

CAN A VIDEO GAME
CURE DEPRESSION?

SPARX and the social shaping of digital mental health



A Sociotechnical Reading



Luke Fullagar

Founder

Ideal Nurture

luke@foundingidealnurture.org

luke@idealnurture.org



THE PROMISE



IN 2012. THE HEADLINES WROTE THEMSELVES

“DEPRESSED? PLAY A VIDEO GAME.”

“COMPUTER GAME AIMS TO ZAP TEEN DEPRESSION.”

“A NEW WAY TO BEAT THE BLUES – ON YOUR SCREEN.”

The move to watch

Every headline locates the cure inside the artefact. The game cures; the teenager receives. Naming that move precisely is most of the work.



THE THROUGHLINE



SPARX'S EFFECTS ARE NOT PROPERTIES OF THE
SOFTWARE.

THEY ARE PRODUCED – OR LOST – IN THE
SOCIAL AND ORGANISATIONAL WORLD IT
ENTERS.

The social shaping of technology, in one sentence. Everything that follows is evidence for it.



THE LADDER



HOW THE WEEK BUILT THIS ANALYSIS

My single assignment — the “group work” brief, done solo — is the deliberate application of the week's toolkit to one tool. The course built a ladder; the four steps climb it.

DAY 1

Sociotechnical lens + hype

→ **Steps 1 & 2**

DAY 2

Co-design & its limits

→ **Step 3**

DAY 3

Implementation science •
NASSS

→ **Step 4**

DAY 4

Ethics • responsabilisation •
data justice

→ **the critical edge**



THE TOOL



WHAT SPARX ACTUALLY IS

7

modules of CBT delivered as a fantasy game — you defeat the gloomy automatic thoughts, the “GNATs”

2014

made free to every young person in New Zealand, funded by the Ministry of Health

RCT

non-inferior to face-to-face counselling — for mild-to-moderate depression, with support

Non-inferior. For some. With support. — keep those three qualifiers; they're about to vanish.



STEP ONE

THE LENS



SOCIAL SHAPING



A TECHNOLOGY HAS NO FIXED. BUILT-IN EFFECTS

Social construction of technology (SCOT). Interpretive flexibility — the same artefact means different things to different relevant social groups. There is no single “the technology”: SPARX is a budget line, a referral, the Māori version, Rainbow SPARX.

Success is the explanandum, not the explanans. When something works, that's the start of the inquiry, not the end.

“Best for whom?” + path dependence. The cheapest option for a ministry isn't the most engaging for a teenager — and once funded, a tool locks in (MacKenzie & Wajcman; Winner's politics of artefacts).





DETERMINISM. AND WHO GETS “RESPONSIBILISED”

TECHNOLOGICAL DETERMINISM

Wyatt: determinism is dead as theory, alive as rhetoric — it survives because it absolves us of responsibility. If the game cures, no one asks who isn't reached. (Four types; the headlines are the justificatory kind.)

RESPONSIBILISATION (LUPTON)

A self-guided app recasts the depressed teenager as a “digitally engaged patient” — an entrepreneur of their own wellness. It sounds empowering, but it carries healthism and individualises a problem with social roots.



STEP TWO

THE DETERMINISTIC HEADLINES



DIAGNOSIS



THREE NAMES FOR ONE ERROR

TECHNOLOGICAL DETERMINISM

Agency relocated from the system
to the device.

SOLUTIONISM (MOROZOV)

A messy social problem recoded as
a neat technical fix — and the
problem-composition smuggled
past us.

SOCIOLOGY OF EXPECTATIONS

Hype is performative: the promise
summoned the funding before the
evidence matured (Borup).



THE EVIDENCE



WHAT THE TRIAL ACTUALLY SAID

THE HEADLINES SAID: “CURES DEPRESSION.”

THE TRIAL SAID: NON-INFERIOR TO COUNSELLING – FOR MILD-TO-MODERATE DEPRESSION – WITH SUPPORT.

Every qualifier that carried the meaning was stripped out. In SCOT's terms that's closure — meaning stabilised early, not because the question was resolved but because everyone agreed to stop asking. And Lupton's responsabilisation is hiding inside it: a “free download” offered as the answer to a structural shortage of care.

The tell: readers under the articles were already asking whether it was SPARX “or just gaming in general.” The public saw the flexibility the headline had closed.



STEP THREE

CO-DESIGN – AND ITS LIMITS



THE STRENGTH



GENUINELY ONE OF THE GOOD ONES

- Built with young people, CBT clinicians, and Māori youth and elders — from the start, not retrofitted.
- A dedicated Māori adaptation — meeting Te Tiriti and Māori data sovereignty as obligation, not courtesy (the decolonising-digital-health lens).
- Rainbow SPARX, made with and for sexual-minority youth: 90.5% completed ≥ 4 modules, with warm ratings.
- The gold standard — Bate & Robert's experience-based co-design: designing with lived experience, and co-designing the implementation, not just the artefact.



THE LIMIT



AND STILL NOT ENOUGH

Arnstein's ladder: participation can look collaborative while the power stays with funders — “voice without muscle.” In Rainbow SPARX, the young people's input changed only ~6% of the script.

Representativeness skews to the already-engaged and digitally included; and even excellent co-design can perfect an individual tool while leaving the structural drivers untouched (Lupton).

The decisive finding: SPARX had genuinely strong co-design — and engagement still collapsed at national rollout. Co-design is necessary, not sufficient. Believing it sufficient is solutionism in nicer clothes.



STEP FOUR

IMPLEMENTATION: NASSSS



THE FRAMEWORK



NASSS – BUILT FOR EXACTLY THIS PUZZLE

Non-adoption, Abandonment, Scale-up, Spread, Sustainability (Greenhalgh et al., 2017): why do tools that work in trials fail in the world? Its answer: seven interacting domains, and a rule – the more domains that are complex, the less likely the tool mainstreams.

COMPLEX $\neq$ COMPLICATED

Complicated is a rocket: hard but rule-governed. Complex is raising a teenager: parts interact, the same input needn't give the same output. Health tech is complex.

WORK-AS-IMAGINED VS WORK-AS-DONE

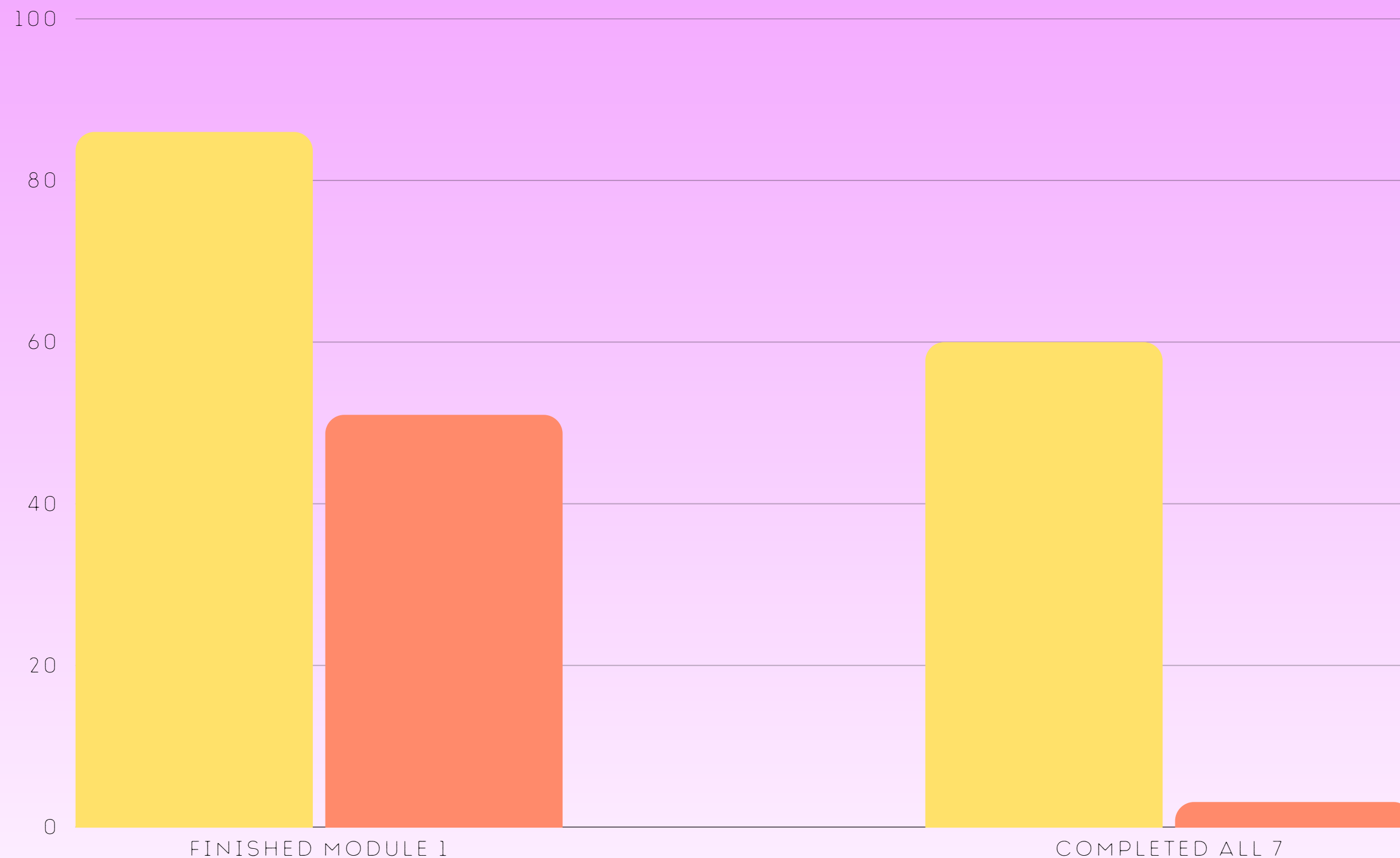
The trial is work-as-imagined (controlled, supported). The rollout is work-as-done (unguided, real). The gap is filled by complexity work – invisible adaptive labour no plan budgets for.

THE EVIDENCE



THE COMPLETION COLLAPSE

● TRIAL (MERRY, 2012) ● ROLLOUT (FLEMING, 2025)



3.1%

of those who started the rollout
finished all seven modules

The effect for those who engaged matched the trial — so the therapy works. The question is everything around it.



CONDITION · TECHNOLOGY

1

THE CONDITION

Adolescent depression is co-morbid, culturally shaped, driven by poverty & discrimination — and ~47% arrived sicker than the tool's target.

COMPLEX

2

THE TECHNOLOGY

“Just a game” — but desktop-only at launch, slow downloads, awkward sign-up. The simplicity is what got it under-resourced.

COMPLICATED → COMPLEX





VALUE PROPOSITION · ADOPTER SYSTEM

3

THE VALUE PROPOSITION

Strong supply-side value (scalable, cheap, evidence-based); the demand-side — worth a teenager's evening? — collapsed. “Value for whom?” (Berg).

COMPLEX

4

THE ADOPTER SYSTEM

Asks the adolescent to become a self-managing “digital health citizen,” and clinicians to add referral/monitoring work. That identity shift is what 7.4% measures failing.

HIGHLY COMPLEX



ORGANISATION · WIDER SYSTEM

5

THE ORGANISATION

Someone must recommend, monitor, catch deterioration — work that must fit clinical routines (Berg). Unguided rollout removed the human who'd do it.

COMPLEX

6

THE WIDER SYSTEM

Govt funding helped; but “game, not medical device” sidesteps adverse-event duties, and the data-justice question (who owns the data) sits unresolved.

COMPLEX



SPARX
TAKE CONTROL



EMBEDDING OVER TIME – AND THE TALLY

7

EMBEDDING & ADAPTATION OVER TIME

Evidence-based medicine wants a fixed intervention; digital health needs continuous updating. Those imperatives are at war — and maintenance/funding is what deployment couldn't sustain.

HIGHLY COMPLEX

SIX OF SEVEN DOMAINS ARE COMPLEX – TWO ACUTELY.

NASSS's rule: when multiple domains are complex, technologies don't mainstream — or if they do, they don't deliver. So SPARX didn't fail despite being good. It failed in exactly the way the framework predicts a good tool fails when the world around it is complex.

THE THROUGHLINE, PROVED



EVERY DOMAIN IS THE SOCIAL-SHAPING THESIS IN
ANOTHER KEY: THE VALUE LIVES IN THE ADOPTER SYSTEM.
THE ORGANISATION. THE WIDER SYSTEM. OVER TIME –
EVERYWHERE EXCEPT THE ARTEFACT.

A tool can be efficacious, and well-co-designed, and still fail – because adoption, fit, safety and sustainability are sociotechnical achievements, not software features.



WHAT I LEARNED



A WAY OF SEEING I CAN'T SWITCH OFF

I can't read a "this app cures X" headline now without hearing the determinism, spotting the solutionism, asking who's been responsibilised, and wondering which NASSS domain will quietly sink it.

The week also gave me the ethics: data justice (who owns and profits from the data), the digital determinants of health (does it widen equity or deepen the gap?), and the healthism baked into designs that assume everyone can prioritise wellness.

And the throughline is one argument seen from four sides — Pinch & Bijker, Lupton, Greenhalgh all say it. It makes me a kinder critic of SPARX, and a far more sceptical reader of the next miracle. Including the ones I might be tempted to build myself.





CAN A VIDEO GAME CURE DEPRESSION?

It was always the wrong question. The right one is harder, and more human: what does it take — in support, in systems, and in time — for a young person to actually get well?

Thank you. · Luke Fullagar · Oxford TIDH

