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Parallel (Planetary) Play:
Engaging with Synchronicities through Sonified Astrological Data

My project's main goal is to provide a new way to engage with astrology. I'm inspired by Donna Haraway's work, which explores how storytelling and mythology shape our perception of the world; she emphasizes the importance of situated knowledge and the subjectivity of experience. Astrology, as a field rich in storytelling and myth, presents a unique opportunity for creative exploration. However, attempts to statistically engage with and validate astrology regularly fail due to the complexity of analysis and subjectivity of astrology. I want to attempt to algorithmically engage with astrology, through the sonification of planetary data, while still allowing for subjective and deeply personal meanings to emerge. My project explores how the sonification of planetary positions could lead to new, hybrid interpretations of astrology. I hope to evoke emotional responses and personal connections, stimulate conversations and debates about astrology's significance and relevance.
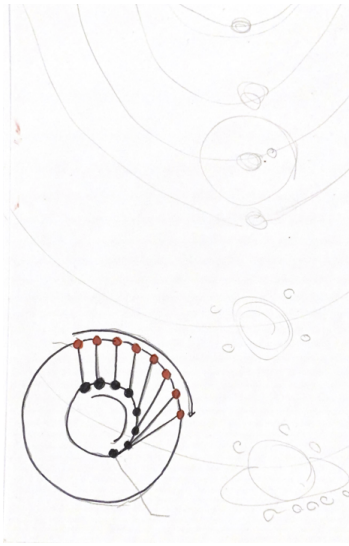
In contrast to traditional astrological interpretations, my project takes a different approach. It involves the creation of abstract sonifications generated using planetary data. I plan to carry out a series of experiments, using planetary data as a creative input in Max/MSP, playing with different combinations of data and algorithms to produce diverse audio tracks. A final 'album' will consist of several audio tracks derived from these experiments. Planetary positions will be incorporated in the form of astrological charts, which require the exact input of the time and location of an event, and consist of fundamental elements such as the zodiac, houses, planets, aspects, and axes. Events will include my own birth chart, charts related to personally or globally significant events, as well as charts for seemingly trivial occurrences like the birth of mold on bread or a leaf falling from a tree. I will parse and process the data using Max/MSP, mapping planetary positions to audio parameters like frequency, amplitude, and timbre. Astrology often involves dynamic changes over time, such as planetary transits. This will be represented through gradual changes in audio parameters. Additionally, astrology places a significant emphasis on aspects, the angles formed by planets in a chart and transiting planets. Aspects serve as the focal points for detailed interpretations. The structure and mood of the track will be informed by the aspects. Throughout this process, I'll take an iterative approach. I plan to continually refine the mappings of data to audio parameters, and the algorithms used to generate sound. Each track will represent a distinct
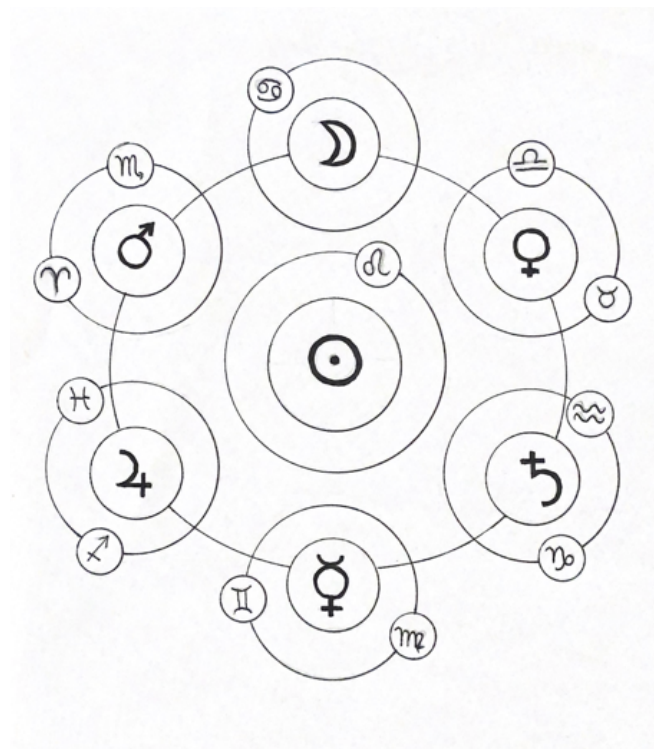
exploration of astrological themes, inviting listeners to engage with and audibly experience patterns within the data, revealing new layers of meaning.

I will source the necessary data for my project from two reputable datasets: the <u>Swiss Ephemeris</u> and <u>NASA's JPL Horizons system</u>. These resources are known for their accuracy in providing celestial object ephemerides. The JPL Horizons system offers access to solar system data and allows for the generation of highly accurate ephemerides for a wide range of celestial objects. It numerically characterizes the positions, motions, and observability of solar system objects over time. The Swiss Ephemeris is built upon NASA's JPL-Ephemeris DE431, which covers a substantial time range from 13,000 BCE to 17,000 CE. It efficiently compresses the extensive 2.8 GB JPL data to a much more manageable 99 MB while maintaining high accuracy. The Swiss Ephemeris is specifically tailored to meet the needs of astrologers and provides long-term ephemerides for a wide array of celestial objects. These data sources offer a solid foundation for my project, enabling precise and reliable access to celestial object positions and ephemerides.

A Sea of Data: Apophenia and Pattern (Mis-)Recognition by Hito Steyerl discusses the importance of pattern recognition in both ancient and neolithic technologies. It highlights how pattern recognition marked the transition from magical thinking to more empirical modes of thought. In ancient astronomy, star constellations were likened to animals and heavenly beings. As cosmic rhythms and trajectories were recorded, patterns of movement emerged. Ancient astronomers observed these patterns and recognized significant correlations to terrestrial events, attributing meaning and significance to these celestial movements. Progress in astronomy and mathematics occurred when it was understood that these were actually expressions of a physical logic—"[t]he patterns were projections, not reality." The text goes on to say that statisticians and experts today acknowledge that many findings are probabilistic projections, but policymakers often ignore this message, treating data projections as reality. This emphasizes how humans tend to become coextensive with the data-constellations they project, blurring the line between perception and reality.

Ancient engraved marks depicting lunar cycle on the Blanchard bone

Throughout most of its history, astrology was recognized as a scholarly practice. However, as the late 17th century ushered in new scientific paradigms in astronomy and physics, astrology lost its academic standing and the belief in astrology declined. It later experienced a resurgence in consumer popularity, fueled by mass media outlets like newspaper horoscopes, and more recently through the internet. In today's pop-culture, there is a tendency to over simplify and condense planetary data, and their symbols, into easily digestible and broadly applicable statements. These descriptions typically possess a vagueness that allows them to apply to a wide array of people. These interpretations perpetuate an anthropocentric viewpoint, making it seem as if the planets revolve around humanity. This oversimplification can obscure the intricate complexities of the planets' insights and the rich tapestry of their interactions. Due to its exclusion from academia and sciences, astrology could offer insights from outside prevailing narratives related to global control, imperialism, and one-world ideologies. But the ways in which we are currently engaging with the practice don't allow for this kind of transformation.

Astrology, as mentioned, can be viewed as a projection. Astrologers interpret star signs and planets not as independent celestial bodies effective by themselves but rather as symbols, endowed with significance we attribute to them. Symbols are qualified by the fantasies and metaphorical imagination of the human mind—from a contemporary psychological perspective, these images are attributed to the collective consciousness. Astrology operates on the principle of synchronicity, where events occurring simultaneously are somehow spiritually connected. Names were given to stars based on the terrestrial qualities they aligned with. The zodiac Leo for example doesn't look like a lion, but it was called so because of the sun's powerful influence in the late summer. The active principle is time, the stars are merely incidental. Astrological symbols serve as guides, subjective companions that assist in an individual's inner development rather than objective causes of events.

Mimi Onuoha's "The Point of Collection," exploring how data can flatten individual variations and complex experiences into generalized categories, has inspired my focus on the subjectivity of astrological data. It explains that no pure objectivity exists in data sets, "[each] one is the result of a number of human processes and decisions that affect, in a variety of ways, the data that they aim to report." Likewise, astrological readings are inherently subjective, arising from symbols gaining significance not as objective entities but through meaning projected by humans. At its core, it draws from astronomy's objective planetary positions. Yet, astrologers seldom convey these objective positions to consumers, leaving individuals with a single perspective, often inherited from a different astrologer instead of personal observation. Unless you have the means to engage with a skilled astrologer who can provide highly personalized guidance, you become limited to generic newspaper horoscopes. What we get is an astrology that feels distant from its celestial origins, producing reproductions devoid of novelty or depth.

An interest in the application of machine learning for astrological analysis is on the rise. However, the lack of well-organized statistical data and the complex nature of analysis has halted the subject. Astrology is a system through which archetypal energies are projected and interpreted. These meanings are revitalized through communication and discussion. Statistics, which focus on quantification and uniformity, simply cannot capture the complexity of astrological symbols and the peculiarities that emerge from personal context, which is required for meaningful engagement. Individual engagement is required for projection, where individuals unconsciously see their inner processes in the outside world.

Rather than aiming for statistical validation, which strips astrology of metaphysical and individualistic understandings, my project will attempt to create a *gestural* expression of life reflected in data. It is my personal exploration, using planetary data as a synchronicity to my inner processes and the

world around me. Using sound as a medium allows me to present the data abstractly, avoiding any rigid or predefined meanings or analyses that might be immediately understood by an audience. This way listeners can create their own meanings—much like finding shapes or patterns in clouds in the sky—discovering personally meaningful signals within the noise. My aim is to ignite a sense of wonder and inspire magical thinking rooted in earthly observations, reminiscent of the curiosity that motivated the earliest astronomers.

Inspiration:
Brilliant Noise by Semiconductor (Ruth Jarman and Joe Gerhardt) is an art project from 2006 that reveals the unaltered, raw form of the sun through previously unseen images, accompanied by a soundtrack. The grainy black-and-white solar imagery is typically cleaned up by NASA to hide the processes behind data capture. Most of the imagery is collected as individual snapshots by ground-based observatories and satellites, and it is then organized into spectral groups to create time-lapse sequences. The accompanying soundtrack adds another layer by translating areas of image brightness into layers of audio manipulation, highlighting the hidden forces at play on the solar surface.

Ryoji Ikeda's Datamatics is a multimedia art project that seeks to make the intangible nature of data tangible through sound and visuals, exploring abstract representations of matter, time, and space through dynamic computer-generated imagery and a layered soundtrack. The project unfolds through computer-generated imagery, predominantly rendered in black and white, with selective color accents. The accompanying soundtrack complements the visual journey with its hypnotic and layered composition, creating expansive acoustic spaces that invite contemplation.

"Planetenmusik / Music of the Spheres." Released in May 2013, this CD is the result of a collaboration between Hartmut Warm, a researcher and author of "The Signature of the Spheres," musician Brian Cranford, and artist Tobias Krug. It translates the movements of planets around Earth into audible compositions, creating a captivating musical journey through the solar system.

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