARCHITECTURAL LANGUAGE FOR THE POST-BINARY

Posted on March 4, 2021 by martabuges

Categories: Data, expanding design practices, Hannah Rozenberg, No Density, Politics and economics

Tags: Architecture&Gender, Artificial intelligence, Built landscape, Cities, Cultural agitator, Data, Design guidelines, Designer's role, Digital design, Future cities, Gender, Global Awareness, Methodology, Research, Simulation, Society, Technology, Urban planning

ISSN : 2575-5374

> *Technology is not neutral. We're inside of what we make, and it's inside of us. We're living in a world of connections – and it matters which ones get made and unmade.*
>
> *Donna Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century' (1991), pp.149-181*

Man is to *Computer Programmer* what *Woman* is to *Homemaker.*

The most appropriate pronoun for the word *Vulnerable* is *She* whilst *Intelligent* is better suited to *He*.

All domestic or administrative AI should be female.

These gendered prescriptions are the result of a machine logic—a logic that indiscriminately infers truths from data; a logic that thus uncovers and embeds problematic prejudices at the heart of contemporary society.

As automated technology finds its way into our bodies, buildings, and cities, it is essential that it be designed in a way that is free from insidious biases. However, in the case of gender, this is rarely the case. Instead, the artificially intelligent tools that we use on a daily basis amplify and sediment existing gender inequalities. For example, Google translates non-gendered language to a gendered one by assigning male pronouns to words such as *intelligent, successful* and *ambitious* but female pronouns to the words *emotional, vulnerable* and *sweet*.

Building Without Bias seeks to discover whether architecture can be used as a tool to reveal, rethink, and revise the biases that are embedded within technology and society.

The design methodology is based on a machine learning technique known as word embedding. The method teaches language by giving machines numerous texts, such as Google News articles. The machine processes them and creates links between words, which result from the way in which they are associated with one another. The machine learns, for example, that *kitchen* has a stronger relationship with the word *she* than *he* because it is more frequently found with the female pronoun in sentences.

Using this technique, the project first defines a series of 0 GU (Zero Gender Units) architectural components. In the eyes of the contemporary machine, these components are—as a result of the

ISSN : 2575-5374

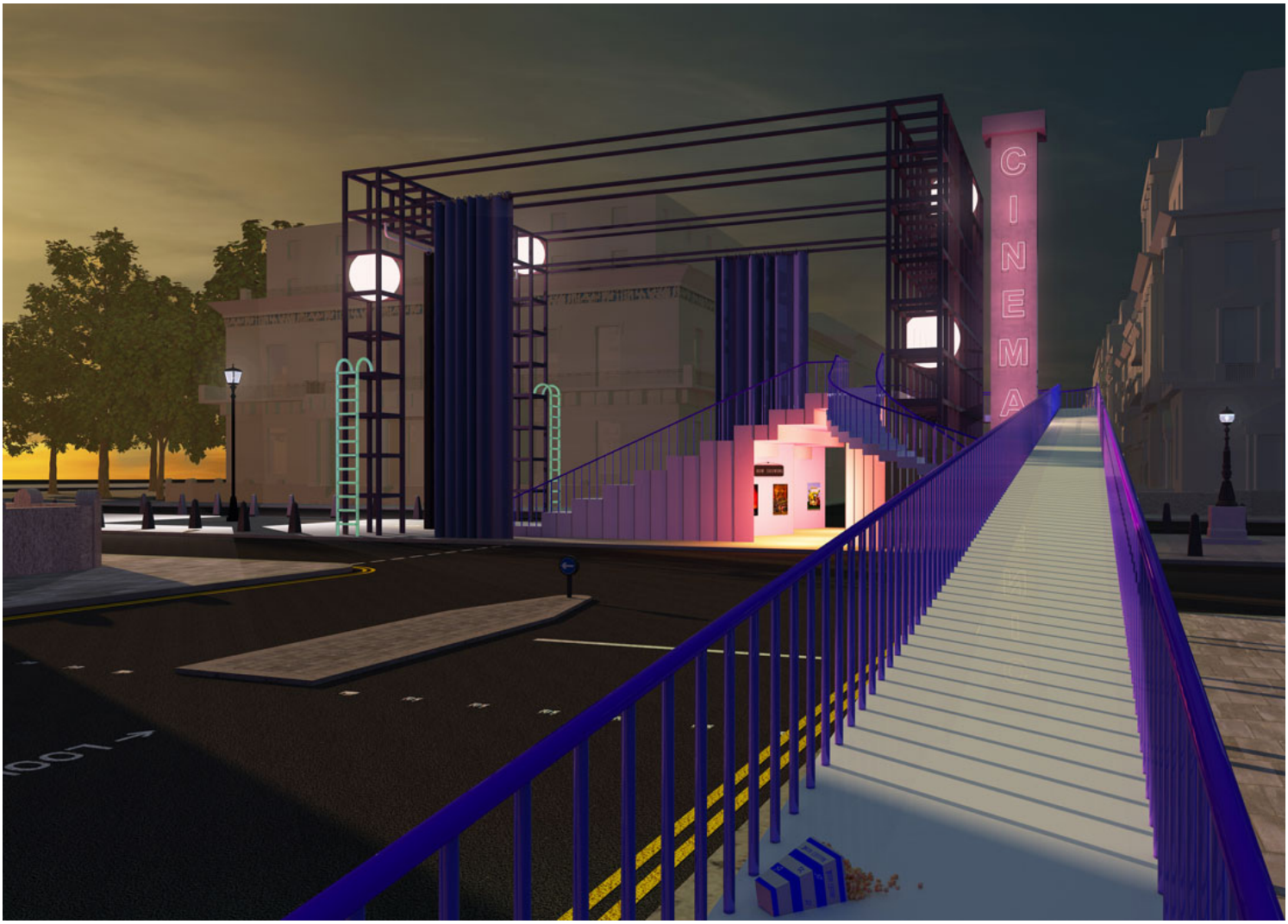
way that they are *labelled* seen as neither male nor female.

The website *Building Without Bias* is created with the aim of reaching a wider audience and allowing others to apply a similar methodology to their practice (http://building-without-bias.co.uk).

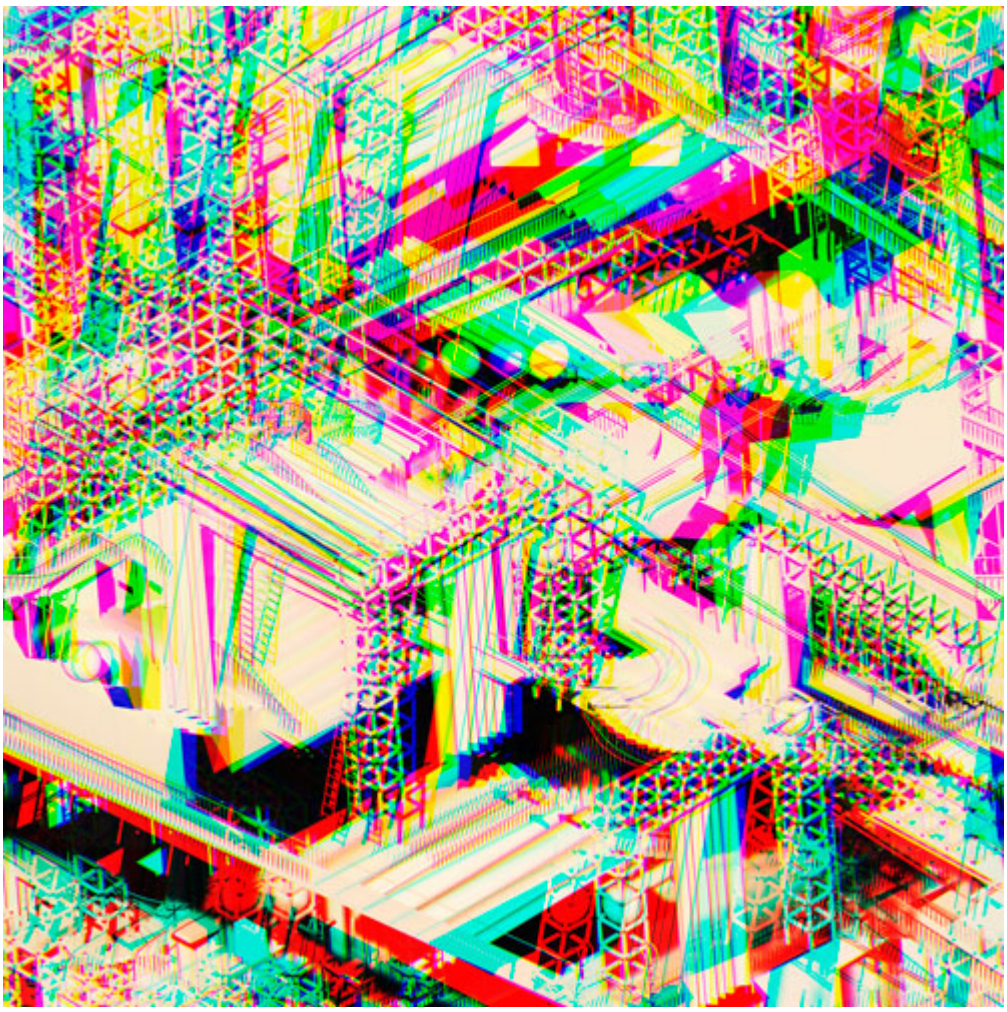
This linguistic approach is then developed into a more holistic methodology for designing a post-gender architecture. Commissioned by OMNI (Organisation for More Nuanced Ideas), a series of post-gender interventions are tested in one of London's least nuanced areas: St James's. In 2018, St James's is still a very exclusive area, with many gentlemen's clubs and gendered businesses. These institutions are visited by white, wealthy men, and their doors are closed to women or to those who do not belong to this elite.

Five OMNI interventions are designed to disrupt the existing situation of St James'. The purpose of these 0 GU spaces, which vary in scale—from the size of a piece furniture to that of an entire building—is to retrain how we use language. Since technology reflects the biases embedded in our language, the first step towards a non-biased machine is a gender equal language. The interventions therefore house five different programs, each representing a different way in which language is used: viewing, speaking, listening, writing and reading.

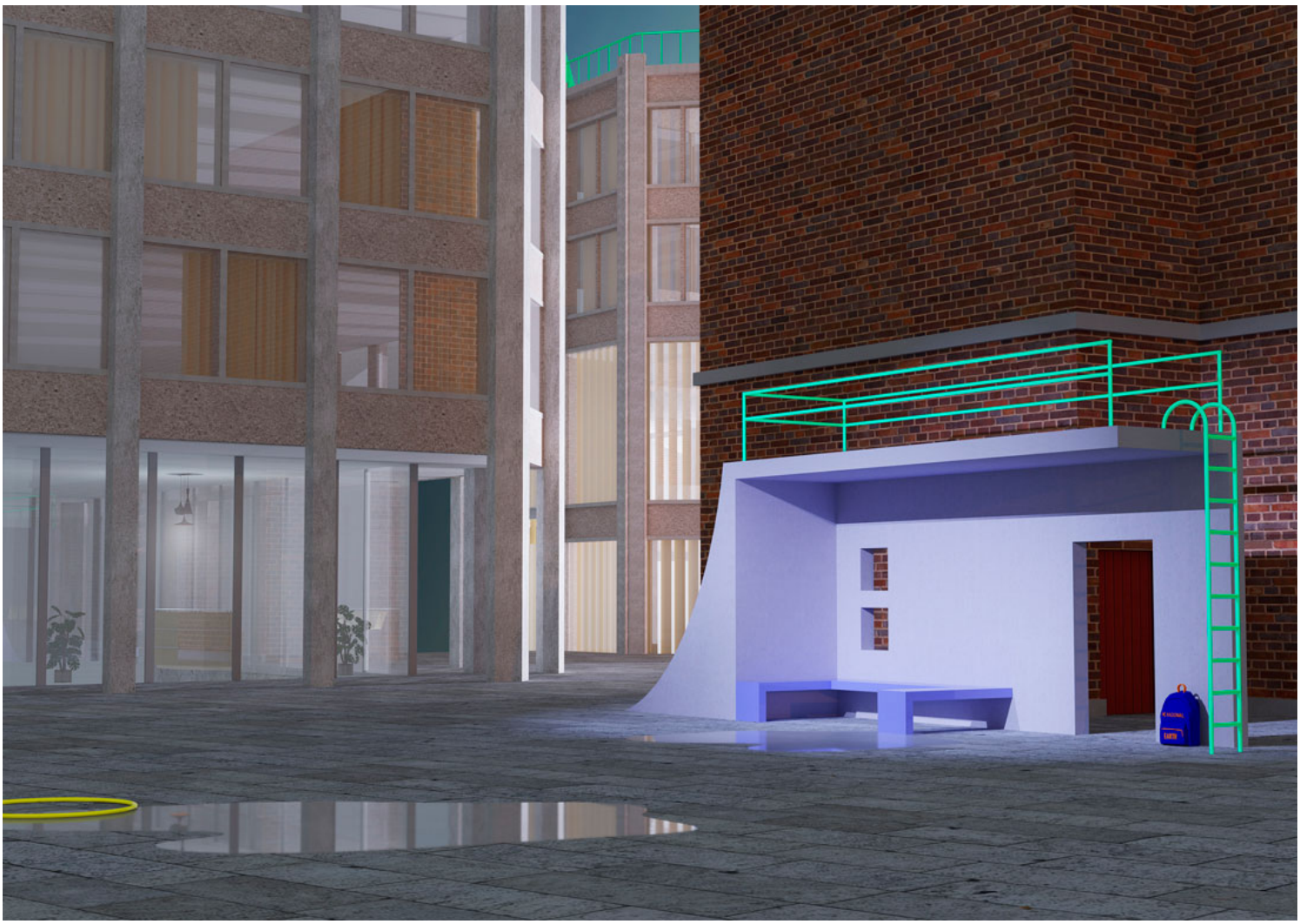
ISSN : 2575-5374



ISSN : 2575-5374



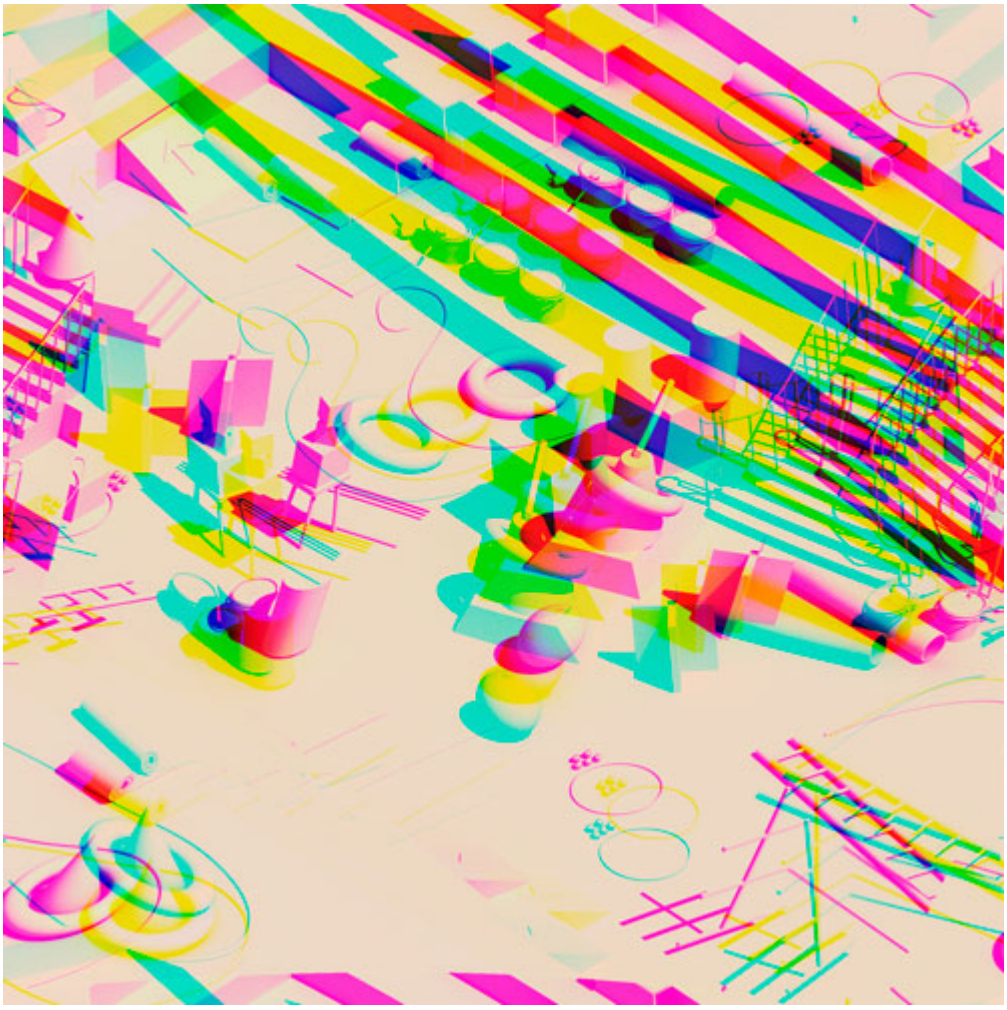
ISSN : 2575-5374



ISSN : 2575-5374

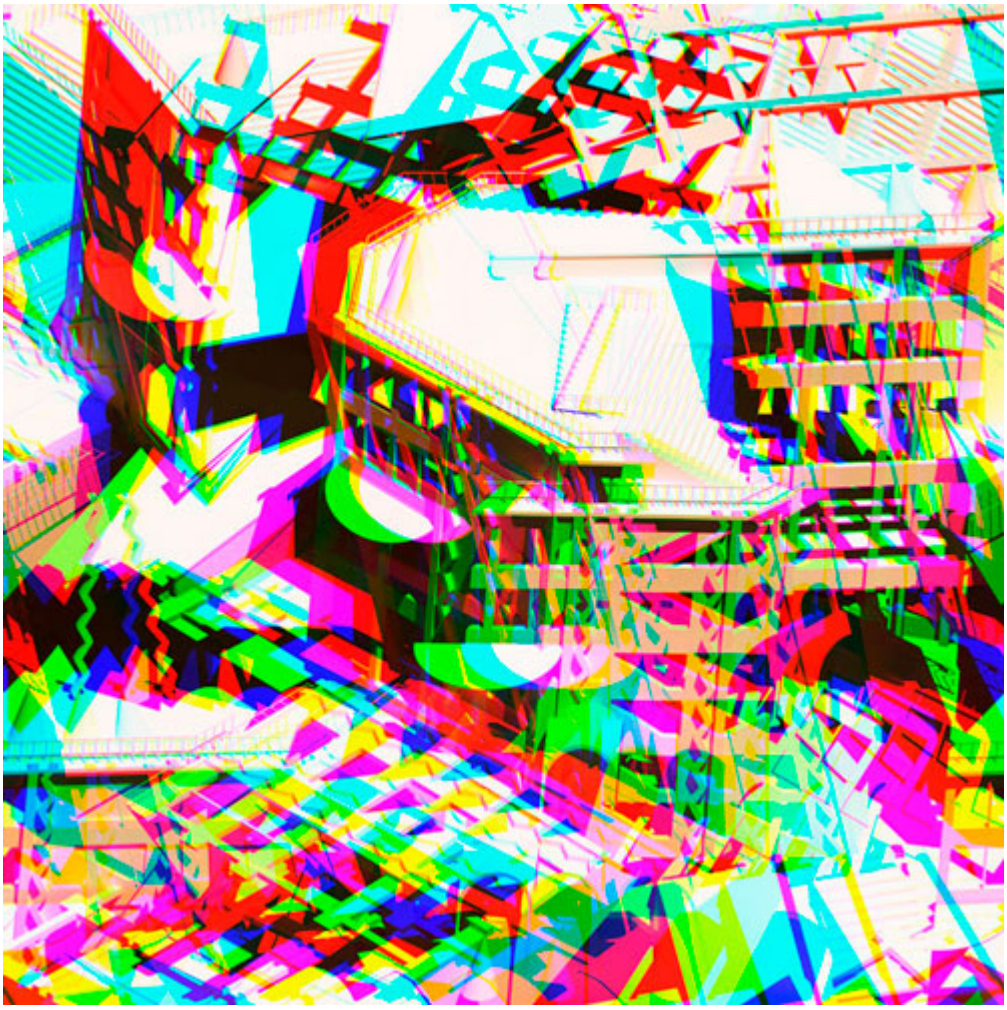
ISSN : 2575-5374

ISSN : 2575-5374



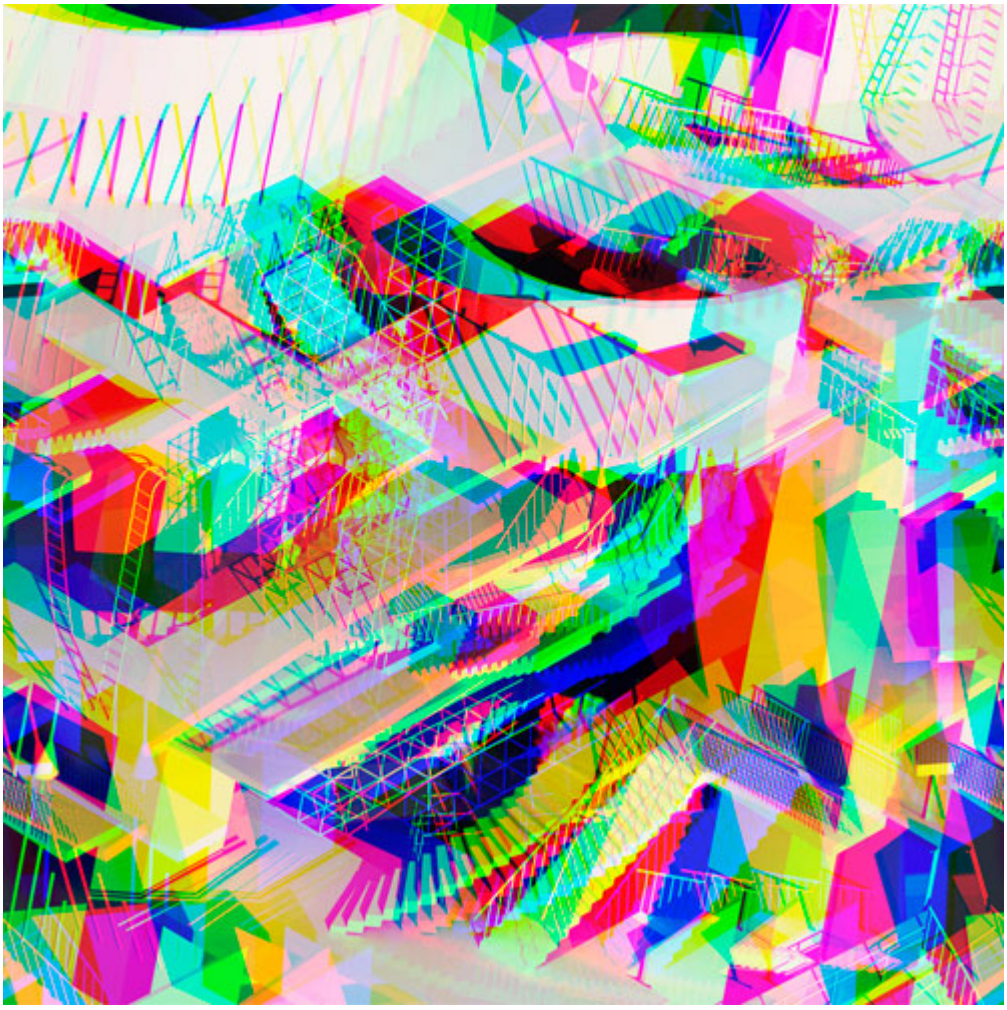
ISSN : 2575-5374

ISSN : 2575-5374



ISSN : 2575-5374

ISSN : 2575-5374



Ultimately, a landscape simulation is designed to maintain an optimally genderless St James's. The ideal gender neutral masterplan is one in which buildings are no longer individual, exclusive spaces and where the boundaries between programs, forms and genders are merged.

ISSN : 2575-5374

ISSN : 2575-5374