

The SIN principle

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Representation: science vs art

Science is perceived as concerned with representation

- of the general and the abstract,
not the particular and the situated
- of the exact and objectively known,
not the elusive and subjective
- of what accords with authenticated experience,
not the fanciful and mysterious

Art favours an alternative: "The SIN principle"

- representing *situation*, *ignorance* and *nonsense*

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Situation in science

The Computer Science perspective

- analyse our environment, identify observables that are sufficient to the purpose in hand
- make a mathematical representation of the relevant observables, generally presuming their objectivity
- build software / hardware to monitor, manipulate and record these observables

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Situation in art

The Computer Arts perspective

- situation is the primary focus of concern for the artist
- situation essentially encompasses the state of the observer
- situation is represented by an artefact
- the artist is essentially concerned with those aspects of computer-based technology that are experiential

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Ignorance in science

The Computer Science perspective

- knowledge is prior to representation - we can only represent what we know
- what we can represent is the best representative we have of what we know - cf. *negation as failure*
- no program without an algorithm - anything we can do must be something we know how to do

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Ignorance in art

The Computer Arts perspective

- not all knowledge can be articulated, and every situation is essentially more than can be represented
- that one experience can represent another in ways that we can reliably experience, but cannot explain
- acknowledgement of ignorance is of the essence in art

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Nonsense in science

The Computer Science perspective

- representations are valid and useful, or invalid and useless
- a representation is directed at a norm, events outside this norm are singular and beyond this representation
- representation is neutral wrt quality of experience

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Nonsense in art

The Computer Arts perspective

- parody, absurdity, exaggeration, fantasy central to art, to be explored within the constraints of integrity
- representation is not sharply constrained to sense vs. nonsense: cf. caricature, morphing
- there are gradations of sense and plausibility associated with degrees of experience

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EM and the SIN principle

Situation

- modelling state as the primary concern
- state embracing situation and mind of modeller

Ignorance

- openness to semantic extension at any point
- represents knowledge implicitly via interaction

Nonsense

- supports indiscriminate blending
- gradations of sense and plausibility

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EM - an enabling technology?

- not functionally driven specification but emergence
- experiential feedback \Rightarrow confidence in interaction
- reliability and commitment after experiment
- comprehension through interaction
- bricolage - "design as you build"

... *individual skills and interaction styles as of the artist*

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Character of the EM culture

- practice before philosophy and principles
 - not the exclusiveness of a work of art, but re-creation
 - common property: communicate & share, not protect
 - open functionality, explicit structure, not optimised
- ... *evolving products of collaboration*

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Conclusion

Science and art truly have more unity than talk suggests

false perception of science - cult of theoretical science
situation, ignorance and nonsense are of the essence in
experimental science

cf. education as 'no rules'

not about liberating the arts alone, but our science

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References

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