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Toward Economic Platform Studies

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INTRODUCTION

Whenever scholars engage with a form of cultural expression, they face the choice how much to engage in an *immanent* analysis of the "work in and by itself", as in traditional hermeneutics or the close reading popularized by New Criticism (Wellek, 1978); and how much to *contextualize* the form as the "cultural effect" of some other context, as practiced in e.g. Cultural Studies (Turner, 2003) or New Historicism (Veeser, 1989).

This paper invites game researchers to focus and expand such contextualizing analyses of games to economics. Economic aspects have long been part and parcel of cultural studies frameworks like Hall's (1997) circuit of culture, and a sizeable body of game studies work has explored the economic conditions of contemporary video games (e.g. Dyer-Witheford & de Peuter, 2009, Marchand & Hennig-Thurau, 2013). In contrast to these often complex and holistic analyses, this paper invites a particular focused and systematic research program analogous to technological platform studies. Part of the "material turn" (Apperley & Jayemane, 2012) of game studies, platform studies provide a classic contextualizing "investigation of underlying computing systems and how they enable, constrain, shape, and support the creative work that is done on them." (Montfort & Bogost, 2009, vii). Yet as Montfort and Bogost readily admit, platforms don't materialize out of thin air; they are "situated in culture, society, economy, and history." (ibid., 147).

In response, this paper suggests a program of *economic platform studies* that asks *how particular economic conditions enable, constrain, shape and support particular aesthetic forms of games*. Again, such a program is not without precedent. In film studies, Bordwell, Staiger and Thompson (1985) authored a now-classic analysis of how the mode of production and aesthetic style of "The Classical Hollywood Cinema" interrelate – a work that inspired media production studies (Caldwell, 2008; Mayer, Banks & Caldwell, 2009), which are slowly finding their equivalent in game research (Whitson, 2012; O'Donnell, 2014).

To illustrate the idea, scope, and value of a future economic platform studies, the paper will first assemble existing research into a series of vignettes showing the kind of research questions and insights an economic platform studies might pursue. Abstracting from this material, the paper will outline a conceptual model in contrasting

comparison with Bogost and Montfort (2009) on the one hand and Bordwell, Staiger, and Thompson (1985) on the other. In so doing, it will review constructs in economics and game studies to theorize economic conditions and aesthetic forms. Finally, it will sketch methodological approaches for tracing their linkages, and outline the intellectual and societal impact to be expected from an economic platform studies.

VIGNETTES OF ECONOMIC PLATFORM STUDIES

Free-to-Play is the Latest Rage

"'Do you believe social games are evil?' 'Yes, absolutely. There's no other word for it except evil.'" (Blow in Caldwell, 2011) These choice words by game designer Jonathan Blow echo a sentiment commonly heard among 'traditional' AAA and independent game designers during the first boom of social games in the late 2000s. The reason for their moral indignation: social games like *FarmVille* allegedly turn "art into a business intent only on making as much money as possible" (cited in Johnson, 2010, n.p.; cf. Whitson & Dormann, 2011; Whitson, 2012; Ahla et al., 2014). As phrases like "the gamification of clicking" (Jacobs, 2012) or "dark patterns" (Zagal, Björk & Lewis, 2013) reveal, this moral affront has been shared by several game scholars as well.

More pragmatically, in the late 2000s, social games popularized online startup practices like metrics-driven design and viral marketing together with a free-to-play or freemium revenue model, where games can be played without cost, but players generate revenue through micro-payments for virtual goods like in-game currency speeding up gameplay, or through viewing ads or sending invites or requests to online contacts, thus driving player acquisition and retention (Tim, 2014, 145–153; Nieborg, 2015). The combination of continually updatable games-as-a-service, rich data analytics, and the freemium business model meant that game designers were enabled and indeed mandated to make design decisions *directly* informed by their economic consequences for the game company. In industry publications and conferences like *GDC* or *CasualConnect*, social game designers openly discussed design strategies and mechanics to maximize player acquisition, retention, and monetization, such as hyper-accessible content digestible for the largest possible audience, "dark patterns" like "play by appointment" forcing players to access the game at certain times or lose in-game resources (Zagal, Björk & Lewis, 2013), or "game design as marketing" such as intentionally inconveniencing players with sub-optimal interfaces they can buy out of (Hamari & Lehndovirta, 2010).

In a sense, freemium social games and their makers carry the impact of economics on game design openly on their sleeve. Beyond specific ethical concerns (using perceived-manipulative psychological principles, generating the majority of revenue from a small number of player "whales" spending enormous amounts of money; Ahla et al., 2014), it seems to be this very openness that crossed some implicit moral boundary of many game industry professionals. More precisely, freemium games

were seen to be "evil" because they put economic concerns *above* player enjoyment: "we're [in the AAA industry] still as much about creating great experiences first and foremost, and the money is a happy second. With *Farmville* and such, the premise is to make a lot of money, and that is the drive that informs every single decision." (quoted in Johnson, 2010, n.p.).

The heated, value-laden vocabulary of these reactions tell us that members of the game industry share strong *moral* norms about what impact of economics on the aesthetic form of games is "normal" and "appropriate": Just like real-money trading and microtransactions troubled players' unspoken norms that gameplay ought to be untarnished by economic factors outside its "magic circle" (Lin & Sun, 2011), so AAA game developers in 2010 seemed to feel that game design ought to occur in its own magic circle kept at a distance from economic concerns. In their moral immune reaction, they show little reflexive awareness of how their own creative work is shaped by economies. Before we turn to these, it is worth drawing some general observations from free-to-play games for the project of economic platform studies:

- A particular revenue generation mode (freemium), linked with particular modes of production and distribution (games-as-a-service, online viral marketing) can directly enable and drive particular game design practices (metrics-driven design) and patterns within individual games.
- At a given time and place, particular modes of game production and distribution, together with particular degrees of (open vs. covert) economic concerns affecting game design are socially *normalized* among producers and users. Deviation from these unspoken norms causes trouble. This indicates that as so often, 'hot' moments of social change provide valuable data by foregrounding such otherwise implicit norms, and it opens the question how the normalisation vs. change of economic 'platforms' interrelates with the normalisation vs. change of game producer and audience practices and conventions.

AAA is Risky Business: The Blockbuster Form

One reason for the lacking economic self-reflexiveness of AAA game developers might be the more strongly developed separation of concerns between design, development, and marketing functions in AAA game production due to the sheer size of development teams and the separation between developing studio and marketing publisher. This "Chinese wall" analogous to that between editorial and advertising in traditional journalism might lead AAA developers and designers to think that their games are somehow 'less' conditioned than social games. Yet while social game designers might be making individual aesthetic decisions direclty linked to economic concerns, the very fact *that* what happens *within* a AAA game is *not* directly beholden to economic concerns is *itself* enabled by a mode of exchange where consumers purchase games

once upfront. In contrast, the aesthetic possibility space within which AAA games can be designed is itself very much beholden to their economics. By far the most common aesthetic critique of AAA games is their creative stagnation in a series of sequel after sequel within a small range of genres, differentiated by technical and audiovisual prowess (White, 2009). As Nieborg (2012) demonstrates in his detailed analysis of the commodity form of AAA games, this aesthetic stagnation is due to the particular modes of financing and exchange, and market structure of AAA games.

First, the market concentration around consoles, and the concentration of consoles on two platforms (Sony PlayStation, Microsoft Xbox) means that platform owners can exert strong homogenizing pressure on publishers and studios to (a) comply with technical requirements and (b) invest significant portions of resource to utilize and showcase the *technical* capacities of each new console generation.

Second, as digital entertainment goods, AAA games show strong economies of scale and high risk – it is uncertain whether an entertainment good, once finished, will be liked by audiences. This is matched by an uncertain expected utility on the consumer side (Andersson & Andersson, 2006, 103-109): No matter whether purchased as a packaged box or downloaded online, AAA games are typically purchased all at once before the consumer has a chance to assess the entertainment value of the game.

This combination of high economies of scale and high risk drives market concentration and risk mitigation strategies that directly result in the "stagnant" aesthetics of AAA games: Just as in Hollywood studios, game studios and publishers pool investment in few blockbuster productions to increase the odds of a game becoming a hit by force of capital-intensive "production values". Significant capital flows into marketing those blockbuster games to reach economies of scale, mitigate negative word of mouth or reviews, and generate positive reviews that consumers have to rely on to assess the game's entertainment value. As a result, those few blockbuster titles become ever-more capital-intensive and thus, risky – a self-reinforcing spiral that leads to the current "über-Triple-A" (Nieborg, 2012, 215). The aesthetic risk mitigation responses are

- *formatting*: licensed (*Harry Potter*) or self-developed (*Gears of War*) IP is extended in sequels, as this IP has established fan bases and/or proven to sell in its prior instantiation (ibid.)
- *cataloguing*: publishers develop new IP only within "proven" genres which they haven't covered with a game series in their own portfolio (ibid.).

As the video game market fragments into ever-more platforms (mobile, online, PC download), this blockbuster model becomes ever-more risky yet ever-harder to escape. In response, AAA publishers expand their formatting strategies with flow publishing or branched serialization: an individual game is split into main game plus a series of individually sold downloadable content (DLC) packages (Nieborg, 2012). AAA

titles are increasingly enriched with freemium micro-payment and real-money trading options (Prax, 2013) to extract further revenue from an ever-smaller portfolio of titles. Hence, AAA titles are increasingly perceived to break the same implicit enjoyment-over-profit norm that AAA developers themselves accused social games to violate, with expectable moral outcry: "DLC is inherently evil" (Mannion, 2014). Again, several general lessons can be drawn from this small vignette:

- Modes of financing, production, and distribution can not just directly affect design choices for an individual game, but indirectly determine the possibility space of *what* games are made, and what kinds and degrees of aesthetic innovation/diversity versus continuity/homogeneity are pursued.
- Comparative analyses of financing, production, and distribution (AAA games versus social games) can foreground taken-for-granted but in fact contingent economic conditions of possibility (one-time up-front payment enables a 'magic circle' shielding in-game activity from economic concerns).

Pay-per-Play: Pinball and the Coin-Op Arcade

Indeed, a look into the early history of video gaming quickly reveals that the separation of game design and gameplay from direct economic concerns is a recent phenomenon. In coin-operated arcade machines, gameplay is directly affected by the money the player has available. In turn, the mode of exchange of coin-op arcade machines again very directly drove particular aesthetic forms: arcade game machines were designed and placed to audio-visually attract passing potential players. The games were highly accessible and required minimum initial learning to maximise conversion of passer-bys into paying customers. Games were also designed to have high replay value, short rounds, and a rapidly rising difficulty curve to minimize effective play time per inserted coin all the while maximizing player interest in continued play (DeLeon, 2012; Kocurek, 2012). In fact, due to the particular revenue split between arcade manufacturers and operators, even the invisible technical parts of game arcades were designed for revenue maximization: namely to minimize outage times and enable local operators without special technical knowledge to repair them if needed (Kocurek, 2014).

A look into history unsurprisingly also reveals historical path dependencies: coin-op arcade machines broadly inherited their economic and interlinked aesthetic forms from pinball machines, and in turn handed many of their aesthetic forms down to home console and PC games, where the different economic conditions allowed games to slowly evolve out of those aesthetic forms (DeLeon, 2012; Kocurek, 2012). For instance, elaborate character creation, long cut scenes, hour-long battles – any long duration gameplay features that are *possible* in up-front purchased games and *desirable* in

subscription-based games (to generate more play time/revenue for capital invested) are anathema for a coin-op model.

Finally, coin-op arcade games and their pinball predecessors provide a ready illustration how *political* economy conditions game aesthetics: Caught in several moral panics surrounding the corrupting effects of gambling, both pinball machines and arcade games at various points became subject to legal prohibition and responded to this by *design* changes that set them more clearly apart from for-money gambling: be it that they exchanged monetary rewards for endogenous rewards (high scores, playtime) be it that they foregrounded skill over chance in their design (Huhtamo, 2005). Oddly enough, we are currently finding the same moral, legal, and design battles and strategies play out by gambling companies trying to reach new consumers through skill-based gambling, and real-money fantasy sports betting (Kestenbaum, 2015; Rott, 2015). To generalize:

- Networks of interlinked aesthetic forms and economic platforms propagate through history. The emergence of particular aesthetic innovations at particular points in time can be enabled by a change in economic conditions.
- Aesthetic forms are affected not just by direct economic modes of financing, production, and distribution, but also by broader political economies.

The Eternal Return of the Indie

If social games, AAA games, and coin-op arcade games illustrate the value of synchronic and diachronic comparison for studying economic platforms, the recent rise and projected fall of *independent games* highlight the value of comparisons across media. Bracketing the inevitable question how to define independent games, we can empirically trace the emergence of an aesthetic indie *style* (Juul, 2014), analogous to the coherent visual style of classic Hollywood and even more so, art cinema (Bordwell, 1979; Bordwell, Staiger & Thompson, 1985). Following Juul (2014, 2015), the indie style is characterized by visual emulations of "low-tech" (pixel graphics, chiptunes) and deviations from game mechanical and narrative conventions all intended to signal deviation from the AAA mainstream, authenticity, and expressive authorial intent. This style is enabled by an overall system of institutions: online marketing, fundraising, payment, and distribution infrastructures (Apple, Google, Kickstarter, Steam, itch.io); game engines that enable the production of games with vastly smaller teams; and a new appreciation community of specialist (online) publications, adult highbrow gamers, festivals, exhibits, and university scholars, institutions, and programs cultivating and legitimizing the creation and appreciation of games as an aesthetic form (ibid.; Deterding, 2015). Economically, the co-evolution of this system of institutions is affording and constraining the rise of independent games as an aesthetic style. This doesn't mean that independent game-making isn't economically precarious

– it is. The rise of the indie game ecosystem merely means that individuals *can* and more and more individuals *do* engage in the high-risk gamble of achieving a breakout hit, or the somewhat lower-risk gamble of building social, cultural, and intellectual capital they then might be able to exchange for financial capital in art and education markets, i.e. stipends, subsidies, grants, residencies, and teaching positions. Indeed, the indie ecosystem has become so hypertrophic that several pundits warn of an impending "Indiepocalypse" or the contraction into few economically viable "Triple-I" studios (Jaffit, 2015).

With minor differences, this development of independent games follows in the footsteps of the rises and falls of independent or art cinema in the 1970s and then digital independent cinema in the 2000s. Again, the aesthetic *style* of independent movies – signalling authenticity, favouring authorial expression over mass-market appeal – was wrapped up in and enabled by a particular independent mode of production (Bordwell, 1979) and the rise of "art cinema as institution" (Neale, 1981). New (analog then, digital now) technologies massively reduced the cost of production; arthouse cinemas, festivals, publications provided an appreciation community, distribution channels and consumer bases; particularly in Europe, government subsidies supplied alternative funding sources; and the rise of film studies and film schools legitimized and cultivated the appreciation of film as an aesthetic form, as well as producing graduates willing to make the precarious gamble of independent film-making (see Andrews, 2010; Tzioumakis, 2006 for more recent and detailed analyses). Today, digital independent movies face the same issues of precarious labor, market oversaturation, and "grow or die" pressures leading to insitutionalization and concentration of studios and intermediaries as independent games (Schamus, 2008; Wyatt, 2008; Barnes, 2014). Generalizing once more, we can see:

- Modes of game financing, production, and distribution can form a systemic whole of institutions with particular aesthetic forms, audiences, and modes of consumption.
- Games are produced for and distributed on multiple markets with their own differing logics affecting their aesthetic form, not just consumer retail.
- Different media show parallel economic processes, suggesting the value of cross-media comparative work.

THEORIZING ECONOMIC PLATFORMS

The foregoing vignettes support and illustrate the basic claim of economic platform studies *that* (a large variety of) economic conditions can affect (a large variety of) aesthetic forms of games. However, if we want to give a more general answer to its basic question *how*, we have to abstract away from individual cases: we have to theorize. Following one broadly held understanding of theory in the social sciences, this means

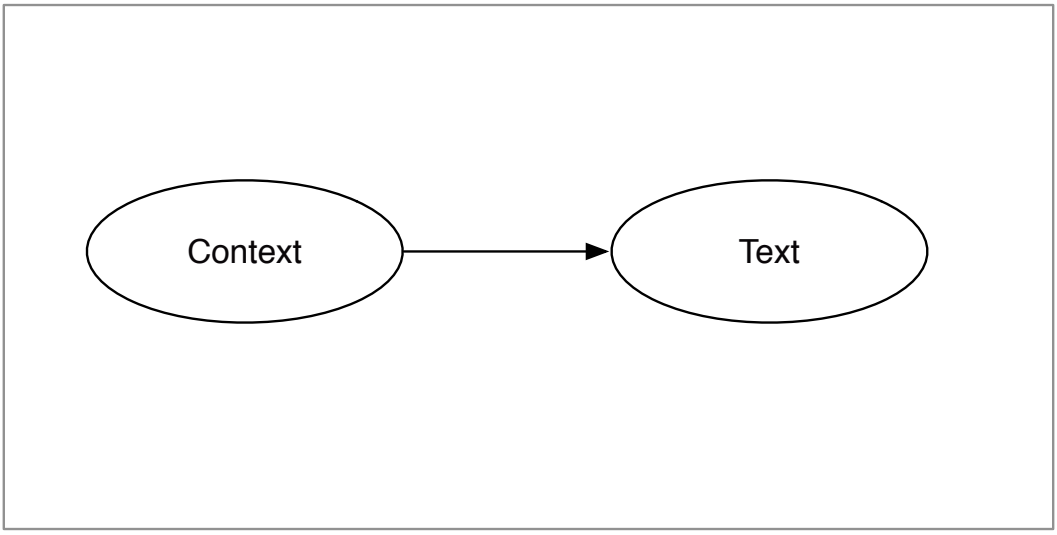

Figure 1. The basic theoretical model of contextualism.

that we have to draw up a "nomological network" of constructs and their relations that entertains a reliable, robust relation with observable phenomena through operationalization (Crohnbach & Meehl, 1955; Bacharach, 1989).

To illustrate, let's return to the beginning. Economic platform studies, we noted, is a contextualizing analysis of cultural artefacts (fig. 1). The two closest analogues to its program we identified were (technical) platform studies (Montfort & Bogost, 2009) and (film) production studies, particularly the study of the linkage between mode of production and film style in *Classical Hollywood Cinema* (Bordwell, Staiger & Thompson, 1985). If we abstract platform studies into a basic conceptual diagram, it looks somewhat like the following (fig. 2).

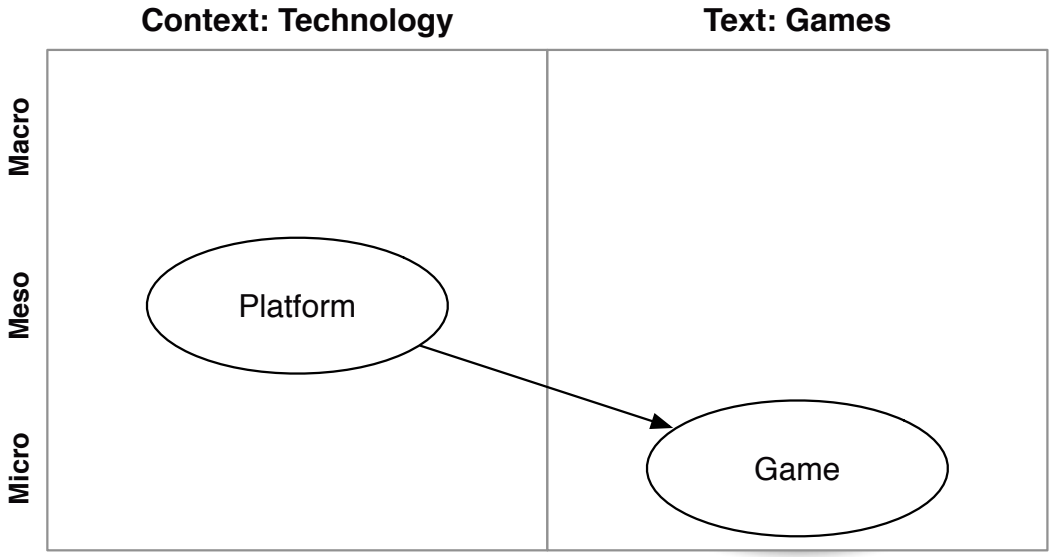

Figure 2: The theoretical model of platform studies

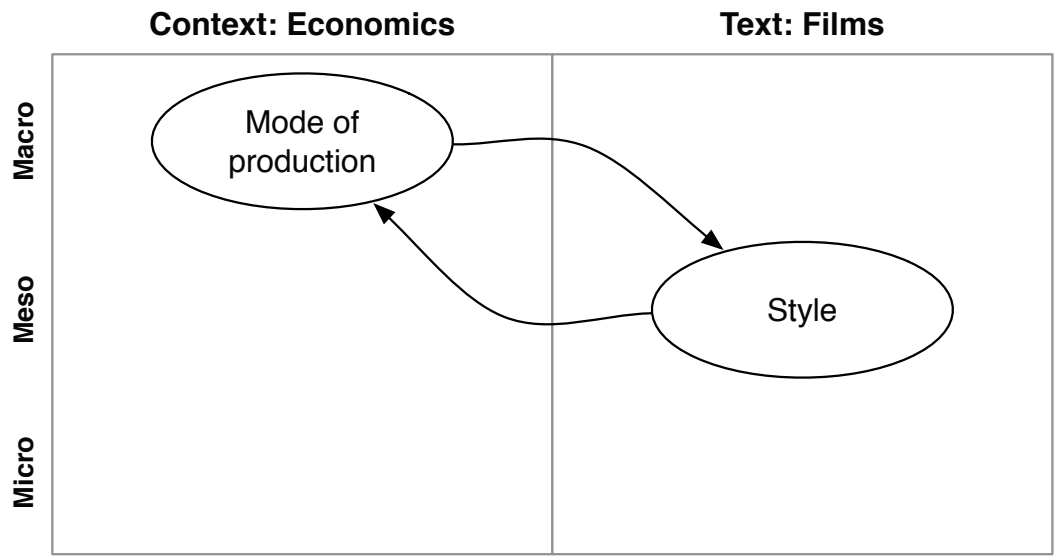

Figure 3: The theoretical model of Classical Hollywood Cinema

It claims that platforms as technical context construct located on a level of granularity "somewhere in the middle" between low-level reception/operation, interface, code etc. and high-level "culture and context" afford and constrain the design of individual games as text construct (Montfort & Bogost, 2009, 145-150) – acknowledging that platforms themselves are historical shaped by other contexts.

Classical Hollywood Cinema makes an analogous but still interestingly different theoretical claim. (fig. 3). First, it identifies "modes of production" as a quite messy, high-level socio-cultural context construct:

> "A mode of film practice is ... most simply, a context. ... the Hollywood mode of film practice constitutes an integral system, including persons and grous but also rules, films, machinery, documents, institutions, work processes, and theoretical concepts. ... a characteristic ensemble of economic aims, a specific division of labor, and particular ways of conceiving and executing the work of filmmaking." (Bordwell, Staiger & Thompson, 1985, xvi-xvii)

Similarly, while instantiations of this mode and its effects can be observed in individual films and their production, Bordwell, Staiger and Thompson aim for a more general and abstract construct of aesthetic form, namely a style shared by multiple films, which they define as "a set of norms" (ibid., 4): "Those norms constitute a determinate set of assumptions about how a movie should behave, about what stories it properly tells and how it should tell them, about the range and function of film technique, and about activities of the spectator." (ibid., xvii) *Classic Hollywood Cinema* like platform studies acknowledges that modes and styles form and change over time affected by yet other contexts. But notably, it doesn't assume a unidirectional context-text relation: "The relations between film style and mode of production are, we argue, reciprocal and mutually influencing." (ibid., xvii)

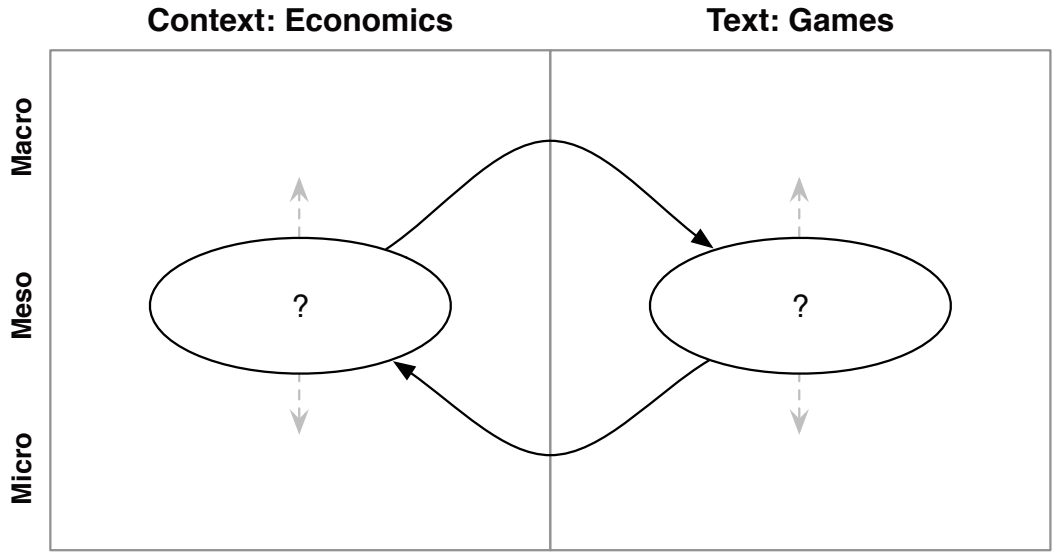

Figure 4: The theoretical possibility space of economic platform studies

The theoretical possibility space and question opened between these exemplars thus becomes: What relations between what constructs of economic conditions and aesthetic forms should it model and study (fig. 4)? Previous work has suggested a large variety of constructs. On the economic side, scholars commonly distinguish *production, distribution, consumption*, and sometimes, *financing* as broad aspects or domains. More concretely applied to video and computer games, we find:

- An originally Marxist concept, *commodity form* describes the particular way in which a particular object with a particular use and exchange value is produced and exchanged within a given society (Nieborg, 2012). Thus, Nieborg (ibid.) speaks of AAA games as "unfinished commodities" and free-to-play games as "connected commodities" (Nieborg, 2015).
- *Mode of production*, another Marxist concept, captures the specific combination of productive forces (like human labor, machines) and social and technical relations of production (like property and power relations) characteristic for a given kind of society. Postigo (2003) used it to describe the unwaged labor of modders.
- *Business models* broadly describe the interrelated aspects or "rationale of how an organization creates, delivers, and captures value" (Osterwalder & Pigneur, 2010). As such, they entail several subcomponents such as delivery channels, customer segments, of revenue streams/models (ibid.). Prax (2013) analysed real-money auction houses in *Diablo 3* as a component business model. Goumagias and colleagues (2014) recently empirically classified video game business models, and *revenue generation* or *monetization models* have been used repeatedly to capture the particularities of e.g. free-to-play vs. COTS games and their economic logics.

- *Value chain* analogously describes the linked activities of a business to deliver value to customers, broadly divisible into design, production, marketing, delivery, and support. Tomaselli and colleagues (2008) have applied this concept to video game consoles and console games.
- When Juul (2015) speaks of AAA games or independent games as a "system", he unwittingly evokes the concept of *business ecosystems* as "extended system of mutually supportive organizations; communities of customers, suppliers, lead producers, and other stakeholders, financing, trade associations, standard bodies, labor unions, governmental and quasigovernmental institutions, and other interested parties" (Moore cited in Peltoniemi & Vuori, 2004, 272).

On the side of aesthetic forms, established constructs include:

- *Game design patterns*, defined as "commonly reoccurring parts of the design of a game that concern gameplay" (Björk & Holopainen, 2005, 425).
- *Game mechanics*: social game design literature frequently discusses the linkage between particular game mechanics and revenue models (e.g., Fields, 2014), though rarely using common game studies understandings of game mechanics as "methods invoked by agents for interacting with the game world" (Sicart, 2008) – their notion is closer to game design patterns.
- *Game genres*, which can be defined as "the codified usage of particular mechanics and game design patterns to express a range of intended play-experiences" (Arsenault, 2009, 171).
- *Visual style*, as a term Juul (2014) borrows from Bordwell but never defines.
- Again, *commodity form* (Nieborg 2012, 2015) as an economic-aesthetic hybrid.

Our empirical vignettes suggest that relevant formations and relations appear on all levels of granularity: from micro (revenue models like free-to-play, game mechanics like appointment play) to meso (business models like AAA publishing, genres like social games, visual styles like indie) to macro (ecosystems like the independent system, game platforms like arcade games). Hence, there is no strong principled reason to limit economic platform studies from the outset to one group of constructs of level of granularity. That being said, in no vignette did we encounter economic micro-level formations like revenue models independent from other interrelated formations such as particular distribution channels, audiences, and production processes. Furthermore, even these clusters or systems of formations did not exist in a vacuum, but were found in an enabling environment of available technologies, regulations, market sizes, and the like. Bordwell and colleagues (1985, 90–91) likewise explicitly used "mode of production" to capture a *necessary* unity of labor force, means of proiudction, and financing they found at work in classical Hollywood cinema. This speaks for functional, systemic, higher-level constructs like business models and ecosystems as

being more ecologically valid, albeit they can be analytically decomposed into subcomponents such as revenue models.

On the design side, researchers have identified particular micro-formations like design patterns characteristic for particular game business models (Zagal, Björk & Lewis, 2013). Then again, such patterns likewise only become functional within the larger systemic whole of a game (Björk & Holopainen, 2005). In addition, across our vignettes, patterns were typically found as functionally interlinked clusters of multiple patterns that *together* serve aesthetic or economic functions: simple controls *plus* short rounds *plus* steep difficulty curve *plus* high replay value equal high coin income. Finally, many of the aesthetic regularities identified in the vignettes do not fit the game design pattern definition of "commonly reoccurring parts of the design of a game that concern gameplay": production values, sequeling, cataloguing, intentional deviation from established mainstream convention, emulated low-tech visuals, arcades placed and designed to draw in passer-bys, etc. This suggests that *styles*, broadly understood with Bordwell, Staiger and Thompson (1985) as functional systems of multiple aesthetic conventions or norms, might be the most ecologically valid and conceptually appropriate construct for capturing aesthetic forms affected by economics, though again, these can be described as made of identifiable subcomponents which include game design patterns and other, non-gameplay related aesthetic conventions.

Restated in a first, tentative, and initial focus, *economic platform studies asks how particular business models, embedded in particular ecosystems, reciprocally enable, constrain, and shape particular game styles and their component design patterns and conventions.*

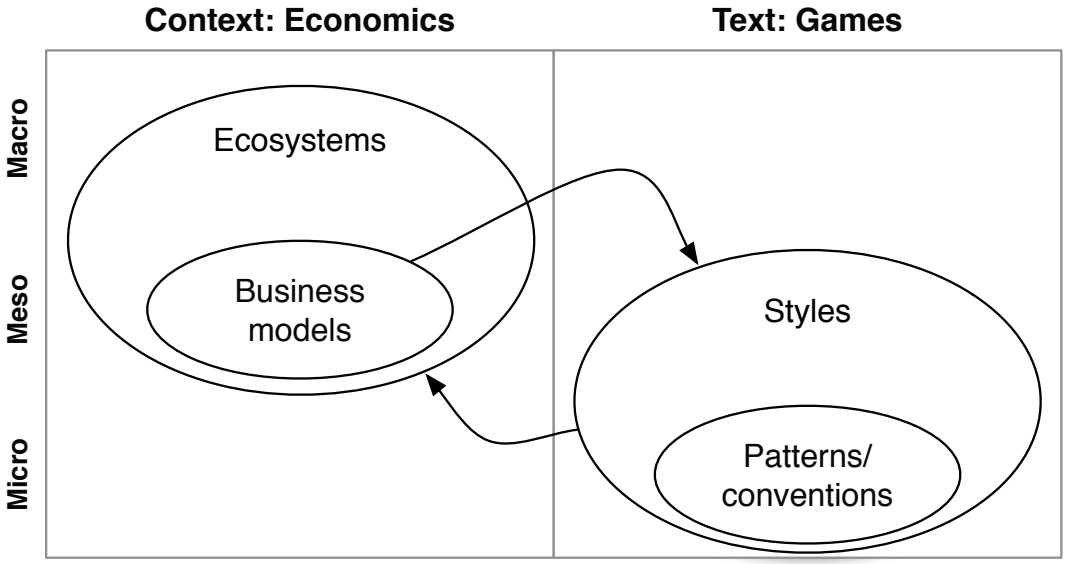

Figure 5: A suggested initial theoretical framework for economic platform studies

That being said, on closer analysis, any of these constructs will reveal complicated multi-causal networks themselves – just think of the positive feedback loops between investment volume, risk, and risk mitigation strategies in the AAA business model.

DOING ECONOMIC PLATFORM STUDIES

With this first theoretical framework at hand: What is the appropriate method for economic platform studies? There seems to be no principled reason to exclude any method or approach – nomothetic or ideographic purpose, close reading of one text or distant reading of many, qualitative or quantitative analysis. The aggregate nature of our target constructs – business models and styles, not Blizzard and *World of Warcraft* – suggests that ideographic readings alone won't suffice; but that doesn't mean tht case studies can't make significant contributions. Neither *Classical Hollywood Cinema* nor *Racing the Beam* make any strong methodological claims; they are media histories by virtue of their authors' training and predilections more than anything else. Our vignettes highlighted two general points: First, there is great value in *comparison* – across times, places, contexts, cases, media (see Klimek & Müller, 2015, for a general discussion), as it allows to foreground otherwise taken-for-granted phenomena. Bordwell, Staiger and Thompson (2010) acknowledge in hindsight that the lack of comparison weakens the argument of *Classical Hollywood Cinema*; the main reason they did not engage in it was practical. A second point is the value of studying historically "hot" moments of conflict, change, and emergence, where social actors very literally (and with lots of material and document traces) work and talk through how things can fit together or not (Latour, 2005).

A third point can be added. It is easy to observe regularities left and right and then suggest that similarity equals causation, perhaps by some bigger unifying third: a paradigm, episteme, mentality, etc. Social games reducing themselves to incremental counters and their metrics-driven design share a focus on measurement and growth – *voila*, a similarity if not correlation, maybe explained by a pervading "spirit of capitalism"? As Alan Liu (1989) exemplarily observed with New Historicism, contextualizing studies easily fall for mistaking observed correlation with explained causation. The lack of theoretical explanation *how exactly* that abstract entity "context" comes to influence a concrete text is covered up by the suggestive power of the correlation itself: "A New Historicist paradigm holds up to view a historical context on one side, a literary text on the other, and, in between, a connection of pure nothing." (ibid., 743) One proven methodological antidote to this flight into abstraction is the dogged micro-empiricism of ethnomethodology, (organizational) ethnography (Neyland, 2008), or actor-network theory (Latour, 2005): How does a "business model" materialize in the making of a game: what network of people, Excel spreadsheets, blog posts, org charts, data gathering and reporting routines, constitutes it? Through what conversations and interactions, with what documents, in what meeting rooms and coffee breaks

does a "business model" touch the "design" of a game, and what is that made of? Apart from taxonomising business models, ecosystems here and styles and patterns there, one of the main tasks of economic platform studies will be to trace in this empirical and theoretical detail *that* and *how* the two come to influence each other.

THE VALUE OF ECONOMIC PLATFORM STUDIES

There is no theoretical end to the number of potential contexts in which to situate games: So why *economic* platform studies? A first obvious answer is that economics are an important part of (or lens on) the totality of culture. Contextualizing games economically thus simply adds to the totality of our understanding of games as complex cultural artefacts, and of the conditions of creative expression writ large. Second, it serves as a critical corrective to *other* contextualising and immanent readings: what is currently interpreted as malign intent or false consciousness may simply be economic necessity.

But there are also important pragmatic reasons: if we as a society wish certain forms of cultural expression in games to occur, we would be well-advised to study what makes them economically viable, sustainable, and likely. Despite good evidence for their effectiveness, serious games for instance are still failing to establish themselves in e.g. education or health care. If we trust senior observers (Sawyer, 2014), the reasons are economic not designerly: regulatory capture of markets by incumbents; a business-to-business environment the gaming industry is not used to operate in; and the lack of a surrounding business ecosystem. Similarly, while independent games are widely lauded as pushing and enriching games as an aesthetic form, they are also economically fragile and precarious. Economic platform studies can supply validated best practice business models and design patterns for game companies as well as recommendations to policy-makers how to nurture and regulate business ecosystems to best support desired kinds of games.

CONCLUSIONS

From the "dark patterns" and metrics-driven design of free-to-play social games to the blockbusterization of high investment risk, high economies of scale AAA games to the coin-drop-maximising design of arcade games and the "indie" ecosystem in games and film: economic conditions affect the aesthetic form of games – not just concrete design decisions of individual games, but also what kinds of games get produced. Notably, this effect is historically contingent, socially normalized, and morally charged: at different times and places, different forms and degrees of direct or indirect economic impacts on game design and gameplay are considered normal and appropriate; deviations from this norm are met with moral outrage until they become normalized in turn.

To study such phenomena systematically is to engage in what we here termed *economic platform studies*. Both economic conditions and aesthetic forms tend to appear in functional, systemic wholes or clusters that span production, distribution, consumption and financing on the economic side and extend beyond game mechanics and patterns on the design side, which suggests theorizing them in more complex constructs: business ecosystems, business models, sytles, conventions. Studying them and their linkage neither presumes nor excludes any particular method. But one of the first tasks of a future economic platform studies will be to trace in micro-empirical detail how "economics" and "game design" are constituted and affect each other.

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