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A State-Supported, Merit-Based Scholarship Program that Works

By Robert Ackerman, Martha Young, and Rodney Young

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The Millennium Scholarship Program, which provides merit-based scholarships for Nevada's students, is designed to increase college participation, college persistence, and the number of in-state students enrolling in state institutions of higher education (IHEs). Data gathered over the past five years reflect that Nevada's Millennium Scholarship Program has successfully met its goals. Further, it has improved student quality in IHEs, as is evident by a lower percentage of students taking college remedial courses. A major focus of this study is to demonstrate how Nevada's merit-based scholarship program may serve as a model for other states attempting to improve college participation.

In the past two decades, state-supported higher education institutions have faced numerous challenges in attracting and retaining academically talented students. Competition from private institutions has remained strong, and while many state-supported colleges and universities have seen growth in enrollments, these increases are due to factors related to population growth and changing demographics more than a gain in the proportion of college-bound students (Dey & Hurtado, 2005). In response, states have implemented merit scholarship programs to encourage in-state students to attend institutions of higher education (IHE) in their home state; increase the persistence rates of high-achieving, in-state students; and increase the number of academically talented students in state-supported IHEs.

While there is a high degree of variation among merit-based scholarship programs across the country in terms of selection and retention criteria, they reflect a common goal: to encourage in-state student enrollment and matriculation in state-supported IHEs. In an effort to understand how merit-based aid programs are constructed and evaluated, this paper provides background on a variety of merit-based aid programs; examines Nevada's Millennium Scholarship Program; and recommends guidelines for successful state-supported merit-based scholarship programs.

Background on Merit Scholarships

The link between access to education and access to the American dream is well documented (Johnstone, 2001). In desiring a better life for their children, parents recognize that a college education, while a challenge to attain, is a necessary step. However, due to limited financial resources, some families will need financial assistance to achieve this goal.

In an effort to provide this support, measures of family financial capability were developed by the federal government, among other entities, and aid programs were instituted to meet part of a student's financial need. A fundamental concept of need-based student aid programs is that families with fewer financial resources should have greater financial support so that the lack of wealth does not prevent a student's participation in higher education (Orfield, 2004).

Unlike need-based student aid programs—which are intended to address social concerns such as access to higher education and equality of opportunity—merit-based aid programs are designed to attract those students who, without regard to financial need, have qualities or attributes valued by the IHE. Merit aid is used to recruit student athletes, academically talented students, students with strong debating skills, and students with exceptional musical skills, among others. State policymakers, influenced by voters, recognize the potential popularity of state-wide merit programs. For middle-class families whose children display a specified level of academic talent, merit-based aid programs provide relief from the increasing costs of going to college (Selingo, 2001). Merit-based aid programs tend to resonate with middle-class voters, so legislators generally support them (Fischer, 2005).

Examples of Merit Scholarship Programs

In 1993, the State of Georgia initiated what has become the largest state-operated merit-based student aid program. Georgia's program has served as a model for policymakers in other states. The revenue source that continues to support Georgia's Helping Outstanding Pupils Educationally (HOPE) is a lottery, enacted for that specific purpose.

The model for HOPE was the G. I. Bill. In proposing the program, Zell Miller, then-governor of Georgia, noted that like the G. I. Bill, "You gave something, you got something; that is the promise of HOPE" (Seligman, Milford, O'Looney, & Ledbetter, 2004, p. 1). What Georgia high school graduates were expected to give was academic achievement. In return, what they received was, without regard to family financial means, essentially a full-tuition scholarship for attendance at in-state, public, or private IHEs. HOPE modified its requirements in 1995 by removing a financial capability test that was based on a family income cap.

In the 12 years since Georgia's HOPE began, 13 additional states have enacted merit-based student aid programs; Massachusetts is set to become the 14th state in the fall, 2005 (Fischer, 2005; Heller, 2004). While the programs differ, they share several common features:

- Michigan is an example of a state that uses merit programs to enhance access;
- Alaska, Nevada, New Mexico, and West Virginia are examples of states that use merit programs to retain academically talented students in the state; and

- Florida and Georgia are examples of states that use merit programs to reward academic achievement (Heller & Rogers, 2003).

Revenue sources for funding the states' programs also share several similarities. The most common source—used by Louisiana, Mississippi, and Missouri, among others—is general tax-based revenues. Florida, Georgia, Kentucky, and New Mexico rely on revenue generated by state-run lotteries. Nevada and Michigan use the proceeds from the tobacco settlement, also known as the Master Settlement Agreement, which was the result of a public health class action lawsuit filed by the attorneys general of 46 states, the District of Columbia, and five U. S. territories against major U. S. tobacco companies and settled in 1998 (Rogers, Barker, & Siebold, 2005). Alaska relies on income from land leases and sales. Some states, such as South Carolina, use a combination of revenue sources (Heller, 2004; Krueger, 2001).

Variation exists among programs regarding the method used to determine merit eligibility; amount of the award; grade point average (GPA) needed to maintain eligibility; and length of time a student may continue to receive scholarship funding. Further, New Mexico's Lottery Success Program is unique in that initial eligibility is determined by grades received in college, not high school grades or college entrance test scores.

Although not much is known about the effectiveness of these merit-based aid programs (Farrell, 2004a; Krueger, 2001), they continue to have broad appeal. Georgia's HOPE is probably the most studied model (Cornwell, Mustard, & Sridhar, 2003; Farrell, 2004b; Henry & Bugler, 1997; Seligman, Milford, O'Looney, & Ledbetter, 2004). The Michigan Merit Award Scholarship is perhaps the most contested because of issues of racial inequity in award distribution (St. John & Chung, 2004).

While popular with students and voters, merit-based, state-funded student aid programs are not without detractors. The Advisory Committee on Student Financial Assistance (ACSFA, 2002) is critical of the change in policy that uses public funds to reward achievement rather than to meet financial need. Others question whether merit-based aid programs are efficient and equitable (Heller, 2004; Selingo, 2002) because they tend to reward students who would go to college without the scholarship (Cornwell, Mustard, & Sridhar, 2003; Farrell, 2004; Heller & Rasmussen, 2002). Furthermore, Binder and Ganderton (2004), Dynarski (2002), and St. John and Chung (2004), are critical because they view such opportunities as discriminating against low-income and minority students. Another concern is that when state funds are dedicated to merit aid, less money is available for the states to fund need-based aid (Heller & Rogers, 2003; Orfield, 2004).

Although not much is known about the effectiveness of these merit-based aid programs, they continue to have broad appeal.

Introduction to Nevada's Millennium Scholarship Program

This article examines Nevada's Millennium Scholarship Program, and is supported by data documenting its growth and success.

In 1999, monies from the tobacco industry settlement served as the impetus for the Nevada legislature's new initiative, the Millennium Scholarship Program. The objectives of this program were to raise the higher education participation rate among Nevada's high school graduates and to retain academically talented high school graduates in Nevada.

This was the first broad-based, state-supported merit-scholarship program in Nevada. Eligibility criteria were graduation from an accredited Nevada high school and an earned overall high school GPA of 3.0 or higher. Since this is a state-supported program, monitoring and recordkeeping have been maintained by a state agency, the Office of Academic Affairs of the University and Community College System of Nevada (UCCSN). Over the past five years, official reports dealing with the success of the program have been generated and serve as the basis for this investigation. Access to the data is centralized, allowing for cross-state IHE comparisons.

The History of Millennium Scholarship Program

By almost every measure, education—particularly higher education—is undervalued in Nevada. The statewide dropout rate is 5.8% (Nevada Department of Education, 2004). In 1998, two years before the Millennium Scholarship Program was initiated, Nevada's rate for college participation was 37.1%, which was the lowest in the nation and 20 percentage points below the national average (National Information, 2004). Of the 1998 Nevada high school graduates who went on to college, only 61.5% remained in the state (UCCSN, 2004b).

In April, 1999, after introducing the merit-based Millennium Scholarship Program in his state of the State address, Nevada Governor Kenny Guinn outlined his plan to the legislature (Whaley, 1999). With funding from Nevada's share of the tobacco settlement, the program began in fall 2000.

The legislature set no limits on the number of recipients. The scholarship would provide annually between \$1,250 for community college students and \$2,500 for four-year college students attending state-supported Nevada institutions (Krolicki, 2003a). The difference in the dollar amounts reflected differences in tuition rates.

Continuing eligibility would require completion of a minimum of six credit hours per semester and satisfactory academic progress (defined as a 2.0 GPA on a 4.0 scale). Students could receive funding for up to eight years following high school graduation. In 2002, the GPA required to maintain the scholarship was raised from 2.0 to 2.6.

It was estimated that over a 25-year period, Nevada would receive \$1.2 billion from tobacco settlement funds while the Millennium Scholarship Program would cost between \$20 million and \$25 million annually, with projected costs in 2011 set at \$35 million (Vogel, 1999; Vogel, 2005b).

The Impact of the Millennium Scholarship Program

Detractors of merit-based scholarships believe that these programs may drain state funds from need-based aid programs. Supporters point out that any increase by the state in funding student aid is likely also to help needy students (Longanecker, 2002). For the academic year 2000-2001—the first full year of the Millennium Scholarship Program—Nevada allocated \$6.5 million in need-based aid to undergraduates and \$6.9 million in merit aid. By 2001-2002, Nevada was providing \$20.8 million: \$7.47 million allocated for need-based aid and \$13.35 million allocated for merit-based aid (NASSGAP, 2004).

The goals set for the Millennium Scholarship Program were “to increase the number of Nevada students who performed well in high school and then enroll in, and graduate from, an eligible institution of higher education in Nevada” (Krolicki, 2003a, p. 62). The 2002 data suggest that progress is being made toward these goals: the participation in higher education rate for Nevada high school graduates was 44.7%, while 74% of those going to college enrolled at Nevada colleges and universities.

Krolicki (2003) compiled data on the ethnicity distributions of Nevada high school graduates who were eligible for a Millennium scholarship, those who used a scholarship, and those who were eligible for the scholarship but did not use it.

This comparison shows that fewer minority students were eligible and accepted the scholarship; an even smaller number were eligible and did not accept the scholarship. Clearly, the program did not enroll ethnic groups equal to the graduation proportion nor did it identify eligible students who attended college but declined the scholarship equal to the graduation proportion in an in-state IHE.

Demographic Data

Table 1
General Ethnic Distributions of High School Graduates Accepting and Declining Millennium Scholarship*

	White	Hispanic	Black	Asian
High school graduates	70%	14%	9%	7%
Eligible for scholarship and accepting	83%	10%	5%	2%
Eligible for scholarship but declining	85%	5%	5%	5%

**Percentages are row percentages, totaling across groups.*

In terms of household income, nearly 37% of the parents of Millennium Scholarship students reported incomes of \$75,000 or more, while only 30% of the households of Nevada high school students in general reported incomes at that level. This point appears to support the criticism (Heller and Rasmussen, 2002) that merit awards go to students who would likely have the parental support to access postsecondary education regardless of aid. Further supporting this point, just over 16% of the families of high school students reported incomes in the range of \$20,000 to \$25,000, while only about 9% of the Millennium households came from that category.

Results

One of the goals for the Nevada Millennium Scholarship Program was to increase the number of Nevada high school students going to college. Reports from the Office of Academic and Student Affairs in the UCCSN provide evidence regarding Nevada high school graduates continuing on to postsecondary education in UCCSN as well as those continuing out of state. Table 2 provides the percentages of high school graduates continuing in Nevada and outside of the state, calculated bi-annually (UCCSN, 2004a).

Year	State System	Increase	Out-of-State	Increase
1992	19.4	--	13.4	--
1994	23.9	4.5	13.6	0.2
1996	24.2	0.3	14.3	0.7
1998	24.8	0.6	14.0	-0.3
2000	33.2	8.4	13.3	-0.7
2002	33.3	0.1	10.7	-2.6

These figures document normal growth, but a noticeable jump occurred in 2000, the year the state Millennium Scholarship Program began. The significant information is the increase from year to year. Growth is less than 1% (except for the first year, which is probably because of data collection procedures) until 2000. In 2000, the overall rate jumped to 8.4%, which is a sizeable increase and exactly the result expected from the introduction of a state scholarship program. The following year reflects a return to the rate of less than 1%, but that is on top of the spurt that occurred the first year of the program. It seems clear that the scholarship program increased the number of high school graduates going to college in Nevada.

Change in the Ratio of In-State to Out-of-State Students

Additionally, and fundamental to assessing the success of the program, is determining whether the state scholarship program also changed the ratio of in-state to out-of-state college students. During the first year of the program, not only was there an increase in the number of high school students enrolling in college, there was also a clear change to the in-state/out-of-state ratio that favored in-state enrollments. Certainly a change in this ratio would be expected in the first year of a new in-state scholarship program. The significant question becomes whether the change would continue. This would indicate whether the pattern is changing in a progressive or additive manner.

Table 3
Ratio of In-State Students to Out-of-State Students,
1992 to 2002

Year	In-State to Out-of-State Ratio	Simplified Ratio	Percentage
1992	19.4 to 13.4	1.45 to 1	145%
1994	23.9 to 13.6	1.76 to 1	176%
1996	24.2 to 14.3	1.69 to 1	169%
1998	24.8 to 14.0	1.77 to 1	177%
2000	33.2 to 13.3	2.50 to 1	250%
2002	33.3 to 10.7	3.11 to 1	311%

Table 3 reports the yearly ratios of high school graduates attending college in-state and those attending out-of-state (UCCSN, 2004a). These ratios are then converted into a percentage, which can be interpreted as the number of in-state students as a percentage of out-of-state students. To illustrate, note that in 1992 the percentage of high school students attending in-state was 19.4%; the percentage attending out-of-state was 13.4%; and the ratio of in-state to out-of-state was 1.5 to 1. This means that in 1992 there were one-and-a-half students attending college in-state for every student going out-of-state. In 2000, the ratio was 2.5 to 1; two-and-a-half students attending college in-state for every student going out-of-state. The state scholarship program definitely increased the ratio in the year 2000, which it would be expected to do. What is even more significant is that in the following interval (2002), the ratio increased even more, to 3.1 to 1. This suggested that, in increasing numbers, students who typically would have attended college out-of-state were attending college in-state. Thus, Table 3 shows that the state scholarship program increased the number of students going to college, a point confirmed by Farrell (2004a). Furthermore, it shows that the proportion of students selecting in-state attendance is increasing.

Academic Level of Millennium Scholarship Program Students

We also wished to examine whether the Millennium-caused influx of students enrolling in in-state higher education institutions increased the number of academically talented college students enrolling as freshmen. A common index of students' academic quality is the percentage of students required to take remedial classes. The Nevada State Legislature mandated cut-off scores to enter any Nevada IHE without enrolling in remedial courses, in part to ensure a "level playing field" between Nevada IHEs. The following ACT and SAT scores are minimum requirements to enter any Nevada college without enrolling in remedial coursework prior to entering credit-bearing courses in English and mathematics.

Table 4
State-Mandated Minimum ACT and SAT Test Scores to Take Credit-Bearing Courses in English and Mathematics

	ACT	SAT
English/Verbal	21	510
Mathematics	22	520

Table 5 clearly indicates that the Millennium Scholarship students take remedial courses at a noticeably lower rate than non-Millennium students (UCCSN (2004c). One conclusion is that the scholarship is attracting more academically talented students to IHEs.

Table 5
Percentage of Students Enrolling in at Least One Remedial Course Immediately Following Graduation

	Millennium Scholarship Recipients	Non-Millennium Scholarship Recipients
Fall 2000	27.2	38.6
Fall 2001	31.4	49.3
Fall 2002	32.1	52.8
Fall 2003	32.9	51.9

It is troublesome, however, that in both groups the percentage taking remedial courses increased from fall 2000 to fall 2003, although test score averages for entering freshman increased for this period. The exception to this increase is a one-year drop in math scores for 2001. To clarify, Table 6 provides

the ACT and SAT score for all freshmen and Millennium students from 2000 to 2003 at the University of Nevada – Las Vegas, a large IHE.

Table 6
Average ACT and SAT Scores for
Entering Freshmen at UNVL
 Millennium Scholarship Recipients and
 Total Entering Class

Year	ACT-Composite		SAT-Verbal		SAT-Math	
	Millennium	Total	Millennium	Total	Millennium	Total
2000	22	21	506	495	522	513
2001	22	21	512	498	524	509
2002	22	21	513	501	525	514
2003	22	21	517	505	526	515

For both the Millennium students and the total class, ACT scores remained unchanged while SAT scores generally improved (with the exception of a drop in the total class SAT - Math score in 2001). Nonetheless, the percentage of students taking remedial classes increased. To explain this contradiction, it needs to be noted that remediation only applies to freshmen-level, for-credit English and math courses (as opposed to other core courses). New students opted for these courses rather than non-traditional courses and this resulted in an increase in the numbers enrolling in remedial courses. Based on a survey of Millennium scholarship recipients, Krolicki (2003b), concluded that the scholarship “increased the amount of effort put into schoolwork” (p. 13).

The Millennium Scholarship Program has increased the number of students attending higher education, improved the ratio of students attending in-state versus out-of-state, and increased the number of academically qualified students enrolling in higher education. These are all positive indices of a successful program. Further, on a survey of Millennium students, 58% indicated that the scholarship affected their decision to go to college, and 73% indicated that the availability of the scholarship affected their choice of college (Krolicki, 2003b).

High School Impact

When the Millennium Scholarship Program began, high school administrators questioned whether students would opt out of Advanced Placement (AP) and honors courses to ensure the 3.0 GPA required for Millennium eligibility. However, Ackerman and Young (2003) investigated enrollment figures in AP and honors courses in the Clark County School District since the inception

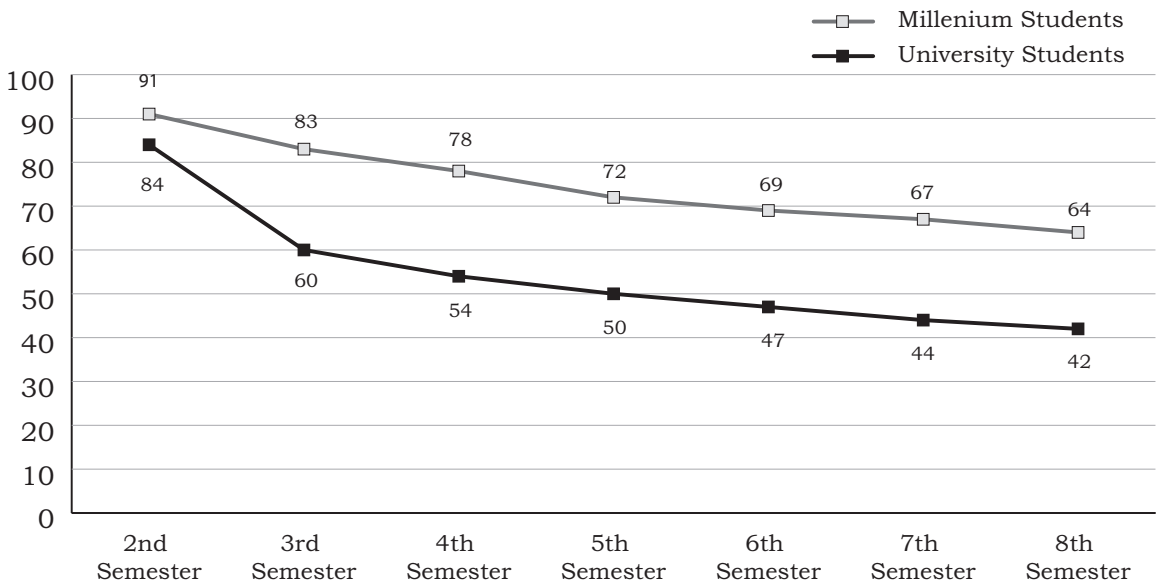
of the Millennium Scholarship Program and determined that enrollment in these courses had not been affected. In fact, enrollment in these courses continued to grow slightly above population growth.

College Persistence

We also examined the persistence of Millennium students in comparison with other students. Figure 1 demonstrates that the Millennium students not only take fewer remedial courses, but also persist at a higher rate than full-time students in general (UCCSN, 2004d). The same pattern of a higher retention rate was also documented for community colleges (UCCSN, 2004d). For their second semester, spring 2001, 55% of non-Millennium students in community colleges returned, while 80% of Millennium students returned. A similar pattern for subsequent semesters and years was also documented.

Figure 1 shows that Millennium students, beginning with spring 2001, have persisted at a greater rate than non-Millennium students. Nevada’s Millennium Scholarship program fulfilled its goals and positively affected higher education in Nevada.

Figure 1
Student Persistence
 Full-Time Students and Millennium Students
 Percent Returning Each Semester



The Future of the Millennium Scholarship Program

Nevada's state-supported merit scholarships could easily have been jeopardized because "college education expenses have been rising far beyond the nation's inflation levels [with] the average in-state tuition at public four year universities rising 10.5%" (Loven, 2005). Nevada's Millennium Scholarship Program has been so successful that—as is the case with other state-funded merit programs (Cornwell & Mustard, 2004; Selingo, 2001)—it faces financial difficulties. The cost of scholarships awarded to students have outdistanced tobacco settlement revenues because settlement revenues have proven to be less than anticipated while the demand for the scholarship has been greater than predicted. Recent reports (Vogel, 2005a; Vogel, 2005b) indicate that costs for the first four years of the program exceeded initial estimates by \$23 million because utilization rates ran higher than projected (Krolicki, 2004). This has led the state to fill this financial gap with state-supported funds. Although the projected 2006 shortfall approaches \$16 million, the governor has rejected proposals to implement a financial needs test (Guinn, 2005). This point suggests that that the Nevada Millennium may already be perceived as an entitlement. An alternative reform would be to increase the eligibility requirements as the way to reduce participation. In Nevada, that process has begun. Initially, the college GPA requirement for maintaining the award was set at 2.0; in 2002, it was raised to 2.6. Initially the eligibility requirement was a high school GPA of 3.0; this increases to 3.1 for the class of 2006 and 3.25 for the class of 2008 (Krolicki, 2004b).

Conclusions

The Nevada Millennium Scholarship Program reflects a sound approach for improving the educational level of Nevada's students and for retaining these students in Nevada's IHEs. The program has fulfilled the goals of encouraging in-state student enrollment and matriculation in the state's IHEs. If academically capable students have access to merit-based financial incentives, many will seek higher education. And if these incentives are restricted to in-state IHEs, more students will choose in-state institutions.

The data further indicates that Millennium Scholarship Program students persist at a higher rate than their non-Millennium Scholarship Program counterparts. This strongly suggests that once these students attend state-supported IHEs, they find that these institutions do indeed meet their academic needs.

Until recently, the Millennium Scholarship Program was in a state of flux, primarily because of financial concerns. As indicated earlier, the popularity of the program was unanticipated, necessitating changes to the basic selection criteria, including raising the high school GPA required to qualify, and requiring a higher college GPA to maintain the scholarship. Along with these changes, the Nevada State Legislature pledged to continue its support of the Millennium Scholarship Program by providing state revenues from the general fund (Vogel, 2005c).

This sends a strong message that the program is successful and necessary to the educational health of Nevada. In promoting the value of higher education, the Millennium Scholarship Program specifically encourages enrollment and retention in IHEs. In states like Nevada, where there is largely a non-college educated, service-based workforce, this point is especially important. As the number of college-educated individuals increases, so does the capacity for higher wages, a higher standard of living, and an educated populace.

During this program's five-year history, it is clear that the criteria for selection and retention were, at the beginning, realistic and positive, and continued to evolve to meet changing funding demands. A review of the Millennium Scholarship Program also suggests protocols that other states may wish to adopt to ensure and measure sound program development.

Recommendations for Developing State-Supported Merit Based Scholarship Programs

This article examined the concept of state-supported, merit-based scholarship programs to understand their effectiveness in increasing in-state student IHE attendance. The following are observations and recommendations to consider in establishing a successful merit-based scholarship programs.

- Over time, merit-based scholarship programs should be tied to stable, state revenue sources rather than variable or non-renewable funding sources.
- Such programs are effective in keeping academically talented students in-state and in inhibiting the "brain drain" phenomenon.
- IHEs will experience steady growth, and it is important to expect and plan for increased enrollment, since both attendance and retention rates will increase;
- Because qualifying for the initial scholarship depends on the student's high school GPA, increased collaboration with P-12 public and private schools is a fundamental aspect of planning and implementing such programs; and

Careful documentation is critical to assessing program success. Data management should be centralized in the state higher education system accountability measures should be identified at the outset of the program, and cohort and cross-sectional analyses should be instituted.

As the demand for a college-educated workforce and citizenry increases, programs like the Millennium Scholarship Program will become increasingly important. With the threat of impending cuts to federal student aid programs (Loven, 2005), merit-based programs similar to those addressed in this article will become attractive, and perhaps necessary, alternatives.

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