

Exploring the production
and consumption of risk

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6 Turning the tables

The global gambling industry's crusade to sell slots in Macau

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Introduction

Low-stakes slot-machine gambling has become the revenue mainstay of the gambling industry in North America, Australia and Europe, and legal access to the activity continues to expand in these jurisdictions as governments seek ways to bolster budgets without raising taxes. Yet as worries of domestic 'market saturation' arise, and as the economic recession slows the rate at which casinos replace old machines with new ones, stakeholders in technology-driven gambling are ramping up their efforts to secure new markets abroad. The Far East, with over four billion people and under 30,000 slots, is regarded as the most promising foreign frontier for the spread of machine gambling (Wee 2010)¹.

Macau, an area of 11 square miles off the southern coast of China, is seen as the key to unlocking the Asian-Pacific market. The territory became known worldwide as the 'Monte Carlo of the Orient' after Portuguese colonial officials legalised gambling there in 1847; since 1999, when Macau was returned to Chinese control as a 'special administrative region', it has been the only area of the People's Republic of China with casinos. Until recently, however, government restrictions made it difficult for mainlanders to visit. In 2003, in an effort to stimulate tourism and raise new tax monies, policymakers relaxed domestic travel restrictions to Macau and at the same time lifted economic restrictions barring foreign investment.² Leading companies in the global gambling industry quickly moved in to obtain operating licenses and contracts, hoping to gain access to a market of 1.3 billion Chinese nationals who, despite the mainland's ban on gambling, are known to be avid gamblers (see Osnos 2012; Leong 2011).

Only two years after the opening of its first Las Vegas-style casino, Macau saw its gambling revenues surpass those of Las Vegas; henceforth, the tiny city became known as 'the gambling capital of the world'. Macau has more than lived up to its new title: in 2012, annual revenues generated by its 32 casinos reached \$38 billion – five times those of the 122 casinos operating in Las Vegas. Analysts project that the region will account for 34 per cent of total global casino revenues by 2015.

And yet, as foreign gaming entrepreneurs are often surprised to learn, the gambling scene in Macau is not simply a supercharged version of Las Vegas. In a

near-exact reversal of the revenue breakdown in the United States, where upwards of three quarters of gambling revenue derives from low-rolling slot-machine players, in Macau three quarters of the revenue derives from high rollers in VIP rooms who place enormous bets at the green-felt table game of baccarat. The vast majority of these players are brought in by 'junkets', independent companies whose agents recruit wealthy gamblers, give them lines of credit and earn commissions on how much they bet (Osnos 2012).³ When mass-market, non junket baccarat is taken into account, the game accounts for an astonishing 88 per cent of total gaming revenue in Macau.

'If you've been to Macau you've seen them four and five deep at those baccarat tables', wrote a gambling industry journalist in 2011 (Rutherford 2011). Slot machines; the same journalist reported, 'sit mostly untouched'. In a recent poll, nearly 90 per cent of Macau's casino patrons said they preferred table games (Liu and Wan 2011). The strong preference for tables is reflected in the fractional percentage of revenue that slots generate – a mere 4.6 per cent in 2011.

Stakeholders in Macau's gambling sector have a number of reasons to consider slots' lowly status a problem. For one, profits from high-rolling bets are less predictable than mass-market machine gambling because they are far more affected by larger economic forces like credit crises. They also involve pricey commissions for VIP junket organisers (Leong 2002). Slot machines, by contrast, require no such expense – nor do they require the employment of dealers, who are both costly and a challenge to find given the labour shortage caused by the recent economic boom in Macau (Ho 2005, 2006; Leong 2011; Quinta 2011; Osnos 2012). Finally, because the Chinese government has set caps on the number of table games permitted in Macau, it is difficult to expand that market (see Jacob 2013; Anderer 2012: 14).⁴ There is currently no cap set on slot machines.

The gambling industry executives, managers and designers tasked with the challenge of overcoming the unpopularity of slots in Macau invariably frame the problem as a question of culture – a 'cultural aversion', a 'cultural objection' or a form of 'cultural resistance'. Accordingly, their counteractive strategies tend to take the form of 'cultural adaptation', to use the phrase of one industry analyst (Kale 2008: 10). Cultural adaptation can be seen to operate at two levels: on the one hand, there are efforts to adapt the slot product to players' culture (as construed by industry stakeholders); on the other hand, there are efforts to adapt players to the product. These two modes of cultural adaptation, working in concert, drive the global gambling industry's crusade to 'turn the tables' in Macau.

This chapter takes a close look at the innovative practices and products that casino marketers and technology designers have developed in the service of this crusade, and at the formulations of culture on which these practices and products are based. I begin with a sketch of the industry's ideal model of slot machine play – a model fashioned after the kind of mass-market 'repeat play' that can be found in the United States and other machine-strong markets (Schüll 2012). Next, I examine the resistance that casino executives and slot designers face in their attempt to cultivate mass-market machine play in Macau and show how they make sense of that resistance in relation to a particular conception of Chinese 'culture'. Finally,

drawing on a series of video interviews (Jalal 2011a, 2011b, 2011c, 2012) with these executives and designers, their recorded presentations at international gaming conferences and articles in trade journals, I explore the various techniques and technologies they have developed to 'win the hearts and minds' of Asian gamblers, as Catherine Burns of Bally Technologies characterised the objective in 2010 at the Global Gaming Expo in Macau. As we will see, these techniques and technologies – commonly referred to as 'market attunements' – are designed both to appeal to the imagined motivations, preferences and habits of the Chinese player and to shift those motivations, preferences and habits.

The Western slot player: a tolerance for technology

Until the mid-1980s, green-felt table games such as blackjack and craps dominated casino floors in the United States while slot machines huddled on the sidelines, serving to occupy the female companions of 'real gamblers'. Often placed along hallways or near elevators and reservation desks, rarely with stools or chairs in front of them, the devices occupied transitional spaces rather than prime casino real estate. By the late 1990s, however, gambling machines had moved into key positions on the casino floor and were generating twice as much revenue as all 'live games' put together. It became common to hear them referred to as the 'cash cows', the 'golden geese' and the 'workhorses' of the industry (Schüll 2012: 5).

Several factors contributed to the dramatic reversal of slots' once trivial presence in the gambling economy. Because they were relatively unburdened by the taint of vice as a result of their association with women, retirees, and youth arcade gaming, they played a key role in the spread of commercialised gambling in the 1980s and 1990s as recession-stricken states sought new revenue sources. The low-stakes devices fitted comfortably with the redefinition of gambling as 'gaming' by industry spokespeople and state officials who hoped to sway public endorsement of the activity as a form of mainstream consumer entertainment rather than moral failing or predatory entrapment.

The cultural normalisation of machine gambling was further facilitated by the growing consumer familiarity with screen-based interaction that accompanied the rise of the personal computer and electronically mediated entertainment such as video games. 'Technology is extending to every area of society,' said a panelist at the 1999 World Gaming Congress and Expo, where industry executives had gathered from around the country to speculate on the promising future of slot machines. 'People are attuned to what's around them, and it's becoming the norm for them to use these sorts of devices – in fact, they're coming to expect it. There's a growing tolerance for technology' (Stuart Bull, Aristocrat Gaming).

Contemporary slots typically feature video screens instead of mechanical reels and buttons instead of handles, and they accept credit cards and barcoded paper tickets instead of coins. The ongoing incorporation of digital technology into gambling machines has altered the gambling experience in subtle but significant ways, enabling a form of play that is solitary, continuous and rapid. It is possible to complete a game every three to four seconds, with virtually no delay between one game

and the next. Regular slot gamblers describe how the asociality, flow and speed of machine play can have the effect of suspending time, space, monetary value, social roles and sometimes even a sense of one's own existence. This kind of gambling is not an occasion for the face-to-face 'character contests' that the sociologist Erving Goffman, himself an avid gambler, wrote about in the 1960s; rather, it is a reliable mechanism for 'zoning out', as machine gamblers often phrase it. In the zone, the aim is not to *win* but simply to *continue*.

Slot gamblers are after 'time on device', the gambling industry's term for a mode of machine gambling that is less about risk and excitement than about maintaining a hypnotic flow of action – a mode that happens to be especially profitable for casinos. 'Our best customers are not interested in entertainment,' acknowledged a slot machine designer from a company now owned by International Gaming Technology (IGT), the nation's largest slots supplier. 'They want to be totally absorbed, get into a rhythm' (Gardner Grout, interview with the author).

Over the last decade, recognising how lucrative this kind of play can be for casinos, machine manufacturers have introduced 'high hit frequency, low volatility' video slots that allow gamblers to sit for extended periods at nickel or even penny machines, their play characterised not by long dry spells rewarded with the exhilarating shock of a large jackpot, but by a steady, relaxing stream of small wins. They do not 'play to win', but 'play to win to play', to use game designers' expression. So-called dribble-pay or drip-feed games, often played with nickels or pennies, nibble slowly at a gambler's budget until it is gone (for a detailed discussion of the technological innovations that enable this kind of reward schedule, see Schüll 2012: Chapter 4).

In the United States, Canada and Australia, such games lead the market. The industry has become heavily invested in extending the global reach of its new 'Costco model of machine gambling', as one gambling executive has described it, referring to a cut-price retailer in North America whose profits derive from the volume of spending rather than product price.

The Chinese gambler: a cultural aversion to slots

It is against the Western-derived figure of the repeat player – a mass-market customer who gambles alone, for time-on-device rather than big wins – that gambling executives understand the motivations, preferences and habits of the machine-averse 'Chinese gambler'. To this gambler they ascribe a range of 'cultural' characteristics: a desire to win big, a strong appetite for risk, a belief in luck, a distaste for the asocial nature of machine gambling and a distrust of slot machines' computerised programming. These traits, linked together in industry narratives to form a cultural and psychological profile of 'the market' in Macau, serve as interpretive touch points in accounts of gamblers' lack of interest in the low-stakes, low-volatility, asocial and computer-mediated activity of slot machine gambling.

At the 2010 Global Gaming Expo in Macau, in the course of a slot-operators' roundtable called 'A Growing Game', the director of slot operations at a local

casino described how his team had 'struggled to get people onto the product', with little success (Lindsay Stewart, Sociedade de Jogos de Macau). The problem, as he saw it, was that the product in question did not lend itself to the kind of gambling that his customers sought. Culturally disposed to view gambling as a means of monetary gain rather than a form of entertainment on which to expend money (as in the West), these customers found no appeal in games designed for players seeking time-on-device; instead, they were drawn to high-stakes, high-volatility table games (see also Lam 2007, Ye 2009; Leong 2011).

Industry narratives of Asian gamblers' overweening desire to win big frequently link this desire to their strong 'risk-taking propensities' – another cultural characteristic said to set them apart from the relatively risk-averse slot players who generate the bulk of the gambling industry's profits in the West (Ozorio and Fong 2004). In contrast with those penny-betting slot players, the typical Asian gambler is seen as willing to bet a significant portion of his income in the hopes of a life-changing windfall (CLSA 2005; Ye 2009; Osnos 2012).

A readiness to risk, note casino managers in Macau, is particularly apparent among Chinese gamblers, who make up nearly 60 per cent of the visitors. Some interpret this as 'a result of China's relatively recent transition from economic poverty to prosperity' (Lam 2005, 70); mainlanders are regarded as a new, unsophisticated market, not as financially well off as visitors from Hong Kong and Taiwan and more likely to view gambling as 'a shortcut to financial achievement' (Lam 2012). In gambling they are thought to be seeking to better their lot in life and catch up with the recent economic turn in China.

Another cultural explanation that the gambling industry frequently invokes to explain Chinese gamblers' readiness to take big risks is a belief in luck and the rewards it can confer (Ye 2009). Desmond Lam, a marketing professor at the University of Macau who specialises in the psychology of Chinese gambling and frequently publishes in gambling industry trade journals, writes that while Western gamblers tend to have statistical probability in mind when they take risks, Chinese gamblers regard winning as a function of luck – something that can be swayed (Lam 2007, 2012). A luck-based orientation to chance, according to Lam and others, accounts for their 'illusion of control' over outcomes and their strong superstitious beliefs (Lam 2007, 2009; Oei and Raylu 2009; Ye 2009). The luck-oriented gambler 'concentrates on "signs" that will tell if that person is lucky at that moment or if his or her luck can be trusted to make the right decision', explains one scholar in a thesis comparing Chinese and Western gamblers completed for a master's degree in hotel administration at the University of Nevada, Las Vegas (Ye 2009: 12).

Notions of luck are understood as a factor in Chinese gamblers' gravitation to face-to-face forms of gambling, for lucky signs are thought to be most readily apparent and legible in collective settings. In China, writes a reporter in the trade magazine *Casino Journal*, the attitude is that

everyone wins when the good of the whole takes precedence over the passions of the individual. [...] Entire families make the crossing from Zhuhai or ride in on the ferry from Hong Kong, determined to strong-arm Fortune into revealing to them their destiny, if only for the day, and the more collective

spiritual muscle you can bring to bear on the contest the better. (Rutherford 2011)

The solitary encounter of machine gambling, he goes on to suggest, runs counter to the collective spirit of Chinese gambling. 'Chinese culture does things communally, and it's not communal when you're alone in front of that machine,' said American Gaming Association president Frank Fahrenkopf while moderating a 2007 panel at the Global Gaming Expo in Las Vegas. 'We hoped we could figure out a way to pull people off the tables', one of the panelists recalled of early attempts to promote slot machine gambling in Macau, 'but that's really complicated because there's a whole social aspect.'

If Chinese gamblers view the 'social aspect' of gambling as critical to enhancing their luckiness, they view slot machines as distorting the natural course of luck. The fear, explains an industry journalist, is 'that you're taking on a machine, an inanimate, insentient object that cannot be appeased or cajoled and might well be rigged against you' (Rutherford 2011). 'Asian players have very strong doubts about anything related to electronic games,' confirmed the president of an Asian gaming company at G2E Asia in 2010 (Simon Liu of Jumbo Technology). 'They think there is always something predetermined or calculated or computed behind every hand so they don't trust it' (see also Ho 2006).

As correspondents frequently explain in their cultural dispatches from China, machines are known as 'hungry tigers' in Cantonese and regarded as 'preprogrammed money eaters that can be manipulated by casino operators on the fly' (Anderer 2012: 12; see also Lam 2005; Johnson 2006; Jalal 2008; Ye 2009). The supremely popular baccarat, by contrast, is considered to be the fairest game in the casino because 'the casino merely acts as a "referee" who takes only a small commission from each game' (Leong 2002: 85; see also Lam 2012). Of all the cultural obstacles that the global gambling industry faces in its Asian-Pacific venture, it is gamblers' distrust of slot machines themselves that looms largest, for it strikes at the heart of the technology itself.

Market attunement: adapting machines, adapting gamblers

Low as Macau's current slot revenue figure of 4.6 per cent is, it is an impressive gain from the 2003 figure of 0.8 per cent and represents a tripling of the 2009 figure. Most in the gambling industry, heartened by this upward trend, expect the jurisdiction's slot income to eventually surpass its table income. 'The general feeling in the industry, particularly among slot vendors', wrote an industry analyst in 2006, 'is that Asian players will enjoy slots almost as much, if not just as much, as their American brethren once they are exposed' (Anderer 2006: 4). A strong machine market will emerge in Macau, another analyst similarly speculated in 2008, as gamblers 'finally start trusting and becoming familiar with gaming machines' (Legato 2008). Some believe this trust will grow organically as younger players enter the market. 'China is the fastest-growing electronically literate country in the world and that's going to breed a new generation of players who are exposed to electronic games,' observed one gambling executive (Lindsay Stewart,

Sociedade de Jogos de Macau). 'It's very early in the evolutionary process and we will continue to make inroads.'

Others are less sanguine about the process. 'When it comes to slot machines, the edict *Build it and it will pay* will definitely not work in Macau,' a consultant to the industry has commented (Kale 2008: 10). Instead, a concerted campaign of market cultivation is seen as the way forward. The cultural traits that the industry ascribes to Chinese gamblers serve not only to explain the resistance to slot machines, but also to guide the efforts of designers and managers to shift their customers' gambling habits. 'While one cannot change the traits of Chinese gamblers overnight, one can however devise and implement better strategies to promote slot play,' wrote Lam in 2005 (Lam 2005: 71). As an industry journalist reported the following year, 'Many international manufacturers have set up marketing offices in the city in order to get closer to local clients' (Ho 2006).

The robust presence of slot manufacturers at the annual Global Gaming Expo Asia – a smaller version of the premier annual trade show in Las Vegas, where industry members from around the world convene to take stock of the latest trends and products in the world of gambling – attests to their commitment to fostering mass-market machine play in Macau. While attending G2E Asia in 2008, industry consultant Sudhir Kale was surprised to find 40 exposition booths – one in four at the show that year – occupied by slot machine companies. This struck him as bizarre given that at the time Macau had 'the lowest slots-to-tables ratio of any gaming jurisdiction in the world' and derived a mere 3.5 per cent of its gaming revenue from machines' (Kale 2008).

Kale's surprise grew as he left the exposition hall to explore Venetian Macau, to this day the largest casino in the world, and found that its slot areas were largely empty. How to square customers' low participation in slot machine gambling with the vigorous participation of slot companies at the meeting? He returned to the exposition hall to ask the vendors why they had come and what their strategies for turning the market from tables to slots might be. The responses they gave Kale suggest that two dynamically interrelated approaches are at work, both of which can be described as forms of 'market attunement', in the current jargon of the global gambling industry.

What, exactly, is market attunement? 'Market-attuned games', reads a 2012 press release from IGT, the slot design and manufacturing company with the largest international market in the world, 'are designed to appeal to global audiences and are tailored for specific regional cultures with localised themes and appeal'. In a series of video interviews conducted at the Asian Global Gaming Expo in 2011 for the website edition of *Inside Asian Gaming*, Kareem Jalal, a leading foreign correspondent for the industry, queried a number of slot company representatives about this increasingly common design philosophy. Craig Churchill, senior vice president of international sales at IGT, told Jalal:

Market attunement is all about ensuring that we're producing games that really resonate with the patrons and consumers. We've been doing some very

expensive research over the past 18 months on getting that deep psychological understanding of the motivations of players in local market places. It's not, anymore, about designing games for the North American market and putting them into the Asian marketplace. (Jalal 2012)

'We're launching more and more games designed for Asian Players,' reads an IGT advertisement in the March 2013 issue of *Inside Asian Gaming*.

The Asian-Pacific region, and Macau in particular, has become a critical laboratory for industry experiments with methods of market attunement. Catherine Burns, a representative for Bally Technologies, told Jalal about the special studios her company had set up to 'focus on Asian games' (Catherine Burns, quoted in Jalal 2011a). The representative for Aristocrat Gaming spoke of his company's plans to assemble an 'Asianized' portfolio of games (David Punter, quoted in Jalal 2011b).

What does the process of market attunement in Asia entail? At the most basic level, it involves translating game directions and arranging button panels and displays in a way that is legible to local audiences – something that was rarely done in the early days of slot machine globalisation. A step up from linguistic and operational translation is the work of cultural translation, which happens at a number of levels, including games' thematic content, mathematical structure, social connectivity features, and communication of integrity and trustworthiness.

In the last decade there has been a veritable explosion of Asian-themed games. In contrast with crude attempts at 'cultural marketing' – as in the 1990s when IGT introduced the Fortune Cookie slot machine to protests of racism from some gamblers – international slot design teams have become savvy producers of wildly popular games like Fa Fa Fa (which means Get Rich! Get Rich! Get Rich! in Cantonese) by the Australian-based company Aristocrat. The game, which has become 'Asia's most successful slot product' (Anderer 2012: 15), delivers a stunning jackpot when three faces of the God of Fortune (Choy Sun) line up horizontally. Other popular Asian-themed games prominently feature dragons, geishas and the monkey god; in one, a bonus feature allows players to 'slay' tigers (Johnson 2006). 'We are working closely with IGT', said Lance Gautreaux, vice president of slots operations at the Venetian Macau, 'trying to incorporate a lot of Chinese culture and beliefs into the games and graphics' (quoted in Anderer 2012: 15). 'We've got some themes and math models that we think will be popular with the local market.'

Gautreaux's mention of 'math models' refers to culturally modified game algorithms designed to create higher volatility and the possibility of larger jackpots. Instead of formatting games' math with time-on-device gamblers in mind, designers format them for gamblers who are playing to win and are willing to risk large losses (Lam 2005: 71). 'Volatility is the overriding profile for the slot player in Macau,' said IGT's Churchill (Jalal 2012). 'We've got games that have the themes and the volatility that Asian players need,' reads a full-page IGT advertisement in *Inside Asian Gaming*, going on to describe two such games, Fire Dragon and Golden Pheasant. The notion that 'slot machines aren't for high rollers', a Macau-based publication asserts in a feature article written to educate local gamblers

on the appeal of electronic gambling, 'is simply no longer the case' ('Rise of the Machines' 2013):

In some jurisdictions machines now account for more than half of casino revenue, seeing slot players amongst the most respected people on property – with comps and status to match. Electronic gaming is Macau's fastest growing form of play, and the big casinos are rolling out the red carpet for the many high roller slot players who visit their properties.

To reinforce the notion that high rollers should pay heed to slot machines, high-stakes versions are often placed in special VIP rooms.

Another technique for boosting slots' appeal in the eyes of the play-to-win gambler is to link numerous machines together such that their jackpots grow over time as gamblers collectively contribute a portion of each bet to the pool. Linked machines with a communal jackpot have the additional benefit of adding a sense of collectivity to the otherwise asocial process of machine gambling. A recent spate of 'community games' go a step further in the direction of Lam's recommendation that the industry work to 'increase the connectivity' of its slots (Lam 2005: 71) by allowing slot gamblers to compete with and against each other even as they play at their own terminals. Games like the popular Dragonboat 'appeal to the collective nature of Chinese society' (Kale 2008: 10).

Finally, how to modify machines in a way that can counter the market's distrust of computer programming as an unfair, suspect distortion of luck? Lam suggests that 'casino operators in Macau may consider bringing back the traditional pulling lever for slots or creating new devices that enhance the illusion of control' (Lam 2005: 71). Others believe that making machines' hidden workings more transparent would help. Gautreaux at the Macau Venetian explains the logic behind the recent decision to publish and publicise the technical standards for machines: 'With the release of the technical standards, any player can go online, read through the standards, understand that the machines are regulated and that there are requirements that have to be met before a machine can be approved and placed on the floor' (quoted in Anderer 2012: 13). This kind of transparency, he believes, will help promote the 'integrity of slots' and cultivate market trust. 'As the slot market grows and guests grow more comfortable with the machines', he writes, 'they are becoming more aware of how they work, more comfortable playing the games and the mechanics behind playing the games.'

The gambling industry's most successful strategy for cultivating trust in screen-based gambling thus far has been the development of semiautomated and fully automated electronic tables, known as 'e-tables'. E-tables render traditional, group-oriented games like poker, blackjack and even craps in an electronic format. Gamblers who gather around these tables – which are classified as slot machines and so do not count against the government caps on table machines – are equipped with individual video screens and consoles while live dealers are replaced by the centre screen of the table itself, which sometimes features digitally

simulated croupiers who verbally address and even make simulated eye contact with players (Grochowski 2007: 36).⁵

To overcome players' distrust of electronic formats and demonstrate the true randomness – and thus fairness – of the process, some e-tables feature upright video displays showing how outcomes are selected from real decks of cards, or, in the case of roulette, a real ball. 'Live streaming' versions of e-tables similarly seek to increase trust by showing players live video of the actual table games they are betting on. (This setup also works to foster a sense of camaraderie and communal outcome, since many players around the casino are all betting on the game shown in the live feed.) Andy Crisafi, vice president of operations at a Macau casino, explains the strategic logic at work in live streaming: 'It's the whole trust thing . . . players can view the cards being dealt in real time. This appeals to a segment of the market that is still somewhat skeptical of electronic table games' (quoted in Anderer 2012: 13).

Another version of e-tables, known as 'hybrid tables', are designed to overcome gamblers' skepticism by allowing them to compete against a live roulette wheel, dice shaker or card shoe (Bradford 2013). By incorporating familiar, non-virtual elements – a ball bouncing, dice jumping or cards being dispensed – they 'can be an educational tool for players to accept the technology . . . a very good catalyst for us to transfer people from tables to video slots – a catalyst to change players' habits', said Simon Liu, president of the Macau-based gaming company Jumbo Technology, at the Global Gaming Expo in 2010 (author's emphasis).

Liu's comment on the habit change that e-tables can bring about suggests that market attunement is not just about modifying gambling devices to fit with players' cultural proclivities; it is also about shifting gamblers' proclivities. In this second sense of market attunement, players are the objects of change and technological innovation is the vehicle of that change. E-tables, for example, are often strategically positioned between live games and their fully mechanised counterparts, serving as a gateway into the world of machine gambling – or, as one casino executive put it in 2006, 'a transitional product from tables to slots'.

The story of Macau's Mocha Clubs casino, a venue with no table games, offers a striking case of e-tables' role in shifting market attitudes and habits. When the casino opened in 2003, it presented a gaming area with a cosy coffee shop ambience (including a coffee smell) and introduced multiterminal e-table versions of familiar games like baccarat and roulette to convince Chinese players to give slots a chance (Ho 2005, 2006; Jalal 2011c). These e-tables originally accounted for about 70 per cent of the casino's total revenues – yet they 'drew crowds who gradually began to explore the other idle slot machines' (Ho 2006). Mocha's president, Constance Hsu, recalls: 'As those multiterminal players became accustomed to playing on machines and they saw some of the slot players winning jackpots, they began tentatively approaching the slot machines' (quoted in Jalal 2011c). By 2006, she noticed a 'steady shift' from the e-tables to the slots, and e-tables were downscaled to 50 per cent of the games on offer; by 2011, they had been cut back by another half, accounting for only one quarter of the machines on the casino floor. Casino managers, working together with slot technology companies, had

'achieved their objective of using multiterminal games to drive Chinese gamblers to slots', a journalist wrote for *Inside Asian Gaming* in 2006, the year that traditional slots took over from e-tables as the leading source of machine revenue in Macau (Ho 2006; Jalal 2011c).

Some casino executives in Macau, Hsu among them, see evidence of a dispositional shift in the local market toward the subjectivity of the 'repeat player' who seeks time-on-device and a retreat from the social world in slot machines. 'Slots in Macau are attracting a new demographic of gambler seeking to while away a few hours without staking [expensive] table minimums,' reports a journalist. 'The



Figure 6.1 'Rise of the Machines', cover story in *World Gaming Magazine*, issue 21, January/February 2013. Available for download at <http://www.worldgamingmag.com/en/wgm/front-covers#issue21>.

coming years', he predicts, 'will see more middle-class mainland Chinese coming to Macau, raising demand for slots . . . Macau is moving towards the Vegas model at an accelerated pace' (Ho 2006).

Conclusions

In the field of science and technology studies over the past decade – a period that happens to coincide with the gambling industry's crusade to 'turn the tables' in Macau and create a culture of machine play – a number of scholars have focused on attunement in the design of consumer products. The sociologist Michel Callon and his colleagues Méadel and Rabeharisoa, for instance, have described consumer product design as an iterative process of successive adjustment in which 'what is sought after is a very close relationship between what the consumer wants and expects, on the one hand, and what is offered, on the other' (2002: 202). They construe this relationship as a symmetrical 'collaboration between supply and demand' (212) wherein corporations and consumers meet on even ground, holding roughly equal hands, in order to mutually satisfy their respective desires. Schot and de la Bruheze describe a similar 'mediation process between production (supply) and consumption (demand)' in which there is a 'mutual articulation and alignment of product characteristics and user requirements' (2003: 230). In Nigel Thrift's account of this process, products are understood to emerge through a dynamic 'co-creation' in which corporate concerns 'lie ever closer to the concerns of the consumer' (2007: 35).

The story of so-called market attunement in Macau offers a rather less democratic reading of the dynamic relationship between supply and demand. Attunement, in this case, does not appear to be a process of symmetrical co-creation, but a strategic venture, articulated and executed by the gambling industry, to shift customers' motivations, preferences and habits. 'Basically', said an executive for a slot supplier to Mexico, summing up the industry's global ambitions for machine gambling, 'what you're doing is establishing player habits. We get our machines down there, and the players start becoming familiar with them and they like them, and you keep those players' (Burke 2005). Essentially, what he describes is a project of market creation in which new player dispositions are inculcated via technological mediation.

This is not to say that there is no dynamism to the project. As we have seen, the thematic alignments, mathematical adjustments and other innovative technological modifications in the industry's attunement repertoire are sensitive to the proclivities of players and indeed shape themselves as responses to those proclivities (for more on the iterative process of game design, see Schüll 2012 and Cassidy, Chapter 5 in this volume). Yet it is important to recognise that agency is distributed asymmetrically in the dynamic that unfolds between the industry and the players; instead of attunement as co-creation, the process is better conceived as 'attunement by design'.

Notes

- This paper draws on sections of the introduction, Chapter 4, and conclusion of my book *Addiction by Design: Machine Gambling in Las Vegas* (Princeton, NJ: Princeton University Press, 2012).
- 1 For a discussion of the globalisation of gambling more generally since the 1970s, see McMillen 2006.
 - 2 At present, gambling taxes account for 70 per cent of government income in Macau. All revenue statistics cited in this chapter are taken from the Macau Gaming Inspection and Coordination Bureau.
 - 3 Junkets are a way to get around the ban on advertising gambling in mainland China, the law that Chinese nationals can carry no more than a few thousand dollars on a trip to Macau, and the fact that it is illegal to collect on gambling debts. As Osnos explains: 'Working through junket operators is a legal bypass around those problems, because the operators will recruit rich customers from across China, issue them credit, and then handle the complicated business of collection.' The junket system, which lends itself to money laundering, has long been 'susceptible to the involvement of organised crime' (2012; see also Leong 2002).
 - 4 The government has restricted table growth to 3 per cent a year between 2013 and 2020, severely limiting the potential expansion of table gaming market (Quinta 2011).
 - 5 As vehicles for transitioning the market from tables to slots, electronic tables create significantly more profit than their nonelectronic counterparts, not only because they eliminate human mistakes (e.g. misread hands, accidentally flipped cards, inaccurate deals, or mistaken payouts), but also because they facilitate a much faster pace of play and allow players who are temporarily out of action to make 'side bets.' Another advantage that e-tables confer upon the house is their ability to track the details of players' real-time behaviour, a feat not possible on conventional table games. The hope is that as local players 'get used to machines', they will also get used to player tracking cards (Jasper Hsu, president of Jumbo Technology, Global Gaming Expo Asia 2010).

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