

# *The Power of Placebo: Design for Contextual Healing*

*Design by Nathan op den Kelder*

*Text by Pieter Desmet*

## **The curse of the placebo effect**

Twenty years ago, *Science* published an article about a ground-breaking new antidepressant<sup>1</sup>. This medication with the mysterious name MK-869 was developed by pharmaceutical company Merck. It was to be the new-millennium medicine for millions of people who take antidepressants daily. As it turned out, that was not the case. Shortly before the launch, Merck decided to shelve the drug and that's where it remained. What happened? MK-869 fell victim to "the curse of the placebo effect"<sup>2</sup>. In a press release, Merck declared they had discovered that patients who'd taken a fake pill did unexpectedly well on the clinical test. In fact, they did almost as well as the patients who'd been given MK-869, wiping out the rationale for the new drug.





### Contextual Healing

The fact that a fake medication is able to significantly improve people's (mental) health has long been a thorn in the side of serious pharmacology. The placebo effect was traditionally viewed as undesirable noise that must be controlled for to determine a treatment's effect. Well, not anymore. Nowadays, the placebo effect is in the spotlight. Health researchers have embraced it as a powerful tool, and reframed it from 'fake' to 'contextual healing'<sup>3</sup>. Nowadays, prominent medical professionals also acknowledge that medical rituals contribute substantially to a treatment's effectiveness. Is it possible to purposefully design such rituals? This question inspired designer Nathan op den Kelder for his thesis "the power of placebo".

### Medical Rituals

Nathan focused on hand and wrist physiotherapy because patients have relatively low expectations of these treatments (compared to surgery). Is it possible to raise these expectations through contextual healing? He did some research to map the ingredients of successful therapeutic rituals, and he found three: (1) The characteristics of the treatment itself, (2) the patient-therapist interactions, and (3) the environment. Experts agree that the second ingredient, the patient-therapist interaction, is the most important factor in contextual healing. How patients experience the therapist during the sessions has a substantial influence. Radiating competence in combination with empathy, friendliness and reassurance increases patients' trust in the effectiveness of the treatment. And, in the end, that trust is the core factor of the placebo effect.

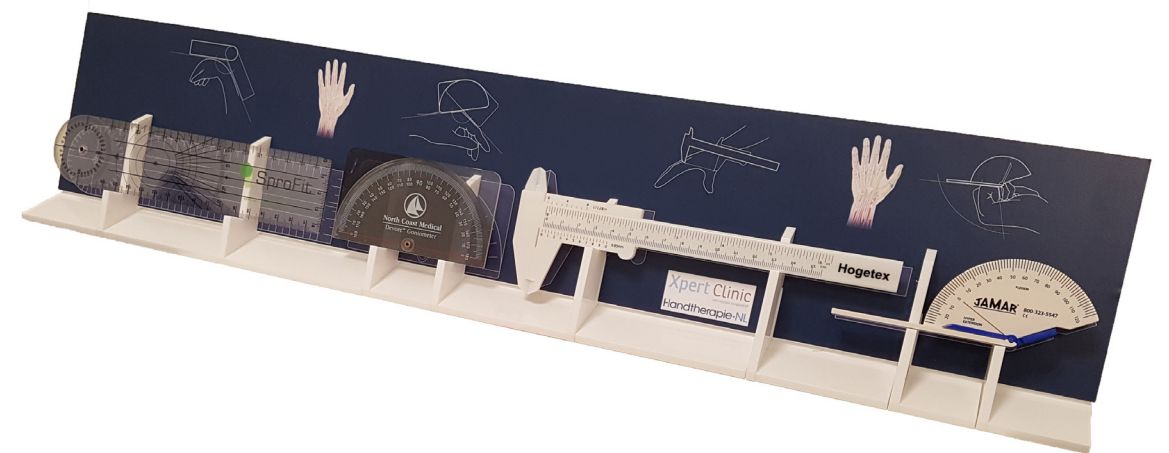


### Therapists as Professional Experts

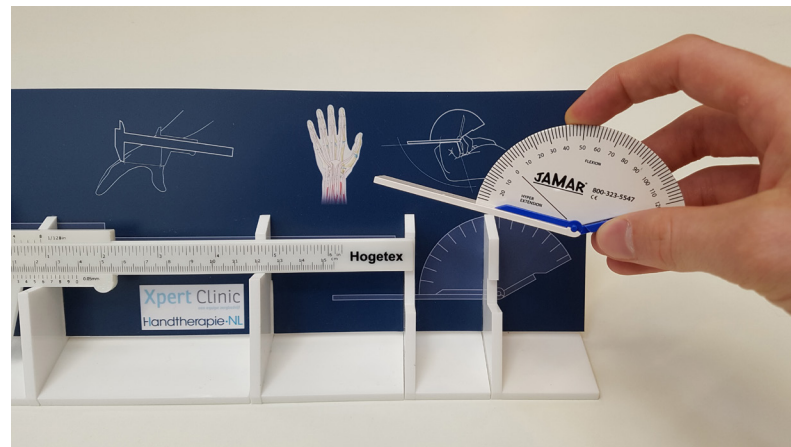
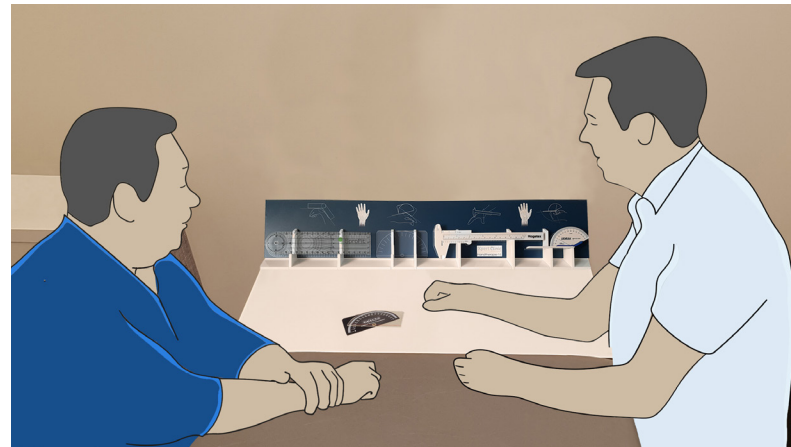
To get an idea of the patient-therapist interactions, Nathan conducted observations and interviews in a practice. He noticed that the treatment rooms are white and clean, but that equipment (such as goniometers and other instruments) are often stored rather messily – at the corner of a table or tossed in a drawer. Compare this to workspaces of other professionals, such as surgeons, opticians, but also furniture makers and jewellers: Tools are neatly ordered and stored. And the look of well-organised tools contributes to the aura of professionalism. Nathan viewed this as his design opportunity. After a series of ideas and sketch designs, the final design was elegant in its simplicity: a measurement instrument display.

### The Tool of a Specialist

The display presents the measurement instruments of hand and wrist therapists in an open and ordered way. Nathan consciously opted for a sober and clear design. This gives the display a professional and medical look. The idea is that this contributes to the degree to which patients experience the therapist as a competent specialist, which could increase their trust in the treatment. Nathan tested his design in practice. Patients were fascinated by the design and the look of the treatment room was more professional. The therapists' feedback was surprising. The display encouraged them to conduct their measurements in a more structured way and to emphasise the specialist qualities of the instruments towards the patient. As it turned out, this small adjustment in the room had an effect on the most important ingredient of the ritual: the patient-therapist interactions.



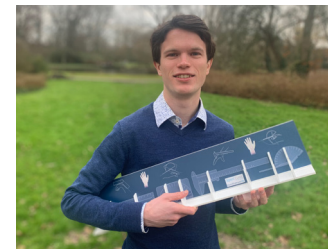




### Placebo: Purposeful or Manipulation?

Nathan discovered that contextual healing isn't a 'yes or no' matter: it is *always* present. A medical treatment is a ritual by itself, filled with contextual qualities such as design of the space, procedures, clothing, symbols and dialogue – and this all influences the patient's trust, and thus the treatment's effectiveness. New was his insight that this trust is much more important than often recognised. That something as simple as a display can have a

significant effect means there's plenty of room for innovation. Naturally, ethical questions play an important role here. To what extent are you allowed to purposefully influence patients' expectations, separate from the medical effectiveness of the treatment? For now, we must rely on the wisdom of Aristotle who taught us that the golden mean is the desirable middle between two extremes: Neither too much nor too little.



Nathan op den Kelder designed the display in 2019 as a thesis project for the master's programme Design for Interaction at the TU Delft<sup>4</sup>. The project was an initiative by Jarry Porsius, and part of a collaboration between TU Delft and Erasmus MC. The thesis project was conducted in collaboration with Xpert Clinic and Handtherapie NL. Thesis supervisors were Jarry Porsius and Pieter Desmet (TU Delft). Consulted sources and additional project information can be found in Nathan's thesis.

<sup>1</sup> Kramer, M. S., Cutler, N., ... & Hale, J. J. (1998). Distinct mechanism for antidepressant activity by blockade of central substance P receptors. *Science*, 281(5383), 1640-1645.

<sup>2</sup> Enserink, M. (1999). Can the placebo be the cure? *Science*, 284(5412), 238-240.

<sup>3</sup> Miller, F. G., & Kaptchuk, T. J. (2008). The power of context: Reconceptualizing the placebo effect. *Journal of the Royal Society of Medicine*, 101(5), 222-225.

<sup>4</sup> Op den Kelder, N. (2019). The power of placebo: Designing for contextual healing - fostering placebo mechanisms by increasing patients' belief in physiotherapeutic hand treatments (Master's thesis, Delft University, Delft, NL). Retrieved from <http://resolver.tudelft.nl/uuid:948a97dd-d06a-4003-bf9f-1d6e131e49a7>

# Colophon

## **The Power of Placebo: Design for Contextual Healing**

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### **Product concept & design by Nathan op den Kelder**

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### **Reference**

Desmet, P.M.A. (2020). *The Power of Placebo: Design for Contextual Healing*. Delft, Delft University of Technology.

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