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Market-Based Measurement for School Achievement

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Over the last thirty years, state governments have paid ever-increasing attention to the results of standardized testing to identify successful schools, rewarding those with better performance by allocating to them a greater share of resources. Although traditional, high-stakes, standardized testing has been shown to be effective at measuring discrete skills or a predetermined list of facts, the overwhelming majority of research into its effectiveness shows not only that these tests fail to measure educational quality but also that their use tends to negatively affect the intellectual development of students in the classroom. This article argues for an alternative mechanism to evaluating school achievement. We claim that a free-market approach to education, one that includes central features of market systems—profits, market entry, price changes, product differentiation, and competition—not only provides a better mechanism than the use of high-stakes testing by which to allocate limited financial resources and motivate academic achievement but also serves as a more accurate tool to measure the quality of school programs.

In 1983, the United States National Commission on Excellence in Education released *A Nation at Risk*, arguing that American schools and students were performing comparatively worse than other industrialized nations, jeopardizing the future success and prosperity of the United States. The Commission's recommendation, among other things, was to raise education standards across the board, holding students and schools accountable through standardized testing and other seemingly objective measures of academic success. As a result, over the last thirty years, state governments have paid ever-increasing attention to the results of standardized testing to identify successful schools. This trend is

not peculiar to the United States; it affects how governments and state agencies in many countries identify and measure the effectiveness of students, teachers, and schools.

The standardized testing movement itself is reflective of the challenges associated with the evaluation of educational outcomes. It is accordingly a subject of intense scrutiny, with particular attention given to the unintended consequences of a testing-based incentive structure in educational design.[1] With public finances at stake and a strong interest in quality by constituent families, the demand to measure educational performance is continuous. Unfortunately, educational systems also present a classic knowledge problem wherein information is simultaneously complex, costly to obtain, and often obscured by its as-of-yet unrealized outcomes as well as a multitude of tradeoffs. As a primarily tax-funded entity, education lacks the signaling function of a price mechanism and its accompanying information feedback to both its student consumers and its providers. To the degree that it is responsive to quality concerns at all, the education system is accordingly forced to seek out alternative and largely constructed metrics, of which standardized testing remains a prime example.

Curiously, the standardized test has attained something of a reputation as a "market" mechanism itself on account of the very fact that it purports to measure outcomes. But testing, at best, only generates a constructed point of data for the comparative evaluation of institutions. It provides no feedback mechanism beyond an artificial scale on which institutions might be compared, and it inculcates no competitive mechanism between institutions save to increase one's own standing on the same fixed scale. For example, there appears to be no correlation, generally speaking, between increased testing and increased public high school graduation rates. Public high school graduation rates in the US have been measurably declining since 1970,[2] despite substantial increases in standardized testing and public resources devoted to education more generally. The association of test-based metrics with "market" mechanisms is a comparatively recent phenomenon and appears to have no bearing on this trend. The tool of consumer choice, backed by the availability of exit, is nowhere implied as a necessary feature of testing.

Although traditional, high-stakes, standardized testing has been shown to be effective at measuring discrete skills or a predetermined list of facts[3] as well as a predictor of future academic success,[4] the overwhelming majority of research into its effectiveness shows not only that these tests fail to measure educational quality but also that their use tends to negatively affect the intellectual development of students in the classroom.[5] Increased test scores more closely correlate with increased familiarity with the test itself, rather than an increase in broad

knowledge or skill,[6] and while familiarity with a test increases student performance, the result is not generalizable to other standardized tests in the same domain, even when administered to the same students in the same timeframe.[7] Further, with substantial incentives linked to student test performance, schools and teachers feel under increased pressure to teach to the test,[8] and make educational tradeoffs to better ensure that test scores rise. These tradeoffs affect the design of the school system, including what is covered in the curriculum and when;[9] focus a disproportionately large amount of resources on students who will show the greatest gain in test scores, those at or just below the minimum standard;[10] and motivate decisions to hold underperforming students back the year before crucial tests,[11] encourage them to drop out of school,[12] or expel them prior to test administration.[13]

Although most proponents of high-stakes testing seem to acknowledge these shortcomings, their challenge to anyone who objects to this use is to find a better alternative for identifying high-performing schools and allocating financial resources appropriately and efficiently. This article presents a case for such an alternative, arguing that a competitive approach to education—defined as one that includes central features of market systems (profit/loss signals, consumer free entry and exit, price changes, product differentiation, and competition)—not only provides a mechanism by which to allocate financial resources that is superior to the use of high-stakes testing but also serves as a more accurate tool to measure the quality of school programs.

In framing this argument, we make no claim that market mechanisms are a panacea to the educational system or the measurement problems that typically accompany large public-sector administrative entities. Rather, it is sufficient to establish the functional effectiveness of educational markets in most cases, at least as they operate relative to the alternative of a system deprived of entry and exit signaling. If this position seems overly utilitarian, we would also note that market mechanisms in education exhibit certain ethical benefits to the dominant practice of allocating educational resources through an administrative vehicle. Specifically, markets permit students and their parents to exercise a stakeholder's choice in the product they receive, including the choice of exit in the event that an educational institution suffers from corruption, a decline in quality, misallocation of resources, or other similar tangible maladies. The denial of choice in education, we argue, is an ethical consideration as it effectively subjects students to these maladies with no recourse short of abstention from schooling itself. The case for the market-based alternative accordingly derives not only from its improvement upon the status quo (or, at minimum, its offering of a functionally

least-bad outcome among alternative systems) but also from the ethical dimension of its extension of choice to the affected party, including a means of exiting an institution that is insufficiently attentive to the well-being of its students.

Background Concerns

The most frequent concern connected with market-based solutions in education center on the perceived negative effects of what is thought to be a commodification of knowledge and learning. Martha Nussbaum, for example, argues that when education is influenced by the values of economic growth and efficiency, students learn to value economic productivity as the highest good, and fail to concern themselves with critical thinking or the development of other characteristics necessary to being productive citizens.[14] Michael Sandel goes further, arguing that market-based approaches to education are problematic because "[p]utting a price on the good things in life can corrupt them. That's because markets don't only allocate goods; they express and promote certain attitudes toward the goods being exchanged."[15] As an example, he claims that "paying kids to read books might get them to read more, but might also teach them to regard reading as a chore rather than a source of intrinsic satisfaction."[16]

It is unclear as to why these objections are unique to market mechanisms or their alleged tendency to "commodify" education. More often than not, schooling generally has a way of instrumentalizing learning—most students' primary aim is good grades, not acquiring knowledge. This concern is not unique to market-based approaches to education. Beyond this point, literally any subjectively asserted value judgment carries with it a risk of conveying to the student that its pursuit constitutes the highest good. An education model premised upon following formulaic instructions, for example, might inculcate a belief that obedience to authority constitutes the highest value, thereby discouraging independent thought. A model that emphasizes a fluid concept such as "diversity" might bias the student toward valuing that concept for its own sake, risking a morally relativistic educational norm in the process. The point to be recognized is that concepts such as "knowledge" and outcomes such as "good citizenship" are exceedingly difficult to define, let alone measure.[17] The primary advantage of market mechanisms is not a derivative of the values they supposedly inculcate, but rather the functional solution they offer to the challenge of evaluating educational outcomes.

We might also note that this objection to markets is itself subject to tradeoff considerations. Even if we are inclined to agree with Sandel that a child is better off if he sees reading as a source of intrinsic satisfaction rather than being a chore,

we may also recognize that the child is better off being able to read than not, even if what motivated him to learn was being rewarded with money, sweets, or some similar enticement. Yet we need not even concede Sandel's point. His objection to the use of market incentives in education appears to derive from nothing more than his own subjective distaste for monetary exchanges. This distaste, though worth exploring by way of its implications, is a largely sentimental grievance to the effect that Sandel finds something about markets to be impure, unaesthetic, or otherwise excessively worldly. In doing so he is actually conflating his own subjective values for an "intrinsic" assertion of good.

These two judgments are of different types. That a child is better off being able to read than not is evaluative, and is based on the empirical knowledge that being able to read is a useful skill and it is difficult for someone to be successful in our society if he is unable to read. In comparison, we make a moral judgment when declaring that a child is better off believing that reading has both intrinsic and instrumental value, rather than having instrumental value alone.

Sandel rightly observes that these types of moral judgments play an important role in educational decisions. For example, deciding how we should allocate limited school resources toward science, history, physical education, or the arts is, at least in part, a moral question, and Sandel claims that market reasoning makes no room for such moral judgments. "Part of the appeal of markets is that they don't pass judgment on the preferences they satisfy. They don't ask whether some ways of valuing goods are higher, or worthier, than others.… This nonjudgmental stance toward values lies at the heart of market reasoning, and explains much of its appeal."[18] So, for Sandel, a market-based approach to education would allocate based on what is most expedient in the eyes of administrators or which disciplines are perceived to lead to the greatest amount of financial success, rather than as the result of considering both the instrumental and intrinsic value of certain pursuits or disciplines. The consequence, Sandel concludes, is that "our reluctance to engage in moral and spiritual argument, together with our embrace of markets, has exacted a heavy price: it has drained public discourse of moral and civic energy, and contributed to the technocratic, managerial politics afflicting many societies today."[19]

The current regime of high-stakes standardized testing is just one consequence of such technocratic, managerial policies that produce objectively measurable outcomes that appear disconnected from whatever good they initially aimed to measure. But, as we noted, standardized testing is symptomatic of an administrative model of constructed metrics. Standardized testing is symptomatic of the production of outcomes that are disconnected from the values that they aim to track for the simple reason that its metrics do not actually reflect stakeholder

recognition of the quality of their educational product. They assign a number to compare educational institutions but allow little in the way of functional choice between those institutions.

The presence of a functional choice, not its generation of a numerical scale for comparision, seems to be the primary benefit of a market mechanism in education. For example, evidence from developing regions of the world suggests that students at unregulated private schools perform better than their counterparts at state-run schools, for a fraction of the cost-per-pupil.[20] Further, students with access to a "marketplace in education" performed better than students who had no choice in which public school they attended. Surveying fifty-five studies covering twenty nations, both developed and developing, Andrew Coulson found that "[t]here are 35 statistically significant findings of market-like education systems outperforming government monopoly schooling, and only two findings of the reverse, for a ratio of more than 17 to 1 in favor of free education markets."[21]

That a marketplace in education would outperform a monopoly, especially when that monopoly is controlled by the state, should not be surprising. Although we may be uncomfortable thinking about educated students or knowledge as a product, schools are institutions, which can be run well or poorly. In a system where there is only one provider of a necessary or highly desired good, that provider has little motivation to improve that good over time or provide it at a lower cost as technology improves efficiency.

One objection worth considering is raised by Albert O. Hirschman.[22] Hirschman juxtaposes the effects of economic choice through exit with the exercise of voice upon an underperforming provider. In the case of public schooling, the exercise of choice and the mobility to do so become key determinants. He argues that a lazy monopolist provider of a good might actually become *less* responsive to performance concerns if choice-induced exit permitted its most vocal constituents to switch to an alternative provider.[23] Parents who regularly voice concerns about the quality of their children's schools are also the most likely to exercise choice and move to another school first, thereby depriving the underperforming school of what little internal pressure it previously had to improve its product.[24]

In answering this objection, we might concede this point but ask: Is it ethical to hold families of quality-conscious students captive to an underperforming monopoly provider of education simply because their presence slightly ameliorates further degradation in the school's curricular product? Economically, we also note the unseen consequences of this scenario. The monopoly school's underperformance is not the only outcome at play, as a poor-quality education might lead to numerous unrealized life opportunities among its recipients. The competition-induced expansion of opportunities might create as of yet unreal-

ized value that easily exceeds the further decline of an underperforming school, absent its quality-conscious families.

Incentives and Education

Extensive empirical evidence suggests that competition and choice in education not only promote efficiency and reduce costs, but also provide incentives to the schools to improve performance[25] and foster the external conditions that are more conducive to student success due to increased parental involvement.[26] Research over the last twenty years has outlined the wide-ranging benefits associated with increased parental involvement in education, benefits that apply to students, parents, and the schools themselves.[27] To some degree, these findings suggest that the presence of choice itself ameliorates the parental apathy critique advanced by Hirschman and others. Compelling parents to become involved on the front end, by forcing them to consider different schooling options and select what would be best for their child given that child's unique circumstances, promotes parental involvement in education from the very beginning, something that is often missing in situations where there is no school choice. Absent choice, some parents see the education of their children as being someone else's job and adopt the ambivalence Hirschman ascribes to them precisely because a monopoly provider allows them to do so.

Even parents who have never experienced formal schooling themselves can play an important role in selecting the right school for their child and ensuring the selected school's academic programs are functioning properly once the child is attending. In India, 80 percent of school-age students in urban areas and 30 percent of school-age students in rural areas attend for-profit, private schools.[28] Although the state requires all private schools to be licensed, thousands of unlicensed schools operate throughout the country.[29]

While we normally associate private schools with the wealthiest members of society, in India the primary consumers of private education are the poor. In Hyderabad, James Tooley[30] found that 61 percent of the families sending their children to private schools earn below the minimum wage. These families pay between 5 and 15 percent of their yearly income to send their children to these private schools, instead of paying nothing to send their children to the public schools operated by the state. Although poor and uneducated, the parents invest both time and money into this decision, with 69 percent investigating at least two private schools before choosing where to send their child. Parents reported considering several factors in making their decision: cost, reputation of the school, provision of instruction in English, the quality of the teachers, and affordability.

Parents' investigation into the quality of the school did not stop once their child was enrolled. To evaluate performance, parents kept an eye on class sizes when they picked up their children, looked at their children's exercise books to see how often teachers marked in them, and gauged their children's competency in English by listening to them talk to other children in the street. In this way, even uneducated parents with no knowledge of English could make comparative, qualitative judgments about the school's performance and the progress of their children. Tooley also found that increased fees without better instruction led parents to choose less expensive schools, putting a check on profiteering. Parents remained involved and willing to move their children and their tuition fees, and so both schools and teachers were accountable directly to the people who paid their wages.

For-profit, private education for the poor works in developing countries such as India in part because these schools are relatively inexpensive to open and operate, and can pass the cost savings on to the students. Here, the cost savings does not come from cutting corners or providing a subpar educational program, as verified by the millions of poor families that pay a significant percentage of their income to send their children to these schools instead of to the free, state-run schools. Instead, the cost savings comes from not having to spend money on obtaining and staying up to date on the licenses and other supporting documents needed to open the school and keep it running legally.[31]

Competition also plays an important role in keeping costs down, requiring schools to, for example, eliminate all nonessential administrators and nonteaching staff. By comparison, most public school systems have gone in the opposite direction, seeing exponential growth in the number of administrators and non-teaching staff. Benjamin Scafidi found that in the United States between 1950 and 2009, "the number of K–12 public school students in the United States increased by 96 percent … while administrators and other non-teaching staff experienced growth at 702 percent, more than seven times the increase in students."[32] Perhaps more dramatic, had administrators and other non-teaching staff increased only at the same rate as student enrollments from 1992 through 2009, the United States would have saved 24.3 billion dollars over those seventeen years.

Competition can also identify the best schools and teachers. In South Korea, hagwons, or private, after-school tutoring academies, play an important role in supplementing state primary and secondary education. Similar to other private tutor systems, hagwon students sign up to be taught by specific teachers, and so the tutors that produce the best results have the most students. "It is about as close to meritocracy as it can be…. In hagwons, teachers are free agents. They don't need to be certified. They don't have benefits or even a guaranteed base

salary; their pay is based on performance."[33] Tutors and hagwons attract and retain students by treating the children and their parents as a business would treat its customers. When 6,600 Korean students were surveyed by the Korean Educational Development Institute in 2010, they "gave their hagwon teachers higher scores across the board than their regular school teachers: Hagwon teachers were better prepared, more devoted to teaching … more respectful of students' opinions … [and] rated best of all when it came to treating all students fairly."[34]

What creates this market for hagwons is the combination of high-stakes standardized testing for primary and secondary students, culminating with the state-administered College Scholastic Aptitude Test that determines who will be admitted to one of the country's top universities, and the perception that the public school system provides inadequate preparation for these tests. But what allows particular hagwons and tutors to be successful and profitable is their track record of success, combined with providing their services at a market-driven price. Consumers (i.e., students and their parents) are able to see numerical data of past performance by students from different hagwons on various standardized tests, gather anecdotal data from former students that have used their services, and consider these two factors while taking price into account. Then, once students begin attending, parents can monitor their progress and gauge the attention their child is receiving from the tutor, switching to a different hagwon if they are unsatisfied with the service they receive or their child's academic progress.

While South Korea's hagwon market is dominated by the desire of each student and his parents to have him perform well on the country's standardized tests, the same principles used in evaluating hagwons can be used to measure school achievement in other nations where high-stakes standardized testing does not affect the future of the child as significantly. Consider the United States, where state administered high-stakes testing of primary and secondary students is aimed primarily at evaluating schools for the purpose of allocating resources, rather than at evaluating students to determine who gets to go on to study at top universities (privately administered standardized tests serving the latter purpose). But while multiple-choice style standardized testing fails to assess adequately the overall academic achievement of the students or schools when aggregated, the "standardized test" of the market does not fail in this regard. The market is able to pick out which schools perform best in the same way that Indian parents are able to evaluate private schools; South Korean parents are able evaluate hagwons or tutors; and we are able to evaluate restaurants. We can accomplish these aims by eliminating the distinction between public and private schools, and having public education funding follow the students to whatever school they choose to attend, instead of being allocated directly to the schools by the state.

Milton Friedman argued for a similar position in 1955, claiming that we should decrease the state's role in the administration of education, including setting of the curriculum and methods of instruction, while retaining its role in its financing. Recognizing that a "stable and democratic society is impossible without widespread acceptance of some common set of values and without a minimum degree of literacy and knowledge on the part of most citizens," Friedman claimed that there was a compelling state interest "to require that each child receive a minimum amount of education" to "train him for either citizenship or leadership."[35] He argued that the state could finance this education "by giving parents vouchers redeemable for a specified maximum sum … if spent on 'approved' educational services. Parents would then be free to spend this sum and any additional sum in purchasing educational services from an 'approved' institution of their own choice."[36] These schools could be run for-profit, or as nonprofits, and would be permitted to compete for students much in the same way that other businesses compete for customers now. But "[t]he role of the government would be limited to assuring that the schools met certain minimum standards such as the inclusion of a minimum common content in their programs, much as it now inspects restaurants to assure that they maintain minimum sanitary standards."[37]

While this analogy between schools and restaurants may seem off-putting initially, there are a number of important and relevant similarities. For example, there is no one formula for determining what counts as a "good" restaurant or school. Their evaluation is an exercise in subjective valuation, Sandel's aphorisms about the "innate" value of knowledge pursued for its own sake notwithstanding. Good restaurants range greatly in the types of food they serve, the manner in which it is served, the dining atmosphere, and the price point. Both a three-star Michelin restaurant in Paris and a food truck parked on a busy street in Houston can be a "good" restaurant. What counts is that people receive food that is not toxic or rancid, and that they are satisfied by their experience given the relevant opportunity costs. The determinative valuation of something as "good" derives from an ability to compare its products with other experiences, and select one that meets a range of personal tastes and preferences.

Just as there is no best restaurant or best method for preparing food, there is no best way to educate individuals and no best type of school, either in terms of style of instruction or curriculum. While no student is better off receiving the educational equivalent of rancid food, some students are better off attending schools that allocate additional resources to the arts instead of to athletics (or the reverse), or learning to do by doing instead of by lectures (or, again, the reverse). In fact, we might note that the much-derided system of standardized educational testing is a product not of vaguely alluded market mechanisms, but rather the

deprivation of such choice and an accompanying push towards one-size-fits-all uniformity in educational products.

Markets and Morality

Beyond the market playing an important role in the evaluation of schools and teachers, it also allows individuals an opportunity to answer the types of moral questions in education that Sandel identified. How should the students be taught? What subjects should the students focus on? Should a school sacrifice physical education in order to concentrate more on math and science? Answers to questions such as these that relate to the structure of a curriculum or method of instruction are moral judgments, and how best to answer these questions depends on the nature of each individual student and his academic preferences. Because there is no definitive answer to these questions that would best serve the needs and interests of all individual students, allowing students and their parents to make these decisions for themselves, instead of having the state or a handful of administrators make them on their behalf, increases individual autonomy. An educational marketplace premised on choice may be a value "neutral" allocation mechanism much to Sandel's chagrin, but its students and their parents are anything but free from value preferences in their own expectations in the same system. The ethical question, then, is whether such choices are permitted.

It would be a mistake to try to identify the best curriculum or best method of instruction by looking to see which schools are the most popular or have the greatest profit—the types of moral judgments that Sandel rightly notes markets cannot make. But that a school is well-attended or profitable tells us, minimally, that many parents in the area believe it is the best option for their children given all of the relevant considerations. Similarly, that a school is poorly attended or unprofitable does not necessarily imply that students attending that school receive a poor education. But it does show that many parents believe that whatever the school is doing (curriculum, method of instruction, price point, or some combination of these and other factors) is unlikely to lead to student success.

Further, just as we would separate restaurants serving rancid food from those serving food that may not appeal to some section of the population, it is important to separate bad schools from schools that may cater to some niche market. Schools that adhere dogmatically to unsuccessful teaching methodologies or teach material that is factually inaccurate are the educational equivalent of restaurants that serve rancid food, while a school that caters to children who are blind, deaf, or have other special needs is serving a much smaller market and may have more difficulty being profitable. Like bad restaurants, the market will

punish bad schools and make it increasingly less likely that they will be able to operate. Here, the state can play an important role in this process of rooting out bad schools by making sure that all advertisements and claims of past success are truthful.

Even without the problem of deceptive advertising, there is still likely to be some concern about possible market failures. Perhaps parents would not have enough information or would not be intelligent enough to make an informed decision; would be unable to make an intelligent decision because they have too many options;[38] would live in a community too small or homogenous to support more than one school; or would have other characteristics (e.g., poverty, children with special needs) that would render them worse off under a free-market system than they are now. Friedman attempted to resolve some of these concerns by connecting a voucher system with state licensing, insuring "that the schools met certain minimum standards such as the inclusion of a minimum common content in their programs."[39] But we believe these concerns are misplaced, at least for the most part. When it comes to making informed decisions about which school is best for their child, poor parents in developing nations, many of whom lack formal education, were able to evaluate unregulated schooling options in a reasonably intelligent manner. Parents were observed making these decisions about private education not just in India, but also in Ghana, Nigeria, and Kenya.[40] Similarly intelligent decisions could be made by parents in other developing or developed nations without the state having to step in and regulate schools or educational programs.

A more serious concern appears to be the possibility of parents having too few options from which to choose, perhaps having only one or even zero in extreme circumstances. But we believe this concern is overstated and likely to diminish with time due to the rapidly decreasing barriers to information brought about by technological development. Not only does the possibility of online education provide access to competitive schooling for anyone with an Internet connection, but our market-based approach does not exclude the possibility of providing public funding for education, where funds for education follow the individual children, further helping to create a competitive market. Additional concerns about children with special needs can also be alleviated in this way. While there are enough children with a specific learning disability or pervasive developmental disorder (e.g., autism) in most locations to avoid the likelihood of a market failure (at least when looking at statistics from the United States[41]), public education funds could be structured so that these children receive a greater amount funding to assist their families in covering the increased cost of their education.

Although it falls outside the scope of our analysis, one final concern warrants mention in light of its moral implications for school competition. The problem of racial and other forms of discriminatory stratification may emerge in the presence of an exit option from public schooling, particularly if persons using the voucher program cluster in specific racial or socioeconomic groups. Voucher theorists have taken notice of this problem since Friedman's original article on the subject, although Friedman himself argued that competitive pressures—when paired with moral suasion—would lead to greater integration over time. Empirical evidence on this subject is sporadic and at times indirect, but also suggestive that competitive pressures improve racial and economic class integration *vis-à-vis* a status quo where historical and geographic factors have segregated a noncompetitive public school system.[42]

While a market-based approach to education may not be perfect, it provides a better alternative to the current high-stakes testing when trying to measure the achievement of students and schools. Such an approach gives parents more power in identifying and separating out better performing schools. At the first sign that the school is failing to live up to expectations, or if the school's method of instruction or curriculum turns out to be inappropriate or not well-suited for the particular student, a parent can choose to send his child elsewhere. This approach also better addresses moral questions central to schooling decisions. Parents from diverse backgrounds may have very different ideas about what constitutes a good education for their children. Without passing judgment on these views, the market is able to offer a variety of educational options, some of which will succeed, while others will fail. In the end, schools that meet the needs of their students will succeed financially, and that seems to provide a far better standardized test of school success than those currently administered.

Notes

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