

**haha.js:**

**The Comedic Potential of JavaScript Frameworks**

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## Abstract

haha.js:

The comedic potential of JavaScript frameworks

Junior Vigneault

This thesis explores the conditions under which humour can emerge through a designer's playful and reflexive engagement with code, context, and digital tools. While humour is often researched in interaction design for its effects on users, less attention is paid to how it takes shape during the design process. Using a research-through-design approach grounded in reflective and grounded theory, I analyze the design of two original web-based projects, *Inner Birdsong* and *Are You Alone?*, built with MediaPipe and Matter.js. Through journals, versioned commits, and open coding, I trace how humour was both discovered and actively shaped through misalignments, surprises, and intentional, playful interventions with digital materials. Guided by Donald Schön's reflection-in-action, I treat design as a conversation with materials. Humour emerged through this dialogue, responding to system behaviour, appropriating tool affordances, and tuning interactions toward the comedic. Traditional humour theories (incongruity, superiority, relief), alongside interaction design and play theory, are used to interpret these moments. I identify four conditions that supported humour's emergence: adopting a playful stance, letting materials lead, embracing ambiguity, and practicing attunement to the emotional dynamics of the process. This thesis argues for an open, experimental, care-driven approach, where humour is shaped through a designer's situated, responsive, and intentional engagement with making.

*Keywords:* Humour, playfulness, interaction design, reflexive practice, JavaScript frameworks

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# Introduction

Contemporary digital tools and platforms create new opportunities for designing, experiencing, and interpreting humour. While humour has been studied in interaction design for its effects on engagement, behaviour, and mood, there has been less attention on how designers actually work with humour as part of their process (Niculescu 2021). Most research focuses on what humour does for users, rather than how it is created. In my work, I explore how humour can emerge through a combination of intentional choices and unexpected outcomes, shaped by playfulness, care, and responsiveness to the materials at hand. I do not aim to define what humour is, nor suggest that it works the same way for everyone. Humour is deeply subjective, context-dependent, and culturally variable. Instead, I trace how humour surfaced in my own design process, understanding it as an emergent quality shaped by specific interactions, tools, and decisions. Designing humour in this way often meant responding to what emerged while staying attuned to the tone, timing, and feel of the interaction. This process-oriented view calls for a research-through-design approach that foregrounds experimentation and reflection as key methods for understanding how humour takes shape.

This thesis asks: **under what conditions can humour emerge through a designer’s reflexive and playful engagement with code, context, and digital content during the creation of interactive works?**

I approach this question through a research-through-design methodology grounded in process, experimentation, and reflection. As a designer-programmer, I use code not only as a means of building outcomes, but as a way of thinking through making. My work is practice-based and reflexive, drawing on Donald Schön’s (1983, 1990) concepts of reflection-in-action and

reflection-on-action. Design, in this view, unfolds through an ongoing dialogue between the maker and the materials, as well as through retrospective reflection on those moments of engagement. In this context, the design process becomes open, sometimes unpredictable, and above all playful. It becomes a site where humour can be discovered and negotiated with dynamic constraints.

Humour, in this view, arises not from adding jokes to a system but from the design process itself. It emerges in part through misalignments, constraints, bugs, emotional cues, and shifting intentions. These are not interruptions, but opportunities for laughter, surprise, and reflection. While many of these moments are emergent, they don't happen by accident alone; they are often uncovered through a deliberate, playful engagement with the tools. Playfulness becomes a mindset used to explore the affordances of the materials, working with or against them, guided by an initial intention, and staying open to the humorous potential that unfolds through implementation.

To investigate how humour emerges in this way, I analyze the design process of two original web-based projects: *Inner Birdsong*, an interactive bird-watching experience that imagines birds' inner vibes, and *Are You Alone?*, a collection of erotic browser-based toys created in collaboration with Montreal sex-ed organization Club Sexu. I built both projects using specific JavaScript frameworks—MediaPipe and Matter.js—chosen for their distinct and experimental affordances. MediaPipe provides real-time computer vision models for tracking faces, hands, and body poses in the browser, while Matter.js is a 2D physics engine that simulates gravity, collisions, and constraints, enabling dynamic interaction with digital objects.

In practice, these tools rarely behave exactly as expected. MediaPipe, for instance, often produces results that are not what I intended during the ideation phase. Its logic is unfamiliar, sometimes opaque, and occasionally wrong. But rather than treating these inconsistencies as problems to be solved, I approach them as sites of potential for humour. The frameworks become not just tools but playmates, and the design process becomes a space for sensing their behaviours, where a shared play dynamic takes shape and humour emerges through the ongoing exchange between action and response.

Through reflective journals and version-controlled commits paired with commentary, I trace how humour emerged—or didn't—at various points in the process. Using open coding, I analyze this data to identify recurring patterns. These patterns form the basis for a final return to theory, where I reconnect them with key ideas from humour, play, interaction design theory.

The chapters that follow introduce the theoretical groundwork, outline the methodology, and present the two case studies in detail. The final chapter synthesizes the findings from both projects, using the emergent patterns as a basis for theoretical reflection and design conditions. My aim is to uncover insights and practical strategies to inspire designers working with humour in interactive, code-based contexts, and to advocate for a more playful, surprising, and experimental digital culture.

## Theoretical background

In this chapter, I outline the theoretical foundations that shape how I think about humour, playfulness, and interaction design. I begin with three classical humour theories—superiority, relief, and incongruity—which offer interpretive lenses through which I examine the emergence of humour in my design process. Rather than treat these theories purely as generative tools, I use them to reflect on how humour manifested in my projects.

Next, I turn to humour in the context of computational systems and human-computer interaction (HCI). This section highlights the challenges of modelling humour formally through code and points to the importance of intuitive, situated, and experimental approaches in interaction design. These approaches prioritize relationships, surprise, and affect over efficiency and predictability.

I then introduce Miguel Sicart's concept of play and playfulness. His distinction between play as an activity and playfulness as an attitude reshapes how I understand the design process. Rather than a task-focused activity, design becomes a site of reinterpretation, contradiction, and subtle resistance. Playfulness becomes a way of working with tools and materials that allows room for invention, irony, and emotional responsiveness.

Finally, I draw from key texts in interaction design that emphasize ambiguity, expression, and affect. These ideas help position interaction not only as a means of completing tasks but also as a space for storytelling, performance, and emotional depth.

## Humour Theory

Theories of humour have attempted to explain the mechanisms that underlie laughter and humour. Among the most influential are the superiority, relief, and incongruity theories. These frameworks do not offer a single unified explanation of humour but instead highlight different aspects of why and how humour emerges (Lintott 2016). In this sense, these theories work best in combination. As Lintott writes, “some comic amusement is enjoying a certain kind of perceived incongruity that gives one a feeling of superiority reducing psychic and/or bodily energy via expression in laughter. Such a conjoined account explains a great deal about a great deal of comic amusement” (2016, 349).

John Morreall, a philosopher and one of the most cited authors in humour studies, offers an overview of the field in his book *The Philosophy of Laughter and Humor* (1987), which serves as a key reference for this thesis. He points out that humour has rarely been taken seriously as a subject in philosophy. Although Plato, Hobbes, and Kant make occasional remarks about laughter, the first full-length philosophical treatment of humour only appears in 1900, with Henri Bergson’s *Laughter: An Essay on the Meaning of the Comic*. Coincidentally, Bergson’s text was my own first encounter with humour theory in 2018, which sparked my interest in the subject and that eventually led to this thesis.

Morreall also notes how humour has often been framed in negative terms. From ancient Greece through to the early 20th century, laughter was frequently associated with a loss of self-control or a kind of moral flaw. In *Philebus* (48–50), written between 360 and 347 BCE, Plato calls the ridiculous “a certain kind of evil, specifically a vice.” His wariness of humour was echoed by later Christian thinkers, contributing to a long-standing suspicion that laughter was undignified

and even dangerous. As a result, humour remained for a long time a marginal and morally ambiguous topic in Western philosophy (Morreall 2024).

The next sections briefly describe each of the traditional humour theories with their main authors, and are accompanied with examples related to interactivity and technology to better illustrate them.

### **Superiority Theory**

The superiority theory is the oldest traditional humour theory, and traces its roots to Plato and Aristotle and, later formalized by Thomas Hobbes. It suggests that humour arises from a feeling of superiority, whether over others or over a former version of ourselves (Morreall 2024). In this view, laughter is tied to ridicule and mockery. While this theory has been foundational in the philosophy of humour, it has been debated heavily because it claims that the feeling of superiority is necessary for humour, which doesn't account for all kinds of humour and makes no distinction between laughing at someone and laughing with them (Lintott 2016, 349). The theory is primarily concerned with humour's emotional response: as Lintott puts it, it "specifically deals with the affective response... which it maintains is an enjoyable feeling of superiority to the object of amusement" (2016, 347).

Contemporary examples of this theory are the widely shared video compilations that showcase the failure of robots or AI systems. These clips often feature machines attempting to walk or interact with humans, only to fall over, misinterpret input, or behave in ways that are comically rigid. The humour comes from the contrast between our expectations of intelligence or

adaptability and the machine's visible inability to adjust to the situation. This resonates with what Henri Bergson (1900) called *la raideur mécanique*, the mechanical rigidity that appears where there should be flexibility. We laugh not just because the robot fails, but because its failure reassures us of our own intelligence. In these moments, what Hobbes (1651) described as a feeling of “sudden glory”, is directed at a system designed to be intelligent, yet lacks the embodied understanding that comes naturally to humans.

### **Relief Theory**

In 1709, Lord Shaftesbury described laughter in *An Essay on the Freedom of Wit and Humor*, as a physiological release, comparable to a pressure valve in a machine, a form of emotional ventilation. This idea was later developed by Herbert Spencer, who argued that laughter is the discharge of nervous energy when strong emotions—such as desire or fear—are suppressed. John Dewey built on this by suggesting that laughter occurs as a release of tension following moments of suspense or restraint (Morreall 2024).

A well-known formulation of this theory comes from Freud, who claimed that laughter allows us to bypass internal censorship and release repressed impulses. Morreall explains: “According to Freud, the emotions which are most repressed are sexual desire and hostility, and so most jokes and witty remarks are about sex, hostility, or both. In telling a sexual joke or listening to one, we bypass our internal censor and give vent to our libido. In telling or listening to a joke that puts down an individual or group we dislike, similarly, we let out the hostility we usually repress. In both cases, the psychic energy normally used to do the repressing becomes superfluous, and is released in laughter” (Morreall 2024).

A playful example of this dynamic is Moniker's *Do Not Draw a Penis* (2018), a web-based project that collects doodles of penises in response to Google's omission of "inappropriate" categories in its open-source Quickdraw dataset. The site invites users to draw precisely what they are told not to, turning the act of transgression into a shared joke. The humour comes not just from the drawings themselves, but from the relief of breaking a rule and of pushing against the guidelines enforced by large tech platforms. In this context, laughter becomes a release of social and moral tension, aligning the logic from the relief theory.

### **Incongruity Theory**

The incongruity theory is the most widely accepted and dominant theory of humour in both philosophy and psychology. It accounts for the formal object of humour—the perception of something that disrupts our mental patterns or expectations (Lintott 2016). While early thinkers like Plato and Cicero hinted at the idea, the first recorded use of the word "incongruous" to explain humour appears in James Beattie's *Essay on Laughter and Ludicrous Composition* (1779). Building on Beattie, Immanuel Kant (1790) argued that we laugh not because we feel superior, but because our expectations are suddenly overturned. He famously compared humour to music and games—both of which involve the playful manipulation of patterns—marking a shift away from the moral framing of superiority theory. Later, Schopenhauer emphasized humour's link to the mismatch between abstract concepts and lived reality, while Kierkegaard viewed the comic as a contradiction between what is expected and what occurs (Morreall 2024). Many contemporary philosophers, psychologists, and cognitive scientists have continued to develop incongruity-based accounts, reinforcing the idea that surprise, tension, and cognitive disruption are central to what makes something funny.

A contemporary example of incongruity in interaction design can be found in the Reddit thread *r/badUIbattles*, an online community dedicated to showcasing intentionally broken or absurd user interfaces. In May 2024, a post by Aleksandr Volodarsky (@volodarik) on X (formerly Twitter) went viral, featuring a selection of popular entries from the thread—including a physics-based Plinko game used to input a phone number and a shell-game interface that turns account deletion into a gamble (Volodarsky 2024). The humour in these examples lie in how they subvert familiar interface conventions. By deliberately misusing common UI patterns like sliders, forms, and dialog boxes, these designs expose the rigidity of digital interactions. The laughter they provoke arises from the cognitive dissonance between what we expect and what actually happens, demonstrating the core principle of incongruity theory.

## **Humour in Interaction Design and HCI**

Humour is a complex and multifaceted phenomenon, deeply embedded in human communication, culture, and cognition. It facilitates social bonding, eases tension, and enhances creativity and emotional engagement. Across fields such as psychology, linguistics, and sociology, humour has been studied for its role in well-being, learning, and group dynamics (Mulder and Nijholt 2002; Niculescu 2021). In computing, research has traditionally focused on computational humour—developing algorithms to detect, generate, or respond to humour. These approaches tend to centre on language, modelling puns, jokes, and irony through semantic rules, templates, or statistical learning (Ritchie 2001). However, humour in HCI and interaction design remains relatively underdeveloped. While computational humour has received sustained attention in AI and linguistics, there is comparatively little research in HCI on how humour is

designed, experienced, or evaluated within interactive systems (Mulder and Nijholt 2002; Nijholt et al. 2018; Niculescu 2021, 49).

In HCI, humour has shown promise for increasing engagement, managing failure, and improving system perception. For example, humorous feedback can help soften user frustration during error states or awkward transitions (Nijholt et al. 2003). It can also enhance user trust and likability in embodied agents and conversational interfaces (Niculescu and Banchs 2017). More broadly, humour introduces playfulness, encouraging users to explore, perform, or reflect in ways that rigid task-based systems may discourage (Helms and Fernaeus 2018). Despite these possibilities, humour is often treated as an add-on rather than a core component of interaction design.

A concrete example of humour's potential as an interactive public installation is the *Piano Stairs* from the Fun Theory project, which transformed a metro staircase into an oversized piano that played musical notes as people walked on it. The design reframed a mundane task as a playful performance, leading to a reported 60% increase in stair use (Niculescu 2021). The success of this intervention highlights humour's ability to shift behaviour through surprise and embodied engagement. Yet it also underscores a limitation: the effect was tied closely to novelty and spectacle. Once users became familiar with the interaction, its humorous impact likely diminished, raising questions about the sustainability and depth of such interventions.

Designing for humour in HCI presents several challenges. Humour is highly context-dependent, shaped by cultural norms, timing, and shared assumptions. What is funny in one context may be confusing or offensive in another (Nijholt et al. 2018). Humour also relies on disruption such as subverting expectations, introducing ambiguity, or exaggerating form, all of which can conflict with design goals such as clarity, consistency, and usability (Niculescu 2021, 52). There is also a

lack of established frameworks to guide humour design. Unlike usability, humour does not have clear metrics or repeatable evaluation methods. As revealed in a design workshop at INTERACT 2017, even experienced practitioners tend to rely on personal intuition and experimentation rather than formal humour theory (Niculescu, Wadhwa, and Nijholt 2018).

While computational humour has made technical advances, its integration into interactive systems often feels mechanical or contextually awkward. Attempts to build systems that “understand” humour still fall short of human-level nuance (Mulder and Nijholt 2002).

In sum, humour remains an underexplored but increasingly relevant area in HCI. It offers unique affordances for fostering playfulness, reflection, and emotional depth, but also resists easy formalization. The field lacks consistent design tools, evaluation frameworks, and theoretical grounding tailored to humour in interactive contexts. Future work will need to move beyond computational models and toward approaches that centre material, situated, and designerly ways of engaging with humour.

## **Play and Playfulness**

In *Play Matters*, Miguel Sicart (2014) proposes a definition of play that moves away from structured games and rule-based systems, arguing instead that play is “a mode of being human” (5). Rather than something tied to specific activities, play is contextual, expressive, and relational. It can occur in many settings, including those not traditionally associated with leisure or fun. Play can be pleasurable, but also disruptive, uncomfortable, or even destructive. What makes an activity playful is not its form or content, but the attitude with which it is performed.

This leads Sicart to distinguish between *play* as an activity and *playfulness* as an attitude. Where play is bounded and often autotelic—done for its own sake—playfulness refers to how we project the qualities of play into contexts that are not themselves play (Sicart 2014, 21–24). Playfulness allows us to reinterpret the rules, purposes, or expectations of a given situation while still operating within it. It does not reject function entirely, but reframes it. We can be playful while programming, teaching, cleaning, or navigating bureaucracies, not by turning those into games, but by engaging them in the mode of play.

Playfulness is, above all, appropriative. It takes situations not meant for play and engages them differently, reframing their meaning without rejecting their purpose. As Sicart writes, “playfulness assumes one of the core attributes of play: appropriation” (28). This shift is not about turning everything into a game, but about interpreting contexts through the lens of play.

This makes playfulness expressive. It introduces ambiguity into functional systems, opening space for personal interpretation and emotional resonance. It is how we bring ourselves into rigid or instrumental contexts, even when their purpose remains unchanged. “Through playfulness we personalize the world,” Sicart writes, “while still acknowledging that it has a purpose other than playing” (30).

Playfulness also carries a carnivalesque quality—it disrupts, mocks, and reveals. It exposes the seams of systems and resists the smoothness of design. In Sicart’s words, it is “the triumph of the subjective laughter, of the disruptive irony over rules and commands” (24). This laughter is not incidental, it is a signal of friction, surprise, or subversion.

In this sense, playfulness creates the conditions for humour. It generates the incongruities and reversals that humour depends on, and laughter becomes a response to this playful reordering of meaning. In this thesis, playfulness provides a framework for understanding how humour emerges in the design process not as a goal, but as a byproduct of engaging with tools and systems in expressive and personal ways..

# **Methodology**

## **Research-Creation**

*haha.js* operates within the framework of research-creation, an approach that values the concurrent production of creative work alongside theoretical writing as a legitimate form of academic knowledge production. (Chapman and Sawchuk 2012). As outlined by the Social Sciences and Humanities Research Council, research-creation involves clearly articulated research questions, comprehensive theoretical framing within relevant artistic disciplines, and a well-defined methodological approach. Additionally, both the creative output and the academic analysis must adhere to academic standards and be suitable for publication, public exhibition, or performance (SSHRC 2025).

## **Research Through Design**

My methodology aligns with research through design (RtD), a practice-oriented approach that integrates the design process as fundamental to addressing research questions (Godin and Zahedi 2014). Initially articulated by Christopher Frayling as research through art and design at the Royal College of Art in 1993, RtD was subsequently formalized for academic rigor by Alain Findeli (2004). Findeli positions the designed artifact and the process of its creation as sites of research inquiry. Rather than only treating design as an outcome, RtD emphasizes how the evolving artifact and ongoing creative decisions can generate meaningful insights and knowledge to produce design theory.

I approach my work following Löwgren and Stolterman's (2004) notion of thoughtful interaction design, which advocates for a designerly attitude grounded in attentiveness to the evolving qualities of the design process . As a result, I approach humour as something that can emerge in subtle, unexpected ways through the act of making in response to materials, code, and context. Remaining sensitive to these fragile moments becomes a methodological stance in itself: a form of reflective engagement that treats the design process as a relationship and space where humour can be sensed, nurtured, and carried forward. This attentiveness is not purely analytical; it embraces subjectivity as an integral part of how knowledge is produced in design. As Gaver and Bowers (2012) argue, design knowledge is often situated and interpretive, grounded in the designer's perspective and shaped through reflective engagement with the work. In this spirit, I see design not only as a technical activity, but as a subjective and situated practice, where insights emerge through the designer's evolving relationship with the process.

## **The Method for Design Materialization**

The Method for Design Materialization (MDM), developed by Rilla Khaled and Pippin Barr (2023), is a reflective design method that aims to capture the rationale behind design decisions as they unfold. Originally created to support research in game design, MDM provides a structured way to materialize the often-invisible relationship between thinking and making. Central to this approach is the use of version control, using platforms like Git, where each change to a project's code is saved online through a "commit"—a short, descriptive message written by the designer to explain what changed, why it changed, and how it relates to broader design concerns.

MDM is about transparency and traceability. Each commit is tied to a specific, functional version of the project, creating a detailed public archive of how the work evolved over time. These

versions can be revisited, shared, or examined by others, making the process accessible and open to critical inquiry. Rather than presenting only the polished final product, MDM frames design as a journey through ideas, experiments, breakthroughs, dead ends, and course corrections. It makes visible the decisions that were tested, revised, or abandoned, offering an understanding of how the final artifact took shape and how *designerly ways of knowing*—what Cross (2006) describes as knowledge unique to design practice—emerge through the designer’s evolving thought process (Khaled and Barr 2023; Cross 2006).

In practice, MDM captures both micro and macro-level reflections. For example, in *It Is As If You Were On Your Phone*, a speculative game about digital dependency, Pippin Barr commits on February 27 to removing all sound from the game, writing: “[they] are more of a distraction than something that’s helpful—in a sense they emphasize the degree to which you aren’t on your phone” (Barr 2025). Here, removing sound is more than a technical adjustment; it is a design decision driven by the desire to preserve the illusion of being on a phone. According to Barr, adding ornamental audio draws too much attention to the interface as a constructed experience, disrupting the emulation of the low-level, almost unconscious way we interact with our phones everyday.

Alongside these granular reflections, MDM also includes a design journal. This is where more introspective and slower reflections about the project’s broader directions take place. On the same project, Barr wrote on January 16 about the idea of adding a point system: “Why would you play this as a game specifically? There’s some way in which that ends up feeling too close to the real experience? Am I just concerned that without some gamified element people won’t see the point in interacting longer term?” (Barr 2025). This moment captures the designer pausing to

weigh the experiential and conceptual impact of a mechanic on potential replayability, allowing the reflection to steer the next steps in the design process.

By combining commit messages and design journal entries, MDM creates a layered, traceable account of how design thinking unfolds. This layered documentation of thought and action is anchored in Donald Schön's concept of the *conversation with materials* (1983, 1990), where the act of designing is shaped through ongoing, reflective engagement with the work itself. For Schön, design is inherently unpredictable, there is no direct path between intention and outcome. Instead, designers form new understandings as they make successive moves, responding to what the situation “says back” to them. This kind of backtalk, whether triggered by an error in the code or a spontaneous idea, reflects what Schön describes as reflection in action (Schön and Bennett 1996). MDM formalizes this dynamic by capturing those moments of surprise and hesitation through commit messages and journal entries. In this way, it becomes particularly well-suited to studying the design of humour, which is itself structured around surprise.

## **Grounded Theory**

To analyze the material generated through MDM—commit messages, versioned code, and design journal entries—I use open coding, a core practice in grounded theory (Charmaz 2014). This involves reading through each artifact closely, line by line, and annotating moments that stand out—phrases, decisions, or reflections that signal a shift, contradiction, or emotional cue. Rather than starting from a fixed framework, I let categories emerge organically from the material. I coded everything by hand, using margin notes and colour-coded highlights, both to stay physically close to the process and to avoid being constrained by software defaults. My unit

of analysis varies depending on the source: a single commit message might be a unit, or a short passage in a journal entry. Across both case studies, I traced how humour surfaced in specific design moments, then clustered those moments into recurring themes. These themes are later connected to theory from interaction design, humour, and play, as well as to existing interactive works, forming the basis for the practical recommendations developed at the end of the thesis.

In bringing these methods together, I am working with a process that is iterative, subjective, and shaped by the act of making. This research does not begin with fixed hypotheses, it focuses on the conditions under which humour emerges during design. I approach this from an embedded position: as both designer and researcher, my decisions are inevitably influenced by personal taste, intuition, and my own sense of humour. Rather than treating these as biases to be eliminated, I acknowledge them as part of the methodological framework. Through this combination of RtD and MDM under the academic umbrella of research-creation, I develop a grounded approach that treats humour not as an outcome to be judged, but as something that emerges, takes shape, and can be theorized from inside the process of making.

## **Limitations**

Humour is deeply subjective, shaped by cultural, personal, and contextual factors. What one person finds funny, another might not respond to at all. This thesis does not attempt to define humour universally, but rather investigates how humour emerges in specific design contexts from my own perspective as both researcher and maker. The analysis is based on two original case studies, which offer situated and partial insights rather than generalizable claims. While the reflections and recommendations aim to be useful to other designers, they are rooted in personal

experimentation, and should be understood as contributions to an ongoing conversation rather than conclusive findings.

## Case Study 1 — Inner Birdsong

[Repository link](#)

[Live project link](#)

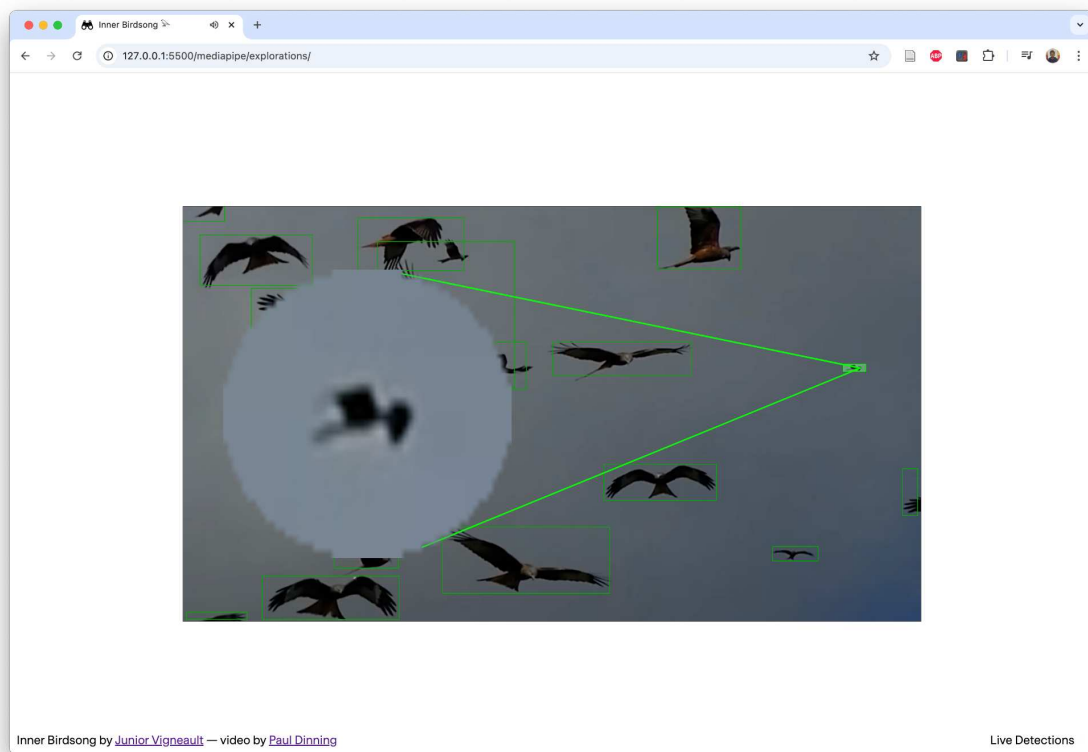
In this section, I introduce the process of making *Inner Birdsong*, an interactive web-based project built with MediaPipe and p5.js. The project allows users to access the imagined mental state of birds: by hovering over live bird detections in a continuous video feed, the video pauses and a song is triggered, creating a moment where time is suspended and the bird appears to "feel" something.

The early inspiration for this project came from interactive works that use minimal input to create quiet, surprising, and humorous encounters. One such work is Darius Kazemi's *Make Someone* (2020), a web page that produces fictional identities with each click. The user clicks on a button to create a new person, and an image is generated using the API people that dont exist paired with three random characteristics. I often found myself laughing at these non-existent people, which relates to the emotional mechanism described by superiority theory: a feeling of distance or elevation over a character, even when that character is entirely generated. This experience led me to reflect on how algorithms, including machine learning tools like MediaPipe, might be used to evoke similarly ambiguous responses in my own work.

Another key influence was Studio Moniker's *Pointer Pointer* (2012), a website that responds to cursor movement by displaying a photograph of someone pointing exactly at the cursor's location. The interaction is simple and repetitive, yet produces a brief moment of curiosity each time. This aligns with incongruity theory, where humour emerges from a disruption of

expectation or a mismatch between perception and outcome. This inspired my decision to base *Inner Birdsong* on a similarly minimal interaction, hovering with the mouse to pause and trigger a response, where humour could emerge from slowness, misalignment, or the bird's imagined inner life.

In the next section, I describe key stages of the design process, from early ideation to moments where the project shifted direction. I also reflect on how humour emerged throughout the process, drawing from journal entries and commit messages. These reflections are connected to relevant theoretical frameworks that informed the project.



**Figure 1.** Screenshot from *Inner Birdsong*, showing a user interacting with the bird detection. This version can be found [here](#).

## From theory to materials

At the beginning of the design process, I assumed that humour theory could serve as a starting point for generating interactive experiences. I wanted to see if different humour theories might map to different JavaScript frameworks, and whether these combinations could be productive. But as I began to prototype, I realized that humour didn't emerge from theory directly, it emerged through interaction with tools, materials, and unexpected outcomes. Rather than discarding theory entirely, I found it became more useful later on, as a reflective tool to help me understand why certain things were funny, rather than a guide for how to make them.

How should I proceed in choosing a humour theory for each JS framework? Should I start by making small things or brainstorming big things? Should I experiment a bit with every theory to see what fits best with each framework? [...] The challenge is integrating humor theory seamlessly into my work, not just discussing it. My approach will involve small technical explorations with Matter.js, infusing them with superiority theory.”

*Design journal, January 23, 2024*

These early reflections show my initial belief that humour theory could drive the design process directly. I imagined each framework could be paired with a humour theory, and that this pairing would guide the creation of jokes. But this method felt artificial. I found myself struggling to generate humour from theory alone, and began to question the usefulness of leading with it.

Cloth simulation – I’ve always had the idea of hiding something under it and having the user pull it out. A dark and mean secret perhaps? Compound bodies of complex shapes – recreating a human doll and throwing it around?

*Design journal, January 24, 2024*

In retrospect, my early efforts were guided by a limited assumption: that humour theory could act as a blueprint for making something funny. What I came to realize was that while I did begin with intentions and ideas, humour often emerged in the interaction between those intentions and the system’s behaviour. This insight led me to shift away from relying on theory or tools in isolation, and toward a more responsive process grounded in engagement with materials and context.

## **Shifting to Context**

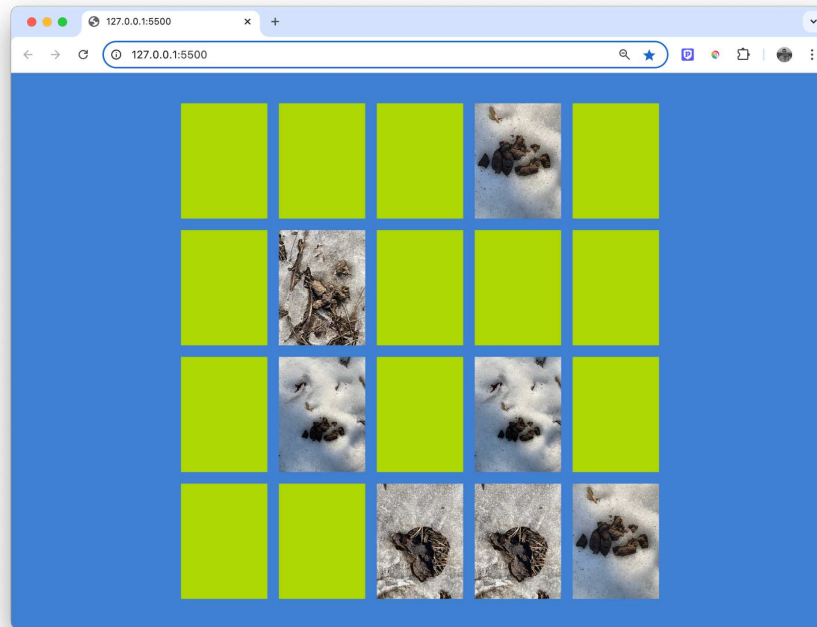
As part of the *Interdisciplinary Practices in Design* seminar, I was asked to collaborate with a colleague and exchange elements of our respective practices to develop an interdisciplinary research-creation experiment. My partner, Florence Boucher, works with poetic, site-specific methods for engaging with urban wild spaces, particularly the Champ des Possibles in Montreal. In response, I formulated the following generative question: *In what ways can humour reframe our engagement with a site through interactive technology?* This shift toward a shared material context formed the basis of my first case study.

I was working with Matter.js [and the superiority humour theory] and I'm a bit over it. [...] I decided to go outside and document using video, pictures, sketches and sound recordings, and see what I can do with JavaScript.

*Design journal, February 29, 2024*

This quote marks a moment of relief. I began to move away from relying solely on humour theory and specific JavaScript libraries as predefined starting points, and instead allowed the material engagement with a real-world site to guide the design. What failed wasn't the theory itself, but my earlier assumption that theory and frameworks could generate humour on their own, without being grounded in a specific context or situation.

One unexpected outcome of this site-specific shift was the seasonal thaw. As I began collecting video and photo documentation, I found the landscape overrun with thawing dog poop—an accidental dataset that quickly dominated my material. This led to the idea for *Le Dégel*, a memory game built with p5.js, where players match similar images of melting excrement. Humour here emerged not from any theory I was applying, but from the absurdity of the environment itself and my own willingness to play with it. In this sense, humour wasn't designed in—it surfaced as a response to the messy realities of place.



**Figure 2.** Screenshot from the memory game *Le Dégèl*, using data collected from Champ des Possibles in Montreal. A playable version can be found [here](#).

## Birds

Birds have this innocence that is already funny. In a sense I think this relates a lot to the superiority theory because we are laughing at the bird in a sense of superiority?

*Design journal, February 29, 2024*

Rather than using humour theory to generate ideas, I began to treat it as a reflective lens, something to make sense of what I found funny after the fact. At this stage, I began experimenting with bird footage as part of my site-based practice. The decision to work with birds wasn't driven by theory, but theory helped me articulate why I found them funny. As I wrote in my journal, birds carry an innate innocence and obliviousness that made them feel like

perfect subjects for humour grounded in superiority theory. Their lack of self-awareness, combined with their fragility, made them ideal targets for gentle ridicule—laughing *at* them, rather than *with* them.

But more than the birds themselves, it was the interaction between machine intelligence and organic unpredictability that opened up humour in a new way.

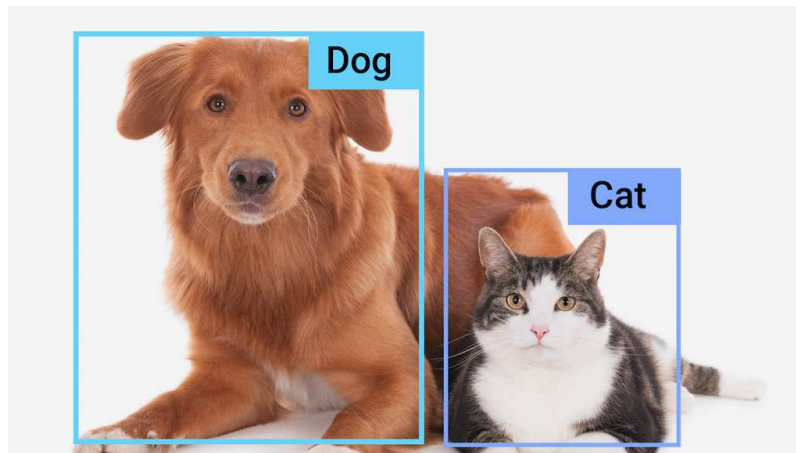
The first thing I thought that could be funny is to try and detect birds. What is a bird and what is not a bird. Hey MediaPipe, show us what you think is a bird if you're so intelligent!!!

*Github journal, April 5, 2024*

This marked a clear departure from designing humour based on abstract theory, and a turn toward humour that emerged through situated and material confrontation. MediaPipe's object detection system provided not only a technical framework but a new comedic actor, one that confidently misidentified birds and other elements part of the video feed. The system's self-assurance in its incorrectness invited laughter, this time not at the bird, but at the algorithm itself. Here, superiority theory shifted its target to the framework itself.

This tension between confident machine classification and the messy unpredictability of the real world became fertile ground for humour. Looking at this through the lens of humour theory, sometimes the laugh came from feeling smarter than the system, which aligns with the logic of superiority theory; sometimes it came from the mismatch between what the system expected and what actually happened, which echoes incongruity theory; and sometimes it came from the relief

of realizing I wasn't the one who had failed, as described in relief theory. These theories didn't solely initiate the joke, but also helped me frame it after the fact.



**Figure 3.** Example from MediaPipe's Object Detection documentation. The automatic labeling of “cat” and “dog” triggered an unexpectedly comedic response and became a reference point in the design process.

### **Filtering failures**

As I began prototyping with MediaPipe and bird footage, I noticed that some of the most surprising and funny outcomes weren't planned. They came from bugs, system inconsistencies, and unpredictable behaviours. At first, I saw these moments as failures. I felt pressure to fix them, assuming that if something didn't work, it was a problem with my code. But as I documented them, I started to notice something else: these errors weren't just flaws, they were often the moments that made me laugh. Humour was emerging precisely in the cracks between what I thought should happen and what the system actually did.

This shift reframed my role not as a controller of outcomes, but as a filter—someone who could choose which breaks to keep. I began to see the importance of allowing the program to behave unpredictably, while also recognizing the boundaries where breakdown became incoherence. The more I tried to force MediaPipe to behave correctly, the less room there was for surprise. But when I let it slip a little, humour surfaced.

I'm starting to make a difference between programming actual jokes with a straightforward narrative and programming an environment where humour can arise from more unpredictable behaviour. [Image segmentation not working] was a failure that was NOT funny. I think that it was not funny because I was programming an interactive joke where timing and every little piece was reliant on the next to create humour in the end.

*Github journal, January 24, 2024*

This journal entry marked a turning point. I began distinguishing between failures that generated humour and those that didn't. Some glitches—like a bird being only partially segmented—offered no ambiguity or playfulness. They just broke the logic of the experience and collapsed the timing needed for humour to land. These were dead ends. But other bugs created surprise. For instance, when MediaPipe confidently misidentified a pile of rocks as a bird, it was funny not because the rocks were interesting, but because the system insisted they were birds with such conviction. The system's certainty became the joke.

## **A bird is a Rock**

Sometimes object detection thinks that a pile of rocks is at least 20% a bird (the filter I programmed), and so you can click on the rocks and it becomes funny to see how

inanimate rocks also have a vibe. But I think this is only funny when it's supposed to be birds but then a rock happens for some reason? Again, bugs are funny apparently.

*Design journal, March 29, 2024*

Specifically, What made these moments work was that the system was still operating within a recognizable logic. It had rules, but those rules were just slightly off. In this case, the system was supposed to detect birds but misidentified rocks as birds. That's what gave the glitch comedic power. If the system had no logic at all, the results would feel random or broken. But when the system was mostly consistent and then failed subtly, the outcome was unexpected enough to be funny, without falling apart completely.

The humour came from multiple directions at once. There was a sense of superiority in watching the system fail while remaining unaware of its mistake. There was incongruity in the mismatch between what I expected to see and what the system delivered. And there was relief in realising that I, not the code, was in on the joke. These emotional responses were layered, often happening at once, and helped me recognise the kinds of errors that carried humorous potential.

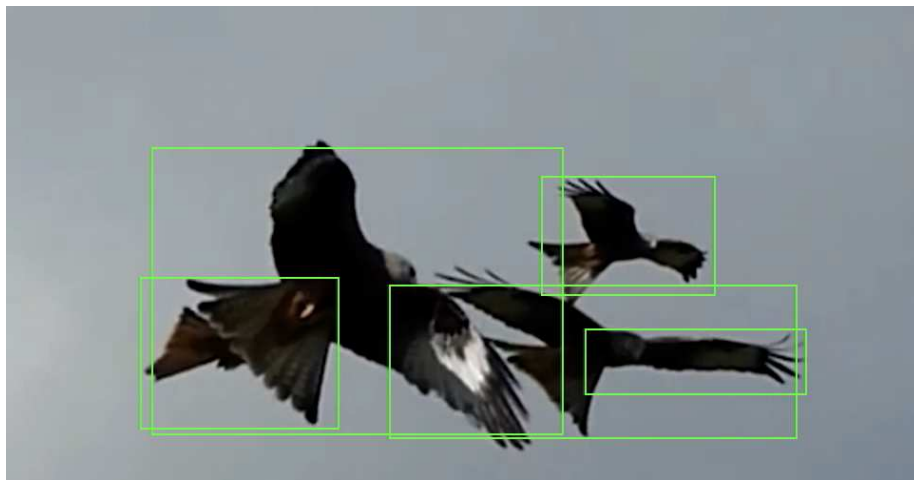
## **Generative Limitations**

While developing the sound logic for *Inner Birdsong*, I hit a limitation with MediaPipe's object detection: it doesn't track objects over time, and produces fresh detections every frame. To address this, I built a custom tracking algorithm that assumed the closest detection in the next frame was the same bird. It mostly worked, but when certain birds were too close to each other, the system often misidentified them as one, making them share the detection and song.

Initially, I found this frustrating because I had the preconceived idea that the humour of *Inner Birdsong* relied on the contrast of different birds in different environments triggering different sounds. I was too caught up into the role of the programmer to have a fresh perspective. After taking a break from working and coming back to it later, I realized that when multiple birds shared the same song, it became unintentionally funny. They seemed to express a shared emotional state, momentarily forming a small scene within the larger system. Letting go of my need for perfect technical logic and fresh eyes helped me see how humour could thrive through this unexpected behaviour.

The detections were inconsistent [...], it would switch to the next closest detection with the same song (which I admit often contributes to the funniness of it all because it became a sort of scene in which both birds interact)

*Github journal, March 23, 2024*



**Figure 4.** In *Inner Birdsong*, two birds detected too close together caused overlapping labels and sounds. What first felt like a glitch later revealed a shared emotional scene, unintentionally humorous in its timing and repetition.

This moment reads like a confession. It reveals how difficult it was to accept that this bug, something I initially saw as a mistake, could actually be funny. It took time to let go of the idea that this needed to be fixed, and instead recognize that its awkwardness created a kind of improvised scene. This shift in perspective marked a turning point in how I understood the role of failure and code limitations in my design process, as well as the limitations of my own perspective over time in recognising humour.

## **Emotional Feedback Loops**

Throughout the design process, I often documented my emotional state in relation to the state of the design. Was I still laughing? Still amused? Still surprised? Those moments of laughter became important tools to signal if the design was alive. When I drifted too deep into code logic or perfectionism, humour faded. When I stayed playful, silly, things started to click. This section is about how I used laughter as a way of thinking, a way of listening and a way of knowing when to shift.

I think maybe I worked too long on this but kind of lost its touch a bit. The tough thing about case 1 (programming an elaborate interactive joke), is that I have to sort of trust the process because at some point I don't laugh anymore. I'm just building this thing that hopefully will be funny in the end because of my initial idea.

*Design journal March 23, 2024*

Here I'm acknowledging how my own emotional state affects, and is affected by, the design process. These moments capture the difficulty of working too long on something meant to be funny. I wasn't laughing anymore. Instead of being surprised by the system or enjoying what I

was making, I was just pushing through. Laughter had slipped away, and with it, my sense of direction. I only found it again after taking a break from programming to add sound.

I giggled a lot depending on what sounds I chose. I started to gain motivation back because it was funny again! Even after having worked on this until I was dead inside I was still finding it funny.

*Design journal April 5, 2024*

Adding sound changed everything. Suddenly the birds had moods, timing, and energy. It made me laugh, and I remembered why I cared about this project in the first place. I felt less like a programmer and more like a co-performer with the work. I couldn't believe I had waited so long to add sound—it should have been there from the start. That moment reminded me that humour isn't something that can simply be layered on at the end. It made me realize I need to sketch with everything at once, even in rough form, and not build a technically complete system and try to make it funny afterward. Starting with laughter, staying with laughter—that's what kept the spark alive.

But humour doesn't remain consistent across a process. I began *Inner Birdsong* with ideas about what might be funny, and those intentions shaped the early design. Still, as the work unfolded, I found that laughter didn't always follow. There were stretches where the project stopped feeling alive, when I was just pushing code and the spark was gone. I developed ways to manage these moments—changing elements, stepping back, revisiting the core idea—but I also began to accept that these fluctuations weren't just obstacles. They were part of the work. Laughter ebbed and returned, often unpredictably. Designing with humour required a different kind of attention and

trust: not just trust in the process, but in my capacity to return to what first moved me, and to listen for humour when it re-emerged in unexpected ways.

Laughter became a signal—one that told me when the work was resonating. It didn't always align with the plan, but it marked where something was alive. Recognizing this required me to adopt a more emotionally-attuned way of working, one that allowed humour to emerge not only from my ideas, but from being in conversation with the system, the materials, and myself.

## **Over-designing**

In this section, I reflect on how my attempts to clarify the interface or polish the visuals often worked against the humour I was trying to build. *Inner Birdsong* was funniest when the user stumbled into it and when the interface hinted just enough without giving everything away. The more I tried to explain or decorate, the more I risked killing the joke. The challenge wasn't only to design for discovery, but to hold back, to stop myself from over-designing.

There's something about the amount of details that I feel have an impact on how funny something is. Even something like the cone following the mouse, adds a detail that the user notices and adds almost like a barrier or like a rule or I don't know, something for the brain to assimilate that makes the humour a bit less efficient?

*Commit message February 24, 2025*

Even small additions—like a line following the mouse—could get in the way. They made the interaction feel more “designed,” and less like something the user had stumbled into. I started to understand that humour in this project wasn't just about what happened—it was about how it

was revealed. The moment of discovery mattered. The user had to feel like they were uncovering something, not just following instructions.

The video pauses when the mouse is moving and continues when mouse stops moving. I chose this because I feel like it needs less explanation. The user will move and stop moving the mouse and will understand that it pauses or not the video. I'm looking for a way to not add any instructions.

*Design Journal February 24, 2025*

balance clarity and surprise. This was part of a broader design shift: moving away from explanation, and toward interaction patterns that could be felt or intuited. I didn't want a tutorial. I wanted users to notice something, experiment, and figure it out for themselves. When I had previously added a modal explaining how to listen to the birds' emotional states, the humour lost its effect. The first bird wasn't surprising anymore. It was just a feature. But when users figured it out on their own—hovering, pausing, listening—the experience landed differently. It felt more personal, and the humour had space to breathe.

This section of the process taught me that humour doesn't just depend on what happens, but on how and when it is revealed. Designing for humour required a kind of restraint, a willingness to leave gaps. When I overdesigned, I closed off possibilities. When I held back, the system became playful again, not just for the user, but for me.

## Conclusion

*Inner Birdsong* started with the idea that humour theory could guide the creation of interactive experiences. That approach didn't fully hold, but it wasn't discarded. I began to shift the role of theory from something I used to generate ideas to something I turned to after the fact to reflect on what had emerged. Theory didn't predict the humour, but it helped me recognize and articulate it. It became part of the process, not at the beginning, but through interpretation and reflection as the work took shape.

What worked was staying close to what made me laugh. Bugs, misclassifications, and strange system behaviour created openings. Laughter became a sign the work was alive. When it disappeared, I returned to the original idea or shifted something to find it again. Adding sound reminded me that humour needs timing, feeling, and context, it can't be a final layer. I stopped trying to design jokes and focused instead on building conditions where humour could emerge. The project became about tuning a system that could misfire in interesting ways. That was enough.

## Case Study 2 — Are you alone?

[Repository link](#)

[Live toy link 1](#)

[Live toy link 2](#)

[Live toy link 3](#)

*Are You Alone?* is a series of interactive and educational erotic toys designed in collaboration with Club Sexu. The project offers a playful and humorous way to engage with taboo topics around sexuality. Built using the Matter.js physics library, each toy is based on a simple, physical interaction. The toys represent parts of the body, and the user's gesture or action triggers curated expert content from Club Sexu, developed by professional sex educators. Each toy functions as a tactile interface, translating bodily metaphors into access points for sexual health and intimacy education. The design goal was to make the content feel embodied, emotionally resonant, and memorable through play.

Two interactive works informed the early tone and direction of this project. Pippin Barr's *It Is As If You Were Making Love* imagines a future where sex is outsourced to interfaces, simulating the act of pleasuring a partner through a basic HTML slider. The piece plays on the contradiction between intimacy and mechanical abstraction. This tension connects to relief theory, where humour arises through release, and to incongruity theory, as the sterile interface clashes with the user's expectations of sensuality.

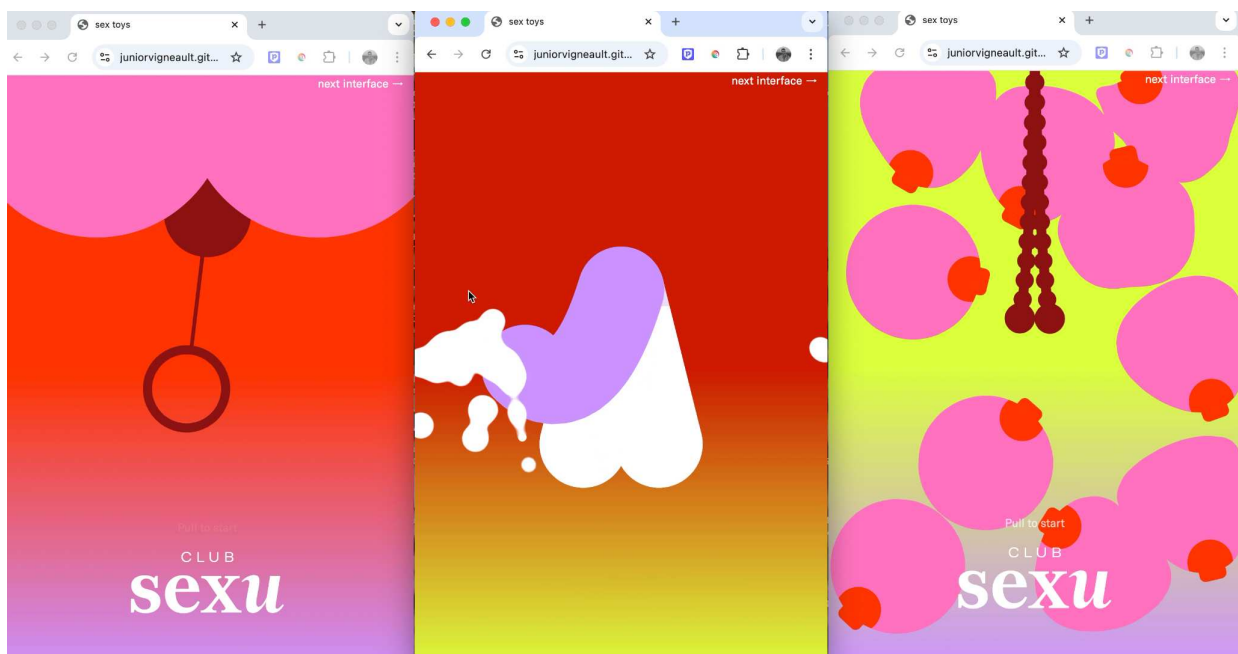
Robert Yang's *Stick Shift*, in which players erotically "drive" a gay car, similarly reframes a non-sexual mechanic as erotically charged. The humour arises gradually, not from explicit

content, but through rhythm, repetition, and metaphor. Both works showed me how ambiguous interactions could be a source of humour, and how systems could create meaning and laughter without relying on explicit cues. These ideas helped me shape a tone that is suggestive and weird, where humour and eroticism are discovered in the act, not prescribed in advance.

In this section, I describe key stages of the design process, from early ideation to moments when the project shifted direction. I reflect on how humour emerged, intentionally and unintentionally, throughout the process.

## Three toys

*Are You Alone?* consists of three interactive erotic toys, each pairing a playful physical metaphor with access to curated sexual health information. In the first, users pull out a chain of anal beads, triggering an informational card with each bead removed. In the second, manipulating a penis until it ejaculates unlocks content once the testicles are emptied. The third features floating breasts, where users connect electrified clamps between nipples to release a card with each completed circuit.



**Figure 5.** The three interactive toys from *Are You Alone?*, shown side by side: the anal beads, the penis, and the floating breasts with clamps.

## Starting over

*Are You Alone?* began with an interest in relief theory. Since relief frames laughter as the release of tension, it felt natural for me to explore sex as a site for humorous interaction. I was curious about how standard browser behaviours like popups, cursor gestures, and modals might feel strange or funny when placed in an erotic context. Around this time, I was thinking a lot about *It is as if you were making love* by Pippin Barr, a browser-based game that uses deliberately awkward interface mechanics to simulate sex. It was clever and uncomfortable and made me laugh. I wanted to do something like that.

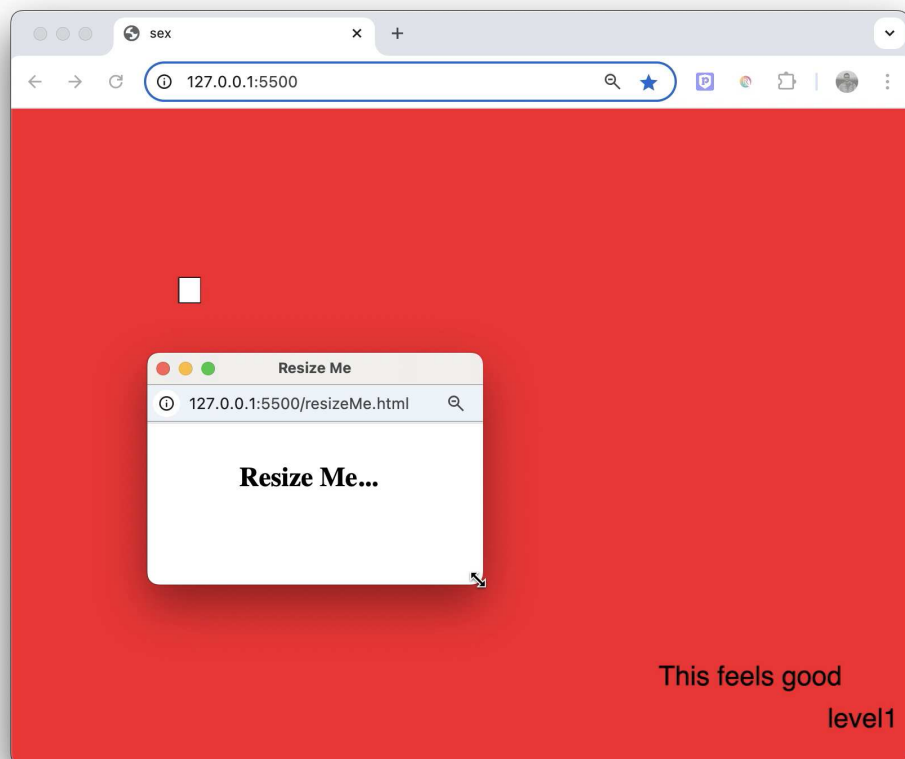
One of my first prototypes involved a “pleasure mechanic” where resizing a popup at specific speeds triggered a system of escalating responses.

In this experiment, I implemented a mechanism where the speed at which the user resizes a popup is calculated. There are 5 levels, each with their own min speed and max speed. The player has to first resize very slowly, then level 2 faster and so forth. There is also a penalty that is subtracted to the number of growing points that add up when the user is resizing at the correct speed. This penalty is bigger as the level increases. There is also a continuous pleasure decrease of 1 point per frame.

*Commit message, May 21, 2024*

What began as a playful idea quickly turned into a complex scoring system. The toy became too mechanical, and humour seemed to disappear. I wasn't responding to what felt funny, I was trying to build a functional structure. It felt more like gamification than comedy during the process.

At the time, I couldn't explain why it wasn't working. Looking back, it wasn't the theory that failed. It was that I wasn't having fun. I had followed someone else's structure instead of my own excitement. The inspiration from Barr's work became a constraint. I was too focused on building a system with a specific outcome, rather than staying open to where the materials might take me.



**Figure 6.** *Resize to Please.* The user resizes a pop-up window at specific speeds to “pleasure” the main page, filling a progress bar. Feedback cues like “feels good,” “slower,” or “faster” guide the interaction.

Ok so I just went to play 'It is as if you were making love' and it is literally the same thing that I did except for me it is about resizing. [...] ok I need to start something else because I am feeling not good about all of this.

*Design journal, May 21, 2024*

This reflection marked the start of a re-evaluation after emotional feedback. I realized that humour and eroticism are difficult to script, they need room to unfold and surprise. I had tried to build a complete system before testing its emotional or comedic potential. The result felt lifeless.

I guess at this point I could maybe take a step back and think about what this is. I feel like it's lacking direction and narrative [...]. I feel like I have to think of it as the player will experience it.

*Journal entry, May 21, 2024*

This reflection marked the shift. I stopped trying to test a theory and started thinking about how the toy might feel to play with. I returned to the material—this time using Matter.js—and let the interaction lead. I stopped building around a fixed idea and started building toward a feeling.

The change wasn't about rejecting theory, but about finding where it belongs. Relief theory helped me identify why sex and humour might work together, but it couldn't tell me how to make something funny. That had to come from the interaction itself. Once I stopped trying to

script it, humour reappeared, not because I planned for it, but because I made space for it to emerge.

## **Material Encounters**

Once I moved into a more material-led approach, the process became playful again. Rather than writing out theories and imagining how mechanics might work, I began experimenting directly with Matter.js. This shift allowed humour to emerge through unexpected behaviours and the affordances of the tool. The design work became less about building toward a fixed idea, and more about reacting to what the materials could do in real time.

One of the first moments where this clicked came while browsing Matter.js documentation. I found myself repeatedly playing with the chain example on the homepage, dragging it around, watching how it moved. It wasn't particularly funny on its own, but as I imagined it in a different context, something shifted.

When visiting the matter.js website I kept playing with [the chain example] and I've been thinking about making a chain as anal beads coming out of a butt, where the user has to pull it out basically, or even put it back in?

*Design Journal, May 27, 2024*

This kind of mental reskinning became a design strategy. I wasn't building from scratch—I was reimagining a basic behaviour from the library by placing it in an erotic frame. The humour didn't come from layering jokes onto code. It came from seeing how something neutral could

become funny and intimate just by changing the context. This kind of in-mind remixing of example code became a consistent way I generated ideas in this project.

A day later, while working on an early prototype of the toy, I noticed something else. I had been trying to manually animate a “bum” object to vibrate, but then I came across another Matter.js demo showing a bridge made out of a chain. Watching the chain bounce on its own made me rethink what I was trying to do.

Added a bounce to the bum to make it more realistic. At first I thought I was going to make them vibrate manually, but then upon stumbling again on the matter.js home page, I saw a demo of a chain as a bridge. As I was playing with it, I thought: OH! I actually should take advantage of this bouncing in matter.js on the bum!!

*Design Journal, May 28, 2024*

This moment shifted how I saw the role of the library. Matter.js wasn’t just a technical layer—I started to treat it as the core material of the project. The behaviour of the tool itself shaped the tone of the interaction. I didn’t have to simulate everything from scratch because the library already had the kind of bounciness and physics that matched the feeling I wanted to evoke. The humour, in part, came from trusting the system to act out these physical metaphors.

There’s something important about this alignment between the physicality of sex and the physics engine itself. The tactile logic of Matter.js—chains, collisions, elasticity—offered an unintentionally perfect grammar for designing interactive erotic play. What made it funny wasn’t always the concept, but how the behaviour of the system exaggerated, misbehaved, or

overcommitted to the metaphor. By leaning into the tool's physicality, I created interactions that felt playful, awkward, and surprisingly expressive.

## **Overdesigning**

As I refined the penis toy's physics and visuals, I found myself drifting toward realism. I began tweaking the dimensions and behaviours of the penis object, adding visual features and subtle effects to make it feel more detailed and lifelike. In this journal entry, I describe that process:

I was testing different things, making the penis heavier, longer, shorter, seeing what felt most realistic. I started adding visual details (a cock ring, a more pointed head). I added a cloth on top of it. At first the two entities were not colliding, but after forgetting a line of code when programming collision filters, the cloth unexpectedly began interacting with the penis under it, holding it in place, almost like a 3D mesh underwear. That's where I realized I might have crossed from comedy into something overtly sexual.

*Design Journal, June 6, 2024*

This moment revealed a familiar shift. Like in *Inner Birdsong*, the more realistic and refined the interface became, the less room there was for interpretation, ambiguity, and surprise. The joke was no longer something the user stumbled into—it was visible at first glance. The humour faded as the form became too specific. Realism pushed the interaction toward erotic simulation rather than playful comedy.

While working on a second toy based on breast stimulation, I again found myself overdesigning. I sketched two breasts and spent a long time trying to shape them realistically, forgetting how

simple Matter.js operates—mainly through ellipses and rectangles. More complex shapes were possible, but recalling what made the anal beads sketch so funny—its minimalism—I reconsidered the direction:

Why am I trying to make something very realistic? I think I forget that this is not what I should strive for at first. So I decided to go back to basics like always which is usually a good thing, so literally starting with two ellipses.

*Design Journal, June 14, 2024*

The humour returned when the visuals became abstract enough to suggest, rather than depict. The cartoonish tone allowed the project to stay light, making space to explore sexual content without becoming too serious or alienating. The minimal style also helped the toys feel more approachable for users.

By reducing detail, I reintroduced uncertainty into the interface. That uncertainty created conditions for humour to re-emerge. Movements felt more absurd, and exaggeration did the work that polish had stifled.

I think what I'm realizing now is that when deciding to make something for this project, is that it becomes funny at one point. I don't know exactly when it will happen, I think I'm not really focused on making things funny per se in the first few moments of making. But usually pretty fast I know how to exaggerate a feature or a mechanic or something to try to make it funny.

*Design Journal, June 14, 2024*

This quote captures a core insight from my research: humour isn't something I insert—it's something I notice. Designing humour means staying attentive and responsive, treating the process as a conversation with the materials, the system, and myself. Sometimes things become unfunny. But if I stay with the work, if I listen and care, the laughter usually comes back.

## **Faith**

One of the most important patterns that carried over from *Inner Birdsong* was the role of emotional feedback in shaping the work. Throughout *Are You Alone?*, moments of laughter and excitement became signals that guided how I adjusted, expanded, or abandoned an idea. The presence or absence of humour in my own experience became a method for evaluating the work in progress.

I need to be laughing and excited (feels new) to be going for it. OR it needs to be impressive in a way that exceeds my expectations.

*GitHub Journal, June 14, 2024*

Here, I clearly name what became one of the most practical insights in my process: emotional engagement is the compass. If I'm laughing, surprised, or energized, I'm in the right place. If not, something needs to shift.

But this also revealed a vulnerability in my process. When that spark wasn't there, I often moved on too quickly. I abandoned the gamified resizing experiment early, and again with a sketch involving a clitoris-like joystick:

Added a clitoris-like particle with a static constraint, gives a bit the feeling of a joystick. My first idea was to be able to play with it in order to make something else happen. I started doing that but did not feel anything, so I skipped to another experiment for the moment.

*Design Journal, June 4, 2024*

In both cases, the emotional disconnect was real, but I also hadn't given the ideas enough time to evolve. What I began to realize—especially looking back at *Inner Birdsong*—was that humour often re-emerged when I stuck with an idea just a bit longer, when I added something new, or simply gave it space to breathe. The return of laughter often came not from abandoning the work, but from trusting it.

Designing humour, I've learned, requires care and patience. It's easy to equate absence of laughter with failure, but sometimes the funny is simply late. Like in *Inner Birdsong*, where adding sound rekindled my sense of play, these moments taught me that emotional feedback isn't just a yes/no signal—it's a conversation that unfolds over time. Humour needs to be noticed, but also nurtured. Letting it grow means staying open, even when the work feels flat.

## **More Ambiguity**

The funniest moments in *Are You Alone?* came when I stumbled into something strange and unresolved—when I didn't quite know what I was looking at, but something in it made me laugh. This is the feeling I wanted to design for: a sense of awkwardness, suggestion, and surprise, without overexplaining. Rather than telling users what to do or what they were seeing, I tried to

design toys that invited discovery through interaction. Ambiguity became a strategy—not to obscure, but to leave space for humour to land.

Take the anal beads sketch. On opening the page, the user sees two ellipses stacked together with a small chain of other ellipses dangling below. All of them are brightly coloured and abstract. There's no text, no label, and nothing explicit. The overall shape might suggest something sexual, but it isn't immediately clear. This uncertainty is part of the joke. It hovers somewhere between toy and anatomy, refusing to say which one. But when the user hovers over the dangling part, the cursor turns into a grabbing hand. This tiny affordance hints at a gesture—pull it—without ever stating it. When the user does pull, the animation plays out and the ambiguity dissolves: they realize they're extracting anal beads from a cartoonish bum.

That moment of recognition—where the awkward thing you suspected is suddenly confirmed—is where the humour lands. It's funny not just because the scenario is absurd, but because the interaction completes a structure of comic timing. The user participates in building the joke. This dynamic reflects key ideas from relief theory: the laughter comes as a release, not just of tension, but of uncertainty. You weren't sure, but now you are. You didn't know what you were doing, but now you're already doing it. The punchline is physical.

A situation at first is very sexual and strange and already a bit comical and then a surprise happens (the interaction) and that is where it becomes funny? I feel like this is how the theory is explained

*Design journal, June 14, 2024*

In this reflection, I begin to notice how humour theory—particularly relief—wasn't something I applied to the project, but something I found myself living through. Rather than scripting jokes, I was creating situations that allowed users to stumble into humour at their own pace.

Designing for ambiguity meant resisting the urge to explain everything. I focused instead on subtle signals—affordances like the hand cursor or the physics of pull and bounce—that could guide users toward action without breaking the uncertainty too soon.

The grabbing hand cursor on the canvas is really nice because it helps to understand the need to pull or grab something and enhances the physicality.

Design Journal, January 27, 2025

These signals became a language of suggestion. They preserved the ambiguity just long enough to let the joke arrive naturally. Humour didn't emerge from the object alone, or even from the context—but from the interaction between curiosity, action, and surprise. In this sense, the design echoed a kind of dramatic irony: the user begins unsure, moves forward anyway, and is suddenly in on the joke the moment it's too late to turn back.

## **Coding as a Site for Play**

Humour also emerged in the code itself. Though invisible to the user, this layer kept the design process emotionally alive. Naming conventions like constants `analBeads`, booleans such as `isCumming`, and variables like `ejaculationLevel` weren't just functional, they introduced an

absurd tone in an otherwise serious tool during the development process. This became another way for me to remain playful during the design process.

For example in the anal beads sketch, the logic that determines whether a bead has exited the body and reached its climax-like threshold:

```
if (bead.body.position.y >= anus.y) {  
  if (!bead.popped) {  
    soundMobile.playSound("pop");  
    bead.popped = true;  
    bead.showCard = true;  
  }  
}
```

Here, the condition `bead.body.position.y >= anus.y` is more than a technical check, it's a literal representation of the toy's comedic metaphor. If the bead's vertical position is greater than that of the anus, then it has officially "exited" the body. I chose to name the variable `anus.y` not out of necessity, but because I thought it was funny. It was a deliberate choice to inject humour into the code and the design process itself, to make it more enjoyable and to keep myself in dialogue with the tone I was trying to create when I was programming and not directly interacting with the experience. These expressions make the code feel performative, part of the work's overall humour.

## Discussion & insights

### Playfulness as a Design Attitude

This discussion brings together the conditions that supported the emergence of humour in my two case studies, *Inner Birdsong* and *Are You Alone?*, in response to the question: **Under what conditions can humour emerge through a designer’s reflexive and playful engagement with code, context, and digital content during the creation of interactive works?** Rather than producing insights that apply broadly across design contexts, this chapter foregrounds a set of situated conditions—rooted in my own practice—that helped humour take shape through ongoing interaction with digital materials.

Through this analysis, I identify playfulness not just as a mindset, but as a structuring attitude that shaped the design process and its comedic potential. This attitude expressed itself across four overlapping conditions: appropriating tools for unexpected use, engaging responsively with materials, staying open to ambiguity, and attending with care to the emotional dynamics of the design relationship. These conditions are not intended as prescriptive models. Instead, they reflect how humour emerged through the specific methods, constraints, and sensibilities that informed my own way of designing. Each condition is grounded in personal experience, shaped by the affordances of JavaScript frameworks and creative coding environments, and contextualized through relevant theory from interaction design, play, and reflective practice.

## Playfulness

Through analyzing *Inner Birdsong* and *Are You Alone?*, I found that humour emerged most naturally when I adopted a playful attitude. Sicart (2014) describes playfulness as embodying the spirit of play while respecting the original objectives of an activity: “We should perform as expected in that (serious) context and with that (serious) object” (21). In my practice—particularly within an academic context—treating design and JavaScript frameworks as unserious serious pursuits allowed playfulness to serve as an expressive, appropriative, and personal lens. Rather than undermining my goals, this playful mindset transformed the design process from task-driven to exploratory, generative, and often humorous.

Appropriation involved taking tools or contexts not typically intended for humour, such as a physics engine or machine learning-based object detection, and subverting them comically. In *Are You Alone?*, I reimagined Matter.js’s physics chains demo as interactive anal beads, repurposing bounce mechanics to evoke tactile bodily sensations. By recontextualizing the framework’s affordances for laughter, I appropriated seriousness into humour, opening new avenues for further playful explorations. As Sicart argues, “Laughter requires freedom, an opening from the institutional world, but also creates freedom” (11). By embracing playfulness, I unlocked new possibilities for laughter and creativity.

Appropriation also appeared through generative engagement with failures or unintended surprises. In *Inner Birdsong*, challenges like imperfect bird tracking shifted from technical problems to expressive features, becoming part of the work’s comedic appeal. As a programmer, adopting a playful mindset transformed technical troubleshooting into a more open and creatively generative activity, reflecting Sicart’s assertion that appropriation involves “a shift in

the way a particular technology or situation is interpreted” (27). This reorientation turned failures into fuel for playful exploration.

Personalization emerged through how I approached mundane coding tasks—naming variables, structuring functions, and designing UI elements—as opportunities for subtle jokes and stylistic flair. During extensive debugging in *Are You Alone?*, for example, I intentionally made the code playful and unserious. While these decisions didn't affect the program's logic, they asserted my authorship and reinforced that every step of the design process could generate humour, even beyond functional necessity.

Crucially, embracing playfulness did not mean abandoning technical rigor. As Sicart notes, “Playfulness preserves the purpose of the activity it is applied to” (26). My code remained functional and effective, yet the journey to its completion was enriched by humour, subversion, and curiosity. Rather than replacing seriousness, playfulness coexisted with it, opening new modes of thinking, feeling, and laughing through the materials themselves.

### **Condition One**

Adopting a playful attitude allows the design process to become exploratory rather than task-driven, creating space for humour to emerge through appropriation, personalization, and expressive experimentation.

### **Material-Led Conversations**

The playful attitude I adopted aligns with Schön's (1987) concept of "reflection-in-action," a dynamic dialogue between designer and materials shaped by unexpected outcomes or "backtalk."

In both *Inner Birdsong* and *Are You Alone?*, humour emerged most effectively when I moved away from fixed ideas and instead let the materials suggest their own comedic possibilities.

In *Inner Birdsong*, MediaPipe's inaccurate object detection demonstrates how Schön's idea intersects with incongruity theory, as humour stemmed from the surprising mismatch between the expected (accurate detection) and the actual outcome (misclassifying rocks as birds). Initially, these errors were frustrating. However, shifting from a purely logical, programmer mindset to embracing these quirks as creative opportunities transformed frustration into humour.

Stolterman and Löwgren's (2004) idea of "thoughtful interaction design" was instrumental here, emphasizing attentive dialogue with digital materials. This encouraged openness to surprises and simultaneous evolution of both problems and solutions. For instance, in *Are You Alone?*, instead of imposing predetermined humorous interactions, I experimented directly with Matter.js demos, letting the framework itself suggest playful possibilities through exploration.

This material-led method highlighted humour as deeply context-dependent. Attempting to move *Are You Alone?* from desktop to mobile disrupted the subtle comedic timing and interactive nuances, revealing how humour was tied intrinsically to its original material conditions. Smith and Tabor (1996) underscore this: "the form of a design is inseparable from its content... function inevitably generates, and is generated by, an aesthetic." Thus, humour cannot simply be added externally—it must evolve inherently within the interaction itself.

## **Condition Two**

Letting materials lead the design process invites humour to emerge through incongruous or surprising outcomes that might not align with original intentions but reveal new potentials.

## Caring Attention in the Design Relationship

Viewing design as a playful conversation with materials fundamentally reshaped my understanding of emotional and relational aspects of designing. Initially perceiving my laughter, frustration, or moments of disconnection as merely personal reactions, I gradually recognized these feelings as valuable "backtalk," guiding the design when thoughtfully attended to.

Stolterman and Löwgren's (2004) concept of "authentic attention," inspired by James Hillman, describes a mindful state of "carefulness and concern" essential for navigating unpredictable design processes and fully grasping emerging possibilities and issues (24). This attention demands stepping away from rigid, solution-focused thinking and embracing the complex reality of evolving design challenges.

In my work, this meant actively caring for the design relationship. When heavily involved in *Inner Birdsong's* object detection, I occasionally lost touch with what made the system humorous. Taking breaks, revisiting with fresh eyes, adding new components like sound, or embracing dramatic failures (such as accidentally generating hundreds of bird images) became essential ways to sustain and renew playful energy.

Schön describes this intimate quality as akin to a "conversational relationship," where the designer receives responsive feedback from materials (Schön & Bennett, 1996, p. 176). Trusting this relational dialogue—even when it deviated from initial expectations—proved crucial for humour to emerge and thrive.

The contrast between my abandoned "resize to please" experiment and the successful *Are You Alone?* highlights this insight. In the former, a fixed outcome led to frustration and abandonment

when expectations weren't met. In contrast, engaging playfully with Matter.js through exploration, patience, and gradual familiarity allowed humour and creativity to naturally evolve towards the final form.

### **Condition Three**

Attending to emotional signals and relational cues within the design process can help sustain humour and creativity, especially when initial expectations break down.

### **Embracing Ambiguity**

Central to my playful, material-driven approach was becoming comfortable with ambiguity. Sicart argues that "playfulness reambiguates the world," making it "less formalized, less explained, open to interpretation and wonder" (28). Humour in my projects consistently arose from uncertainty—where neither I nor the user fully knew what the piece was, its purpose, or how it would be perceived.

Ambiguity served both as a creative method and as material. In both projects, I intentionally avoided explicit instructions, creating spaces that Gaver, Beaver, and Benford (2003) describe as opportunities for users to interpret and discover without prescribed guidance. This careful maintenance of ambiguity wasn't merely for confusion, but rather allowed humour to naturally emerge from users' own explorations and playful misunderstandings, mirroring my own open-ended design process.

I resonated deeply with Sicart's idea of the "architect of play," where designers construct frameworks enabling users to "engage with ambiguous spaces" and form personal meanings as

experiences unfold (89). In this sense, designers facilitate rather than dictate outcomes, creating conditions for play and expression rather than fixed results.

Working with inherently unpredictable frameworks like Matter.js and MediaPipe emphasized this point. Rather than resisting their unpredictable behaviors, I embraced them, allowing humour to flourish in the gaps between intended outcomes and real interactions.

### **Condition Four**

Embracing ambiguity enables designers to create spaces of discovery and interpretation, allowing humour to arise from user interaction and misinterpretation rather than from scripted effects.

### **List of Conditions**

Through this analysis, I have positioned playfulness as a fundamental attitude that transforms the designer's relationship with code, materials, and creative process. The humour that emerged in *Inner Birdsong* and *Are You Alone?* was discovered through playful appropriation, responsive material conversations, productive engagement with ambiguity, and caring attention to the design relationship itself.

Rather than seeking to control humorous outcomes, designers might instead cultivate the conditions under which humour can emerge. The following insights—drawn from my practice—are not definitive principles, but open suggestions shaped by reflexive engagement with interactive materials:

- **Adopt a playful attitude:** Treat the design process as exploratory and open-ended rather than task-oriented.
- **Let materials lead:** Allow unexpected behaviours, glitches, or affordances to guide design decisions.
- **Design for ambiguity:** Resist over-explaining; leave space for interpretation, surprise, and discovery.
- **Listen to relational cues:** Trust emotional responses, fatigue, laughter, and joy as part of the design conversation.

Taken together, these insights suggest that designing humour in interaction is less about inserting jokes and more about cultivating relationships—with tools, with ideas, and with oneself. Playfulness here is not a style but a stance, a way of remaining responsive to what the process offers—and of laughing along the way.

## Conclusion

This thesis set out to explore how humour might emerge through a designer's engagement with code, context, and digital materials. From the outset, I did not aim to produce a general method for making things funny. There is no such thing as universal humour, nor a recipe for designing it. Instead, this practice-based research became an opportunity to explore the conditions under which humour can arise within interaction design, and how designers might recognize and respond to it when it does.

Across the development of *Inner Birdsong* and *Are You Alone?*, I found that humour did not result from planning punchlines, scripting effects, or applying theory in a top-down way. Rather, it emerged gradually through a playful, reflexive engagement with the materials at hand. In *Inner Birdsong*, laughter surfaced through a combination of absurd misclassifications, awkward sonic pairings, and emotional cues that were both unexpected and oddly touching. While these effects were shaped by MediaPipe's technical limitations, they also emerged from the aesthetic and emotional framing I brought to the experience, such as setting misidentified birds to music. Humour in this case was not engineered, but developed through attention and iteration.

In *Are You Alone?*, working with Matter.js opened a space for erotic, playful interactions that were shaped as much by the framework's physics constraints as by my own desire to misappropriate them. The humour that surfaced, such as with the anal bead sketch, depended on both form and function. It was funny not only because of its gesture, but because that gesture was rooted in the specific behaviours Matter.js made possible. The moments that worked best were those that remained responsive to the framework's quirks, rather than treating it as a neutral

tool to execute pre-designed jokes. Rather than abandoning intentionality altogether, I suggest approaching the design process as a continuum that spans from theory- or outcome-driven approaches to more materially driven ones that allow space for surprise, ambiguity, and play.

Through reflecting on these two case studies, I identified a set of conditions that supported the emergence of humour in my design process. These are not prescriptive rules, but open suggestions shaped by my own practice. Each one reflects a different orientation toward the process of making and highlights how humour may take shape when design becomes a site of exploration, responsiveness, uncertainty, and care.

Humour theory played a role throughout this research, both at the beginning and in later stages. Initially, it informed the framing of early ideas and provided a conceptual foundation for thinking about how humour might be designed. As the process unfolded, its role shifted. Rather than serving as a strict guide for generating interactions, humour theory became more of an interpretive lens—something I returned to in order to make sense of what was emerging in practice. Incongruity theory helped me understand why MediaPipe’s misclassifications felt funny. Superiority theory illuminated the quiet pleasure of embedding jokes in code. Relief theory offered insight into the emotional shifts I experienced when laughter re-entered a stuck design. These theories did not dictate outcomes, but they helped me recognize patterns and articulate what mattered in the humour that emerged.

Ultimately, this research argues for humour as an emergent, relational phenomenon in interactive design. It suggests that designing with humour is not about delivering laughs on command, but about staying open: to failure, to surprise, and to the weird poetics of code and form. When humour appears, it is often because something has gone slightly off script. It may emerge

because the designer has listened, misused, improvised, or simply allowed something unexpected to unfold. In that way, humour becomes less a feature to implement and more a reflection of the conditions we create for interaction, play, and care.

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