

# Adopting a research 'AS' design methodology for speculative mixed-reality environments

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## Introduction

This poster proposes the establishment of a specific method of research - "research 'AS' design" (Jonas, 2014) applied through a process of speculative graphic design (Figure 1a). The specific application scenario this might be applied to concerns the emerging field of Mixed-Reality (MxR) (Ohta & Tamura, 2014) design. The use of this language, of "researching the future by design" (Evans, 2014), offers the ability to propose how a designed MxR space might be pluralistically appropriated, utilized or challenged - provoking new ways to think, promote and utilize such a space.

## Designing for Mixed-Reality

Design, which could be defined as "the making of artefacts or the modification of reality towards a preferred start of affairs" (Chua Soo Meng, 2015) provides an operational approach toward the ability to produce and communicate human centric goals. This 'modification of reality' has historically occurred in the physical space, and more recently the digital space. The emerging field of Mixed-Reality (MxR) synchronises the two. This offers the ability to virtually modify a user's own perceived surroundings, using the physical environment as a geometric reference and support to the digital representational overlay.

## The process of Speculative Design

There is potential for a designer/researcher to adopt the process of conceptual (speculative) design looking at 'preferable' futures (Figure 1b) (Henchley, 1978). By considering design as a space for expanded modes of inquiry, in this case applied to MxR, the relative complexity and understanding of an environment can be used as a vibrant space in which to "materialize and experiment with alternative worldviews and futures" (Dunne & Raby, 2013). However, this requires the designer to conceptually separate from the constraints imposed by the marketplace as Dunne & Raby propose (2013): "Separation from a marketplace creates a parallel design channel free from market pressures and available to explore ideas and issues."

This separation provides a framework for speculative design which the author proposes might be further elaborated upon through the adoption of an appropriate design research methodology.

## Exploring the method of research AS design

When designing effective responses to application scenarios which might (at least in part) have areas that remain undefined, a method of research that allows for iterative creation using variable design-based ruleset becomes necessary. The process of speculative design exploration proposed here offers the opportunity for the application of such a ruleset, somewhat aligned to a 'Designerly way of Knowing' (Cross, 2007) research method, as opposed to a scientific method. In effect this design research method illustrates a practice-based abductive approach to the process of the inductive and deductive learning cycle (Dewey, 1997; Jonas, 2014).

The diagrammatic definition of this method of design research was originally proposed by Professor Wolfgang Jonas, based on earlier work by Professor Ranulph Glanville (Glanville, 1997). In Jonas' paper 'A cybernetic model of design research' (Jonas, 2014) the "newly emerging" category of research 'AS' design (Figure 1c) is described as:

*"An embodied/situated/intentional observer inside a design/inquiring system, concentrating on the production of 'variations' AS raw material for the design/inquiring process. Research in action, performed in the medium of design."*

The resultant manifestations of this process were subsequently defined as 'artefacts' (R Glanville & Jonas, 2007) or 'Wildcards' (Hancock & Bezold, 1994).

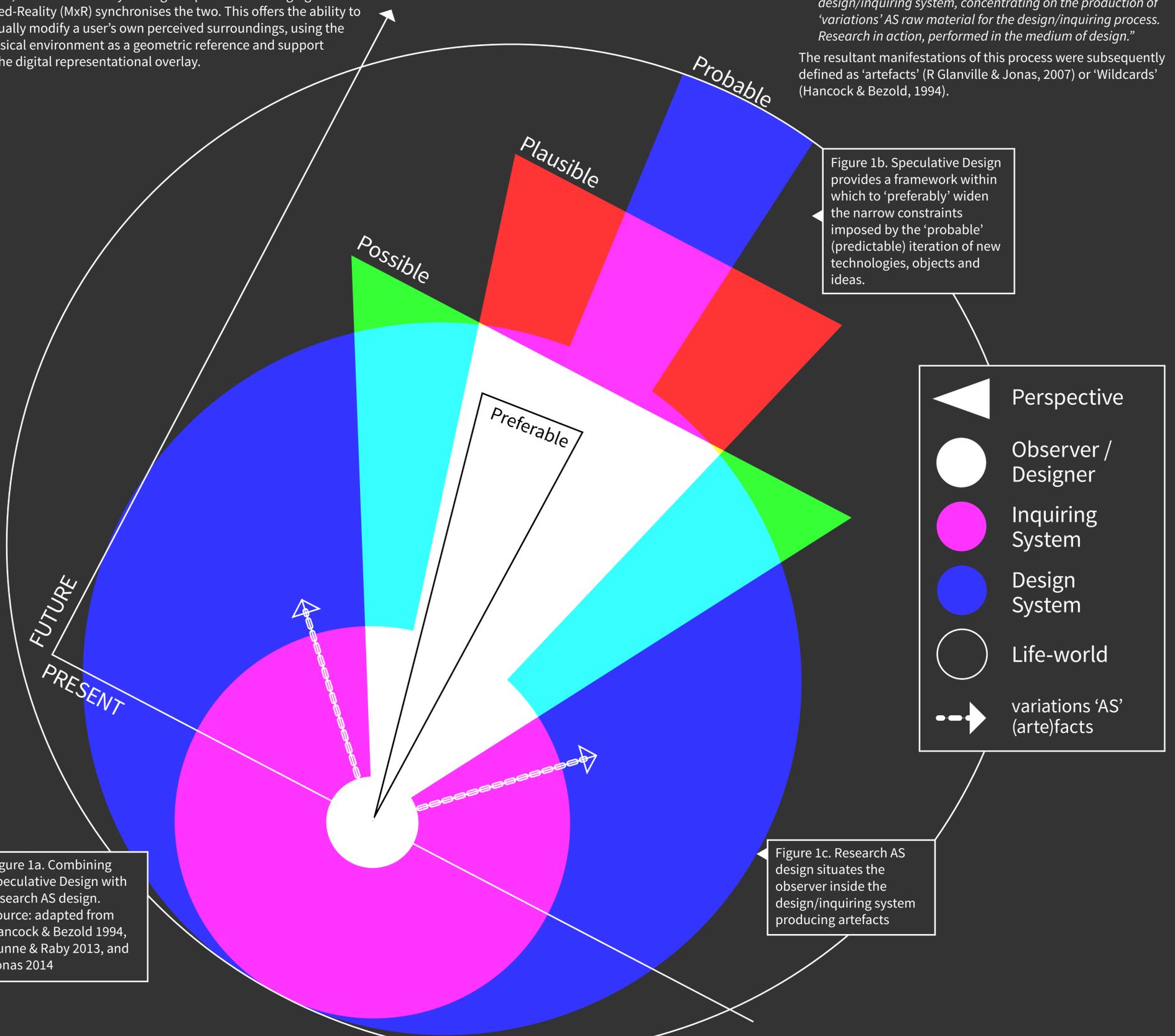


Figure 1a. Combining Speculative Design with research AS design. Source: adapted from Hancock & Bezold 1994, Dunne & Raby 2013, and Jonas 2014

Figure 1c. Research AS design situates the observer inside the design/inquiring system producing artefacts

## Conclusion

Situating the research perspective from the point of view of the observer - inside the inquiring system - offers the potential mechanism to define, document, and refine new and emergent 'artefacts' when exploring 'preferable' (less predictable), speculative design propositions.

In so doing, the potential area for multiple alternative resolutions to a conterminous design problem is necessarily expanded. Fields of research that might look to investigate and expand on existing areas of research and development, such as MxR, may benefit from the kind of design research system proposed here.

Further work will look to adopt a design practice-based application of the above methodology when constructing visual communication artefacts within a mixed reality environment.

## References

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