

MONTANA

FIELD
NOTES

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THE SALVATION OF THE MIDDLE CLASS: And – Oh, By The Way – The Key to America’s Future

George M. Dennison

Some may find my title either decidedly uninteresting or well over the top. But, indulge me, if you will. I have something important in mind that relates directly to our current social and economic situation and the way forward. I want to suggest that paying attention to how we got where we are will have much to do with how we manage the emerging challenges of today.

Now, let me assure you at the outset that I will not harass you with yet another harangue about the way to manage our ominous national debt or get our budget under control. I leave to others the analysis of the relationships between national expenditures and revenues, standing as willing as any of you to participate directly when presented with a plan that takes reasonable account of resources and needs within American society.

As my purpose here, I ask that you consider carefully the lessons of the past as suggestive of a solution for our current situation. In that regard, I think that Dan Peck’s recent articles in *The Atlantic* — particularly one entitled “Can the Middle Class Be Saved?”² — serve to alert us about alarming and long-term trends within American society greatly accelerated by the profound effects of the Great Recession of 2008.

Citing numerous studies, Peck reviews the cumulative impact within our society of

- The decline of manufacturing because of the rapid increase of off-shoring associated with economic globalization
- The shortening of the economic life-cycle of new technology and products with commercial potential, thus reducing the earlier advantages we had as a society for job creation because of our innovativeness
- The widening of the gap between the well-off and all the rest largely because of those two trends, with the effect that the richest 1% of households earn as much each year as the bottom 60% and possess more wealth than the bottom 90%
- The “polarization” of employment, with the top 1% of earners reaping great rewards, the lowest paying service jobs increasing in numbers and stagnating at low rewards, and the mid-level, mid-skilled jobs in manufacturing, back-



President and Professor Emeritus, Senior Fellow at the O’Connor Center for the Rocky Mountain West & Consultant to CSU-Global Campus, George Dennison/Todd Goodrich

office operations, and the like rapidly disappearing; and

- All of which point to the erosion or shriveling of the American middle class.

If only partially correct, the Peck diagnosis of the country’s ills must concern us all. Robert Reich, former Secretary of Labor and currently Chancellor’s Professor of Public Policy at the University of California, Berkeley, agrees with Peck’s analysis, extending it to argue that failure to restore the social and economic support for the middle class will assure the continuation of current trends.³ One need not give full credence to all of Reich’s arguments to recognize the dangers presented by under-consumption by the mass of Americans. We can passively accept a new era of social and economic divisiveness and increasing strife between the rich and the rest, or we can take action to forestall that outcome by restoring the resilience and vitality of American society by resurrecting the middle class. If you agree with me and refuse to accept this inauspicious new era threatening us, then perhaps I can enlist you in an effort to revitalize what I believe made the difference for American society until late in the 20th century. Let me explain.

I

My earlier comment about how we got where we are has to do **not with** the specific details of the Great Recession and its aftermath of political grid-lock, downgrading

of bond ratings, and the like, but **with** the extraordinary growth and development of the American society, economy, and culture over the course of more than two centuries of national existence. It no doubt helped immensely that the country began with seemingly ample room or living space for the developmental process, and that the policies adopted and implemented by the state and national governments emphasized getting the available resources into the hands of people willing to develop them. Unquestionably, abuses occurred in the process, but no one disputes the dramatic results. Along the way, it inevitably became necessary to empower governments and their agencies to regulate in the interests of stability and continued economic and social progress, and to provide supportive investments. Over the two centuries, because of these developments, Americans came to view themselves and to be viewed by others around the world as a “people of plenty,” with the rewards broadly shared.⁴

Arguably, the American system of education, from the public schools through higher education, provided not only sufficient but necessary support for these developments. After all, the United States led the world in the educational attainment of its citizenry until the last decade of the 20th century, and as a direct result emerged as the economic, scientific, technological, strategic, and cultural

leader of the world. No one today questions the role of a robust and responsive educational system in national development. One has only to consider the economic phenomena of the last half-century to appreciate the point, with the rise of Japan, China, India, and the Asian “Tigers.” Similarly, as the American society and economy matured through the 19th and into the 20th century, from the loose confederation of rural, sparsely populated, village- or town-centered, mercantile, and agricultural communities to a national, urbanized, industrial, intellectual, and technological powerhouse, the envy of the world, the states and then national governments provided the sufficient, necessary, and essential support and momentum through an expanding and maturing educational system to nurture and develop the human capital such a society and economy requires to flourish. As the inventors of this approach, we understand very well its potential and benefits. What happened? Have we as a society lost the energy, will, and drive that led to such accomplishments, or our faith in the American innovativeness that made it all possible? Let me briefly review some history and offer an answer to that question.

II

As the old confederated and agrarian republic gave way to the urbanized, industrial nation, Americans put in place an educational system capable of supporting the new society and economy. That did not happen by accident or without effort. Central to the success was the American “social compact” under which each generation assumed the responsibility to educate the next, in a process that not only prepared succeeding generations to take advantage of new opportunities but also to open new avenues for social mobility and access to the “good life.”⁵ Just at the time that the agricultural economy gave way to industrialization, Americans acted to implement the social compact to support the emerging order. The 1862 Morrill Act radically transformed what had been a higher education system exclusively dedicated to the socialization and acculturation of members of the elite. With the support provided by grants of 30,000 acres of federal land for each sitting representative and senator from every state – subsequently extended to the states created after the adoption of the original act, and allowing the more settled states to select land in the unsettled states and territories -- the new land-grant colleges and state universities that emerged took seriously the charge, reflective of the social compact:

... without excluding other scientific

and classical studies and including military tactic, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.⁶

The generational imperative comes through very clearly, with its emphasis on broadening access to “liberal and practical” higher education. The American system of higher education developed from this foundation, extended with the establishment of junior, community, and technical colleges in the 20th century. The intent and purpose left no room for doubt: The education of the masses to provide for the professional, practical, and cultural needs of an industrial society, ever expanding access to assure the development of human capital to fulfill the obligation of the social compact through the education of succeeding generations.

Adherence to the social compact also explains why states accepted the responsibility to support these new institutions and to broaden access to them. In fact, most of the new colleges and universities had charter provisions pledging that the education they provided would forever remain “tuition free,” as in Montana and California. The states struggled to fulfill the pledge, but burgeoning enrollments and scarce resources made it necessary to institute tuition and fees over the years to generate the necessary revenue. The federal government stepped in on occasion, first with the GI Bill after WW II to reward returning veterans and assist them to re-enter society prepared for productive lives, then with the national defense loans during the Cold War to assure American preparedness and competitiveness, and culminating in the 1960s and 1970s with what became the Pell Grants, work-study, and student loans of today.⁷ The community colleges and vocational-technical schools chartered during the decade of the 1960s, with state and federal support, enabled the United States to claim world pre-eminence in educational terms.

As the first scholar to undertake serious study of higher education policy and finance, Howard Bowen articulated the rationale for the social compact in a 1972 publication entitled Who Benefits from Higher Education – And Who Should Pay?⁸ Bowen insisted that the public, as the major beneficiary of the development of an educated citizenry capable of sustaining democratic government and able to care for themselves while generating innovation and growth through their contributions to the society and economy,

should pay the majority of the costs – 80-85 percent. For their part, the students and their families had necessarily to assume not only the remainder of the direct costs in tuition and required fees, but also contributed significantly by paying for the students’ up-keep – i.e., room, board, and other expenses -- and incidental expenses for books, supplies, and the like during the period they studied, and by foregoing the income that students could otherwise have earned had they entered the workforce immediately. The theory that Bowen articulated had prevailed during the earlier years of national development as a justification for public investment in the next generation, and it persisted until late in the decade of the 1970s. Then, quite quickly and unexpectedly, it gave way before a radically different perspective.

What explains the loss of the persuasive power of the Bowen rationale and the erosion of the historic social compact along with it? The timing of the change in attitude and public policy demands our attention for a number of reasons. No doubt, the public disillusionment with the student rebellions of the 60s and early 70s led to new thought.⁹ Who benefitted from higher education and who paid? No one had thought that the social compact required the society to pay for the undermining of accepted standards of decency and order. In this new context, the emphasis shifted to an emerging recognition of the wage premium that accrued to the graduating student, i.e., the demonstration of a clear link between level of education and life-time income, an argument incidentally given wide credence by educators seeking to persuade prospective students to enroll.¹⁰ The new rationale held that since the major benefits of the education went to the student in the life-time wage premium, it followed logically that the student should pay most of the cost. In the 80s, economists and policy makers seized upon, promulgated, and virtually enshrined this theory in public policy.

Two other factors contributing to the rapid and easy acceptance of the new rationale came from 1) growing worries about the ever-increasing costs associated with rising enrollments, and 2) new pressure on public funds to support other services needed within modern society. In a sense, the alternative rationale offered a justification for reducing the public investment in higher education and shifting more of the cost to the students in tuition and fees. Even though surveys of public opinion right down to yesterday continue to indicate that parents fervently want access to higher education for their children, the policy makers and voters relied on the

new rationale and the scarcity of public funds to justify shifting ever larger portions of the higher education costs to the students and their families, thus allowing more attention to public funding priorities for K-12 education, health care, social welfare, law enforcement and prisons, national defense and security, and infrastructural development. Within two decades, the financing of public higher education changed radically. Whereas, the state and national governments had provided roughly 60-70 percent of the support for the higher education of students in the late 1970s, with student tuition and fees covering the rest, that ratio had very nearly reversed by the late 1990s, with student tuition and fees covering most of the cost. The cost shifting continues unabated today.

Quite clearly, this public reversal of attitude in the late 1970s, reflecting the erosion of the social compact, came precisely when the American society and economy needed, even demanded, the kind of support that had made the transformation from an agricultural to an industrial society possible. The dawn of the “information age” and globalization required an even greater emphasis on human capital development to compete and to sustain a decent society. By contrast, other societies around the world recognized this need and made necessary investments. As a direct consequence, over the last two decades of the 20th century, the United States lost its world

leadership in the educational attainment of its citizenry, and also began to lose ground in the economic competition in an increasingly “flat world,” using Tom Freidman’s term.¹¹ Some commentators have noted the irony of this change of priority in the United States just at the dawning of the so-called “human capital economy,” that is, when economic competitiveness depended on the quality of the workforce at all levels.¹²

III

With that background, I want to return to my major premise. The solution to our current dilemma requires attention to what got us here. We altered our priorities just when a changing world economy required that we not only sustain the traditional emphasis on the social compact but strengthen and enhance it in response to emerging conditions in the world. The challenge to us now calls for a restructuring not an abandonment of the social compact to assure that we maintain a higher educational system to help us navigate the transition from the industrial to the information economy, as during the transition from the agricultural to the industrial economy, and in the process to halt and reverse the trends that Dan Peck identified and analyzed.¹³ The American people and society clearly managed the earlier transition superbly, as evidenced by the relatively rapid rise of the American middle class, surviving the daunting obstacles of the Great Depres-

sion, two “hot wars,” and a Cold War. We need a strategy today that will enable us to erect a secure foundation under the shriveling middle class by ushering in a new economy based on knowledge workers to replace the low- and mid-skilled workers of the industrial economy and provide new pathways for mobility into the middle class for those who begin their working careers as low-wage service workers.¹⁴

In my opinion, that begins by making certain that we provide access to higher education for more of our young people from all segments within the society, and for people displaced by economic change. As a nation, we cannot afford to overlook talent from every source; and the maintenance of a democratic society demands that we extend its social and economic advantages as broadly as possible. That amounts to an imperative to assure an education of the very highest quality and responsiveness to help our young and not so young people to achieve their potential. Doing so will enable us to meet our societal need for human capital. That means we have to stop talking about access to higher education in terms of getting through the door and across the threshold of a college or university, and talk instead about active engagement and participation once across the threshold, as Cliff Adelman has reminded

See Salvation page 26



Main Hall at The University of Montana/Rick & Susie Graetz

MON



TANNA

East of the Mountains



On the Padlock Ranch —East side Wolf Mountains
— east of Crow Agency/Rick & Susie Graetz

CELEBRATING MONTANA EAST OF THE MOUNTAINS

Rick & Susie Graetz

One June evening a few years back found us at the site of Chief Joseph's surrender, just beyond the northern slopes of the Bear Paw Mountains. A thunderstorm was tailing off in a cloud-laden sky. On the western horizon, a widening gap revealed a setting sun.

The elements and the heavens joined in a prelude to an unfolding performance. As myriad pastel hues of crimson tinted the breaking clouds, the sun slowly disappeared from sight. Just when we thought the drama was complete, the pinks intensified and began to blend with shades of purple, blue, orange and red. Soon a burning sky in all directions bathed the earth in enchanting light. The tops of the Bear Paw picked up an orange flame, to the east the Little Rockies glowed in gold, and far to the south and north, lightning bolts danced like fireworks. Montana East of the Mountains was suspended in an exceptionally brilliant and dreamlike display as the day closed.

Magnificent sunsets and sunrises are common in this uncommon landscape, a region encompassing two-thirds of Montana. The imposing Rocky Mountain Front defines its western frontier, the sweep of open terrain

flows east from here. On the north, it stretches 460 miles from Browning and the east slopes of Glacier National Park to the North Dakota line just beyond Sidney. Somewhat less defined, the central boundary begins in the valley of the upper Musselshell River, near Harlowton, and reaches for 300 miles to our state's eastern edge. On the south, it's 250 miles as the golden eagle glides, from Red Lodge and the east face of the Beartooth Mountains following the Wyoming border to the South Dakota line.

A distinct region unto itself, and one of America's great pieces of geography, this corner of the Great Plains harbors unique landforms. Grand scenes—badlands, sculptured sandstone, river breaks, canyons, wilderness grasslands, wildlife refuges, lakes and island mountain ranges — intermingle with smaller bits of geologic wonderment. Space, much of it undisturbed, is its greatest commodity. This vast territory of unending sky delivers a feeling of no borders or confinement where a human can stretch and breathe.

At first, the openness, the immensity and the distances may seem overpowering. Gradually, though, you get comfortable with it all; then you notice the beauty and splendor.

Not just the imposing geologic structures, but also the abundance of simple grandeur — cottonwoods along a small creek; a lone tree silhouetted on a hillside; waves of wheat dancing in the summer wind; the first rays of sun illuminating sandstone cliffs; delicate snow patterns drifted against a weathered barn; the northern lights shimmering across the night sky; antelope moving quietly through sagebrush-covered prairie and the soft fusion of earth and sky on horizons that seem endless.

Striking features command your attention — the 1,000-foot deep canyons of the Missouri River; the enormity of Fort Peck Lake; stately prairie buttes; isolated mountain ranges including the Little Rockies and Big Snowies; the Makoshika and Terry badlands, and the canyons of the Bighorn River.

Montana's mightiest waterways have carved their routes through this territory. Born of mountain snows and springs, the prairie gives them room to grow. They are fabled waters — the Missouri, the Yellowstone, the Marias, the Judith, the Bighorn, the Powder, the Tongue, the Milk and the Musselshell. The wide Missouri and the free-flowing Yellowstone were routes of exploration for Meriwether Lewis,



Summer's end and the harvest begins — south of Chester, Montana/Rick & Susie Graetz



Grain elevator — near Plentywood, Montana/Rick & Susie Graetz



Cow Island in the Upper Missouri River Breaks National Monument/Rick & Susie Graetz

William Clark and numerous other adventurers.

In legend, scenic beauty and recreation, the Missouri stands out. It was the goal of the first fur hunters and of Thomas Jefferson in 1803 as he planned the exploration of the Louisiana Territory.

Serving as a lifeline to Montana, the “Big Muddy,” as it is sometimes called, played a major role in creating our state. Among other epics in our history, it witnessed the era of the fur traders, the discovery of gold, Native American trials and tribulations, and steamboat travel to Fort Benton — Montana’s birthplace.

The Missouri’s flow is launched at the meeting of the waters near Three Forks in western Montana. Here the Madison, Jefferson and Gallatin rivers join to power the big river. En route north and east, it picks up more volume from the Dearborn, Teton, Marias, Judith, Musselshell, Milk and other rivers.

This great waterway passes silently through some of the most remote and least inhabited country in the West. Nearly 150 miles of the river, beginning at Fort Benton, have been designated as the Upper Missouri River Breaks National Monument — protected for-

ever. Its eastern reaches meander through the rugged Missouri Breaks and the huge Charles M. Russell National Wildlife Refuge. At Fort Peck, a dam has turned the river into the fourth-largest reservoir in the world—125-mile long Fort Peck Lake, a Montana treasure with a shoreline of 1,600 miles.

As for the Yellowstone River, French trappers, well before Lewis and Clark, entered the lower part naming it “La Roche Jaune” for the tint of the river rocks at low water.

Montana’s Yellowstone River drains a 70,000-square mile piece of the west in grand fashion. It gathers some of the finest mountain and prairie topography on the planet — peaks reaching past 12,000 feet in elevation, the largest high mountain lake on the continent, dense evergreen forests, buttes, colorful badlands, deep canyons, sweet smelling sage and juniper covered hills. Once serving as “a moving highway” into the wilderness, this unique river mirrored the passage of millions of bison, the travels of the Corps of Discovery, creation of the nation’s first national park, the foundations of a state, and the unfortunate ousting from their lands of the region’s first occupants — the great Native American population.

Today it provides recreation, irrigation and beauty to Montana East of the Mountains. This, the longest undammed river in North America, begins its flow from the north face of Younts Peak in the Teton Wilderness, south of Yellowstone National Park in the Wyoming high country. From there it rushes 670 miles in a northeasterly direction to meet the Missouri in North Dakota, just beyond the Montana line.

It gains strength from waters pouring out of the Absaroka-Beartooth — the Boulder, Stillwater and Clarks Fork and farther downriver from the Bighorn, Tongue and Powder flows.

With the exception of some stretches of the Yellowstone, most of the rivers of the high plains are mellow — no whitewater excitement, just serenity, solitude, beauty and a sense of the past. The water moves at an easy pace past islands, sandbars and groves of cottonwoods interspersed with a carpet of grasses and other riparian vegetation providing a home to river wildlife. The landscape along the rivers has changed little with time. A modern day floater can imagine sharing the same place with nineteenth-century trappers and explorers.

Not enough can be said about fishing in

these parts beyond the mountains, and catching warm water game fish in all the area's lakes and rivers inspires stories. Fort Peck Lake and segments of the Missouri River are the most legendary of all. Walleye, northern pike, lake trout and chinook salmon are just a few of the breeds found in these waters.

Walleye rate their own tournaments, attracting some of the nation's best fishing enthusiasts as entrants. Parts of Fort Peck Lake and the Milk, Missouri and Yellowstone rivers furnish the necessary habitat for the almost prehistoric paddlefish, which average 80 pounds. The largest ever taken was a 142-pound giant caught in the Missouri, upstream from Fort Peck Lake.

Rainbow and brown trout live in the upper reaches of the Marias, Judith, Milk, Teton and Musselshell Rivers. The Bighorn River, fed by the cold waters of Bighorn Lake, is considered one of the best rainbow and brown trout fisheries on earth.

These Montana lands are Big Sky Country. Out here, a formidable canopy of sky provides a constantly changing panorama — a playing field for clouds and weather. From the moment the sun bursts onto the clear eastern horizon of Montana, beginning its journey toward the closing of day, many surprises may appear depending upon the mood of the heavens.

It is the canvas for artful displays of the morning and evening sun and billowing clouds. With nightfall, an astronomer's dream of brilliant nocturnal displays takes center stage. Diamond dust-like stars cover the Judith Basin on a cold winter night, a full moon illuminates the hills between Scobey and Plentywood and meteors streak off in all directions. It is as big a dome of sky as any on the planet and often brings an early morning and evening light so beautiful that no painter or photographer could ever duplicate it.

Subdued topography allows the sky top billing. Summer thunderstorms build to a towering collection of billowy white and gray clouds that are then swept by the wind up into Canada or out onto the Dakotas or Wyoming plains, leaving brilliant sunshine over the prairie, often only to be replaced by another storm with intense lightning displays. In winter, northern born blizzards roll like turbulent waves across the uncluttered skyline, depositing a quiet comforter of snow in their wake.

With the sky comes the wind. Out here the breeze has range and character. As it rakes the land, giving clarity and cleanliness to everything, there's no haze diluting the panorama. The wind brings ferocious blizzards, snow-eating chinooks as well as the pleasant smell of sweet clover. It can sustain a tempered clip



North of Jordan in the Hell Creek area/Rick & Susie Graetz

one day and hurricane forces the next.

While the wind adds personality to Montana's prairie, the seasons give it color. Each period of the year is distinct, but spring shows off the land at its best. A morning in early May dawns raw and gray and intermittent snowflakes make an effort to prolong a fading plains winter. But this day the promise of the equinox is about to be fulfilled. The warmth of a rising sun endures. The prairie has turned to face spring.

First, the sagebrush and grasses convert to a vibrant green, then wheat fields come to life

and the juniper and scattered pines show signs of new growth. Later in the month, a rainbow of wildflowers joins the celebration. In June, this new beginning moves out of the bottomlands and up the mountainsides and buttes. Spring moisture and the thunderstorms of early summer keep the landscape fresh.

As July heads toward August and rainfall lessens, the vegetation cures and rust, gold and brown prevail. The grasses take on a warm dust color. This is the hot, dry period.

See Mountains page 26



The Missouri River Breaks on the CMR National Wildlife Refuge at Snow Creek/Rick & Susie Graetz





Twin Buttes and the Powder River south of Broadus/Rick & Susie Graetz





Medicine Rocks State Park — north of Ekalaka/Rick & Susie Graetz



Keeping up with the College of Forestry



Lubrecht Forest Manager, Frank Maus (left), listens as student tree planter, Luke Fehlig (center with hoedad in hand), indicates areas yet to be planted in a regeneration harvest opening that had been previously burned in preparation for planting western larch and ponderosa pine/John Goodburn

Kris Heikamp

“Can you keep up?” said Jim Burchfield, the dean of The University of Montana’s College of Forestry and Conservation.

He wasn’t referring to hiking endurance, or speedy note-taking. He was offering a challenge to potential students who are interested in the academic program. The Dean dares College of Forestry and Conservation students to accomplish and contribute both academically and in other aspects of their education.

“We challenge students. We send them out into the field and expect them to work hard, to be the best.” Burchfield said.

Founded in 1913, the College of Forestry and Conservation offers undergraduate degrees in forestry; resource conservation; parks, tourism, and recreation management; wildland restoration; and wildlife biology. Undergraduates can also add minors in wilderness studies; wildland fire sciences and management; and climate change studies and a certificate in GIS. Graduate degree options include forestry, recreation manage-

ment, resource conservation, and wildlife biology and a graduate-level program in international conservation and development. The college also awards PhDs in forestry and wildlife biology.

Through the extensive range of experience, the College of Forestry and Conservation is vastly multidisciplinary and executes the program in an interdisciplinary way. With economists, ecologists and engineers working with sociologists, statisticians and soil chemists, the college presents and integrates curricula from multiple disciplines.

and Conservation



“We have a lot more breadth than just managing vegetation. We deal with social sciences, land use, fire, international development, wildlife, policy, and water,” Burchfield said.

Tackling the complex relationship between the environment and society is the objective of the department of Society and Conservation. Students dig into the world of cohabitation and persevere towards building a better alliance between the environment and society. Through a comprehensive understanding of the politics, values and

institutions surrounding the natural world, students engage in every angle. The department offers educational and research opportunities in natural resource conflict resolution, nature based tourism and a variety of other specialized interests.

The Ecosystem and Conservation Sciences is a multidisciplinary department that explores a variety of biophysical and ecological sciences. From watershed hydrology and soil science to insects and disease, the department offers expertise in several areas. An exciting addition is the degree

program in Wildland Restoration. This program analyzes issues of restoration ecology in wildland settings, focusing on mountain, forest and rivers.

Presenting an education in ecosystem management, the Forest Management department instills students with skills to engage with all aspects of sustainable forest management. From using computer systems and models to experimenting in the 28,000 acre Lubrecht Forest, students are challenged with a myriad of opportunities.

“We have the most developed fire pro-



The May 2010 class of Natural Resources Measurements Camp photographed in front of a huge, fire-scarred old larch tree on the stream terrace above the Blackfoot River in the northwest corner of Lubrecht Experimental Forest, prior to conducting forest resource inventories on the steep slopes rising up from the river terrace to the Bald Hills above (south). With 48 students, this was the largest group to experience the two-week “measurements camp”, which was conducted by the UM College of Forestry & Conservation, and held at Lubrecht./John Goodburn

gram in the U.S., I think, with respect to people in the forestry department who have materially participated in fire,” said Carl Seielstad, associate research professor in the forest management department.

Seielstad was a smokejumper for several years and still works on fire assignments. He is also helping to organize the new Fire Science and Management minor that will be offered next fall. “Fire management is a big part of natural resource management. If you go to any natural resource schools in the west and ask people what’s hot right now, fire inevitably comes up,” says Seielstad.

As well as being a research institution that pushes the boundaries of human knowledge, the College of Forestry and Conservation also offers several opportunities in interna-

tional travel and education through study abroad programs and fieldwork. Create nature-based tourism projects in Chile, study sheep conservation in Mongolia or investigate climate change in Vietnam, the exciting educational adventures are plenty.

“We really recognize here how interconnected we are with the globe and environmental issues. We want our students to have a chance to get outside the United States and really stretch themselves,” Dean Burchfield said.

The University of Montana’s College of Forestry and Conservation is keeping up by challenging students with their multifarious degree programs, by answering difficult questions about the vast interactions in the natural world through research and educa-

tion, and assembling a team of experienced, knowledgeable faculty.

“We have a real role to play in recruiting, retaining and graduating the best students to be the next generation of natural resource professionals and conservation leaders,” Dean Burchfield said. Can you keep up?

Kris Heitkamp is a novelist, barista and freelance writer. Born in Washington D.C., she holds a Bachelor of Arts in English from the University of Utah and is currently pursuing a MA in environmental journalism at The University of Montana. Her professional project will focus on environmental toxins and women’s health, specifically breast cancer.

College of Forestry



The 28,000 acre Lubrecht Experimental Forest offers more than just an outdoor classroom for University of Montana's forestry students. Just thirty miles Northeast of Missoula, **this woodland offers an oasis for residents, students and travelers.**

The following are some adventurous alternatives of the Lubrecht Forest:

The research forest is available for a whole series of educational projects. Art students, ROTC training and other groups utilize the vast range of opportunities available under the canopy of Lubrecht.

The forest is also open to the public. Conference and meeting facilities are available to rent, including a small conference room complete with a fireplace.

Various overnight accommodations are also available. Log cabins, fully furnished one-bedroom apartments and 16 sleeping rooms offer comfortable convenience in the woods. Great for retreats, reunions or just big-family fun.

A recreation hall, picnic pavilion and fire pit are also rentable for those midnight marshmallow roasts or lazy winter days by the fireplace. Check their website for rates and availability.

Cross country ski trails abound the forest. Trails range from beginner 1 to 3 miles paths to difficult 8.3 mile rugged trail through timbered terrain. Don't forget to pack Fido's treats, dogs are allowed on the trails.

and Conservation

The Lubrecht Experimental Forest



Montana Department of Natural Resources and Conservation, (DNRC), wildlands firefighters during spring fire training. This training is conducted annually at the Lubrecht Forest. Lubrecht is ideal for this type of training as it provides both an indoor and outdoor classroom setting in which firefighters may train for the coming fire season./Frank Maus

Will Klaczynski

Many people wind their way from Missoula up the Blackfoot River corridor to recreate inside its canyon or in other spectacular northern destinations. As they pass by the sign for the Lubrecht Experimental Forest, 30 miles northeast of Missoula, they might wonder: what exactly is an experimental forest, anyway?

It is many things. For The University of Montana's College of Forestry and Conservation, it is an outdoor classroom and research facility. The College manages the forest for students, faculty, and the public for classes, research, and recreation. For decades, multitudes of students have used the forest for natural resources measurements camp and as a destination for class field trips. Students are involved in various aspects of managing the forest as part of classes, clubs, and work opportunities; everything from conducting forest inventory, writing silvicultural prescriptions, designing harvest plans, to running prescribed burns, planting trees, harvesting trees, and milling boards at the Lubrecht sawmill. For the public, Lubrecht is a place to go

skiing in the winter or to take the dog for a walk in the summer, a place to have a family reunion or rent a cabin away from the hustle and bustle of town. In short, Lubrecht has something for everybody.

In 1937, the Anaconda Company donated land to UM's School of Forestry (now the CFC) and the Northern Pacific Railroad company donated additional acres shortly after. Now 28,000 acres – 21,000 owned by UM and the remaining by the Montana Department of Natural Resources – of Western Larch, Douglas-Fir, Ponderosa Pine, and Lodgepole pine forests along with grasslands on a stretch of Blackfoot River make up Lubrecht Experimental Forest. Various CFC faculty conduct research and operate demonstration projects on the forest. Lubrecht's forest manager actively manages the forest for stand health, timber sales, and public recreation. Lubrecht's management goals and learning opportunities continue to evolve to meet new challenges. The mountain pine beetle has impacted a large portion of the forest, leading to extensive salvage in many areas. CFC researchers are evaluating the long-term effects

of fire and thinning on bark beetles, dwarf mistletoe, and understory vegetation.

Lubrecht has comfortable, established facilities for conferences, classes, and informal gatherings. The public can access Lubrecht's trails for hunting, fishing, cross-country skiing, camping, and hiking.

In western Montana, where fire, drought, logging, insect outbreaks, and invasive species influence the health of our forests, rangelands, and wildlife, Lubrecht provides a place where future managers can better understand those factors and where the public can better appreciate the recreational opportunities provided by forests like Lubrecht.

To learn more about the Lubrecht Experimental Forest, its mission, and what activities are open to the public, please visit www.cfc.umt.edu/Lubrecht.

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PEAKBAGGING MONTANA:

A GUIDE TO MONTANA'S MAJOR PEAKS

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hikes and scrambles

PEAKBAGGING MONTANA



CEDRON JONES

A GUIDE TO MONTANA'S MAJOR PEAKS

BOOK REVIEW

Peakbagging Montana is a new and excellent guidebook to hiking and scrambling to the top of more than 50 major peaks in the state.

Written by Helena hiker Cedron Jones, this unique book describes how to reach the summits of significant mountains throughout Montana, from remote peaks in the far northwest to isolated buttes in Montana East of the Mountains. It includes Granite Peak, the state's highest point.

The book features numerous photos, maps, and easy-to-follow route descriptions. The routes range from easy trails to bushwhacking and scrambling.

"This book is primarily for hikers," Jones said. "Dedicated 'peakbaggers' will likely be interested in it too, but technical climbers will not be."

Jones said "peakbaggers" are outdoor enthusiasts who like to tackle different categories of peaks. His book includes lists of the state's highest points, the mountains with the most prominence (the distance above the surrounding terrain), the highpoints of every mountain range, and even county highpoints. Jones compiled the hard-to-find information through many years of research and on-the-ground fact checking.

Jones, 70, started "bagging" Montana's highest peaks in 1973. Since then he has climbed more than 1,200 Montana summits, including 340 peaks above 10,000 feet. He's climbed Granite Peak three times. A long-time volunteer for local conservation groups, he is donating all of his author royalties to the Montana Wilderness Association, Wilderness Watch, and The Cinabar Foundation.

The book sells for \$14.95 and is available at bookstores or from Riverbend Publishing, 1-866-787-2363.

Mountains from page 11

In September and early October, the summer yellows become mixed with the flame-orange of cottonwoods in the river bottoms and the reds of low-lying vegetation in the coulees and on the hillsides. The sky can be cloudless for days.

Sometime in November, winds from the north signal the start of winter. By now, fall snowstorms have put a coating of white on the upper reaches of the Big Snowies and most of the other island mountains. Lasting snows begin spreading to some areas of the prairie and the Missouri Breaks. Soon cold, strong winds will deposit snowdrifts of every size and shape imaginable. Hillsides will be swept clean and ice will form on the rivers. Winter's harshness also brings a softness — tall golden grass and dark evergreens contrast against a blanket of white, and delicate sunsets and sunrises replace summer's blazing displays. The landscape is at rest. This is the prairie's quiet time.

In the western reaches of the prairie, winter brings a phenomenon known as a chinook ... the snow eater. These mild winds bring temporary respite from the frigid atmosphere that descends on Montana.

A chinook's presence is visible in the form of a "chinook" arch of clouds, at once dark and beautiful. If the sun catches it just right, a stunning sunset paints the arch, embellishing the entire sky with a multitude of colors. Often, these winds vanish as quickly as they arrive, with the push of a ferocious northern blizzard reclaiming its season.

It is said the mountains make western Montana, but east of the Northern Rockies, they are only a modest share of a diverse province, appearing as islands floating in a big sea. None are lofty, but where they rise from the prairie they make their presence known. The views from their summits are far-reaching and impressive. They are the Little Rockies, the Sweetgrass Hills, the Bear Paws, the Highwoods, the Little Belts, the Moccasins, the Judith, the Big and Little Snowies, the Bull, Pryor, Bighorn, Rosebud, Sheep and Wolf mountains. These highlands serve as watersheds, wildlife sanctuaries and respites from summer heat. They harbor forests of ponderosa pine, Douglas fir, aspen and willows. Ecologically, some are mini-versions of the mountains of the Continental Divide, others are a blend of prairie and alpine zones.

The Big Snowies, in the center of Montana, provide a high stage to view a dozen mountain ranges. From the summit of 8,681-foot Great House Peak, a hiker can take in a 300-mile view, northwest to the Sweetgrass Hills

and south to the Beartooth Mountains.

As Lewis and Clark made their way westward, the first major rise of land they viewed was the Little Rocky Mountains. Called Wolf Mountains by the natives, white people came to them for their gold and outlaws used them for hideouts..

One of Montana's most prominent ski areas, Showdown, is centered in the Little Belts, the largest of Montana's outlying ranges.

Ice caves, wild horses and a desert environment below their southern slopes make the Pryors an attraction. With the Bighorn Mountains, they guard the narrowed canyons holding 67-mile long Bighorn Lake and Bighorn National Recreation Area.

Other elevated features mark this prairie magnificence. The Medicine Rocks and Chalk Buttes stand as silent sentinels in southeastern Montana's cowboy country. Black Butte, on the eastern rise of the Judith Mountains, can be seen from more than 50 miles away. Western artist Charlie Russell used the imposing Square Butte near Geraldine and the larger Square Butte, southwest of Great Falls, as backgrounds for several of his famous paintings.

Badlands — often described as miniature deserts — and river breaks add to the fascination of Montana east of the Rockies. Shaped by wind and water, places such as Makoshika, the Terry Badlands, the Piney Buttes and the Missouri and Yellowstone breaks present vivid colors, a wild landscape and country void of people.

The short grass prairie is a dominant characteristic beyond the mountains. In some areas flat, in most gently undulating, dissected by coulees and marked in places with sandstone formations, it is part of a serene environment accentuated by space and the sound of the wind.

Before the arrival of white travelers, the land stretching east of Montana's Northern Rockies was a wildlife kingdom and a vast native hunting ground. Millions of bison, great herds of antelope, timber wolves and grizzly bears were common. The wild bison are now gone and the grizzlies have retreated to the mountains, but the prairie is still home to an enormous population of large animals, small critters and winged creatures. Turkeys, burrowing owls, white pelicans, elk, osprey, deer, blue herons, pronghorn antelope, Canada geese, sandhill cranes, cormorants, ducks, foxes, eagles, bighorn sheep, pheasants, coyotes, Hungarian partridge, grouse, prairie dogs and more than 200 species of birds are some of the wild residents of Great Plains Montana.

Montana's eastern domain presents wildlife entertainment unlike anywhere else — the

spectacle of ducks and geese landing to gather on the prairie's waters in the fall before migrating south, the excitement of spring as they convoy home again to refuges, lakes and wetlands scattered from the east slope to the Dakotas. Observing their raucous presence is a spectacular encounter. And the heralding of the summer ahead via the peculiar spring mating dance of the sharptail grouse, performed on favored stages, is a special attraction to witness.

Plenty of space, minimal human activity and protected lands ensure thriving wildlife and waterfowl population.

Together, Medicine Lake National Wildlife Refuge, tucked in Montana's northeast corner and Bowdoin National Wildlife Refuge out of Malta make a home for more than 200,000 ducks and geese, as well as lake pelicans. Other havens, such as Half-Breed National Wildlife Refuge at Rapelje, Freezeout Lake near Choteau and War Horse Lake National Wildlife Refuge northwest of Winnett, also attract migratory congregations.

Then there is one of America's special places — the wild, remote and beautiful Charles M. Russell National Wildlife Refuge includes 1,100,000 acres in a 200-mile strip encircling Fort Peck Lake. Its deep canyons, rough river breaks and isolation provide a sanctuary for wildlife, big and small. It includes the UL Bend Wilderness, home ground for native elk and transplanted bighorn sheep.

In these parts, history is recent and evident. The old West of legend, spanning a short yet wild time, was played out here. Only 150 years ago, the great Indian nations hunted enormous bison herds that thundered across Montana territory. They had the plains to themselves, wandering freely in search of food and shelter. Then the 1804-1806 Lewis and Clark Expedition changed the face of the land and the native culture forever. This Corps of Discovery marked the way for the white invaders.

At first, the newcomers — mountain men, trappers, traders and explorers — came in search of beaver pelts and routes west. Soon steamboats began plying the Missouri to Fort Benton. The initial one reached Fort McKenzie, just below Fort Benton, in 1859, and in 1860 the high waters of that summer brought boats to Fort Benton.

Montana's first major gold strike in July 1862 on Grasshopper Creek in the southwest corner of the state started the rush of gold seekers to Montana, most coming on the sternwheelers to "Benton". Later fanning out from the western gold camps, prospectors began combing the gulches of the Judith Mountains and Little Rockies.

Grass was rich, thick and free for the taking. Central and far-eastern Montana had what seemed an endless supply. By the 1870s, western Montana stockmen ventured into the lush river bottoms and the tall grass to the east, laying claim to the vast open range. They were joined by the legendary drives of long-horns, up 1,800 miles from Texas to winter in Montana.

The era of the big ranches had begun. The Circle C and DHS ranches located in the country between Malta and Lewistown became symbols of the state. These times bred rustlers, horse thieves, cattle barons and vigilantes. The myths and reality of the American cowboy took root. Outlaws met with frontier justice handed out by “Stuart’s Stranglers,” named for prominent rancher Granville Stuart. During this time, the Natives took their last stand and lost. The bison were gone, and the white man and his weapons were too powerful. A culture and way of life all but disappeared from Montana East of the Mountains.

However, cattlemen were soon to have their freedom curtailed as well. The tough winter of 1886-87 caused heavy livestock losses and began the decline of the large operations. The open range cattle industry ended.

During the 1880s, railroads were pushing their way into Montana from the Dakotas. The Great Northern, Milwaukee Road and Northern Pacific lines brought farmers to plow the virgin sod and fence the land. The cattle empires, weakened by winter, shrunk further as the open grasslands diminished. Sheep moved in on the cattle and by 1900, outnumbered cows on the prairie. For a while, Montana was the number one wool-producing state in the nation.

At the turn of the 20th century, railroad promotions and the building of towns along the steel roads, coupled with generous homestead laws (a grant of 320 acres after 1909) brought a wave of people to Montana East of the Mountains. They arrived from points east in the USA and from Europe to cultivate riches from the soil. Some prospered, but many didn’t. The time of the homesteader peaked in 1918. The wet years evaporated, and drought and low prices set in. Thousands left their places, never to return. Prairie vegetation gradually reclaimed fields that once produced bountiful harvests.

Remnants and vivid reminders of early day Montana east are everywhere. Segments of former travel byways such as the Great North Trail, the Nez Perce Trail, the Wood Mountain Trail, the Whoop-Up Trail and the Pony Express Route are still visible, as are the ruins of forts, trading posts and stagecoach

stops. Undisturbed areas show signs of travois tracks, wagon wheel ruts and teepee rings.

Evidence of the era of the first sodbusters is plentiful. Old buildings that once housed these settlers and their dreams still stand, only to serve as refuges for small animals, birds and owls.

Although the drought and economic conditions ended their hopes, some hearty pioneer families persisted, stayed on and today are the backbone of the Montana prairie country.

Descendants of the homesteaders and products of cattle outfits that have been in the same family for generations provide the area with a sense of permanence and independence, a strong profile dictated by rural life and past experiences that characterize this corner of the Great Plains.

It might be facetious to say distance between communities is comfortable and elbowroom is plentiful. Here, space dwarfs the human presence whether it is on farms and ranches well apart from neighbors, or in towns with colorful names: Sunburst, Judith Gap, Roundup, Cut Bank, Plentywood, Whitewater, Choteau, Big Sandy, Chinook, Lame Deer, Lodge Grass, Ekalaka, Grassrange and Wolf Point, as well as Billings, Great Falls, Lewistown and Miles City. The latter four, large towns by Montana standards, are but small outposts on the vast Montana plains.

High school basketball teams often have to travel up to 300 miles one-way for games. The population is dispersed enough to support many one-teacher schools consisting of grades one through eight with an average of 15 students. Many of them are still open east of the Rockies, although fewer every year.

Towns are the *human* essence of this territory where the natural features capture attention. Social and commercial activities interact within them in a way that is all but disappearing across America. Cafés, hardware and grocery stores are where stockmen, farmers, implement dealers and bankers meet to discuss ag-economics, their families, and the weather. You’ll still find drug stores with soda fountains, and chances are that you can walk in the door of any business and shake the hand of the owner. A genuine welcoming atmosphere prevails.

To the uninitiated, life in many of these eastern hamlets might seem carefree, but the problems of a lagging agricultural economy, lack of opportunities for the young, and drought are real. The people of these isolated havens that dot the sprawling prairie deal with them and rarely give up. A “can do” attitude holds sway over town meetings or at the supper table as residents look for answers and new possibilities. Hope always seems to be

there despite all the daunting challenges.

Livestock operations and dry land farming are the major economic pursuits of Montana East of the Mountains, and most of the cultivation involves wheat.

Winter wheat is planted in late summer and gains a foothold before the cold descends. It renews growth with spring’s warmth and is harvested in July. Montana’s dominant crop, it crowds the horizon of The Golden Triangle — the country north and northwest of Great Falls. Farther east and north, where winter is colder, spring wheat colors the fields. Seeds are sown at winter’s end and the crop is cut in late summer. Yields tend to be lower with this strain of wheat.

Although declining as more growers plant “wall-to-wall”, strip farming is still a trademark. In heavily cultivated areas, successions of wheat, interspersed with fallow earth, stretch as far as the eye can see. This farming practice serves as a deterrent to wind erosion and conserves moisture. Each year the pattern is reversed.

Sugar beet farming doesn’t create the same scenic mosaic as the ribbons of wheat fields do, but in the valley of the Yellowstone River, especially between Laurel and Glendive, it adds to the well-being of southeast Montana.

While the big unfenced ranches of the mid- to late 1800s are gone, cattle are still very important in the entire realm of Montana’s high plains. Cowboys continue to work the range and substantial ranches exist in Yellowstone and surrounding counties. Miles City in Custer County is known as the “Cattle Capital of Montana.”

Montana’s Indians, to a degree, survived the devastation of their homelands and are a prominent part of this piece of the Big Sky Country. They are the Blackfeet, the Chipewawa, the Cree, the Crow, the Northern Cheyenne, the Assiniboine, the Gros Ventre and the Sioux nations. Some still occupy a portion of their ancestral grounds, others do not. Most live on six reservations scattered throughout the northern prairie. Powwows, rodeos, Milk River Indian Days, North American Indian Days and the Crow Fair are tributes to their proud tribal traditions.

As the first residents of Montana, these natives were good stewards of the land. They respected it and took only what they needed to survive. They passed through and left it as they found it. Their legacy is still present out here in the places that have remained unaltered with the passing of the ages, and their spirit is still carried on the wind. Listen for it and feel it as you explore and marvel at Montana East of the Mountains.

us.¹⁵ Adelman demonstrated that virtually anyone seeking access to higher education in this country today can find it somewhere. However, that does not mean that anyone seeking access is appropriately prepared. The demand today that we attend to our public schools, raise our standards and expectations, align the high school and college curricula, and help young people to protect their options by preparing themselves for the challenges of the information age mark the first steps toward the revitalization of the social compact.

What about higher education? Our system remains the envy of the world for its responsiveness and quality, but more and more people worry about cost interfering with access and what they discern as a decline in quality.¹⁶ Today we require students and their families to pay most of the cost of the education we provide. Frankly, I doubt that we have the resources in the country to reverse that requirement, so we will have to find new ways to manage the resultant barriers to access.¹⁷ But we must make it clear to these young people that the public continues to invest in them, and thus that they incur a responsibility to take advantage of what is available to them. On that point, a study published in 2010 entitled "Trends in College Spending, 1998-2008: Where does the money come from? Where does it go? What does it buy?" documented the public subsidy: "In public and nonprofit private colleges and universities, revenues from student tuition and fees *do not cover the full cost of educating students; the difference comes from a general institutional subsidy*," originating for publics from state appropriations and other institutional funds, and for privates from tax law exemptions for gifts and donations and endowment income.¹⁸ Thus, while we have departed considerably from the earlier version of the social compact, we nonetheless continue to adhere to it.

As mentioned, I will not argue for a return to the earlier interpretation of the compact because I understand we do not have the resources today to do so, and will not in all likelihood for the foreseeable future. But we can and must develop ways to help young people gain access by appealing to the private sector for funding support, as many institutions have done. The private sector has responded encouragingly in recent years, largely because everyone seems to understand that we cannot have great societies without great universities; and that, in the modern world, we cannot have great universities without the

combination of public **and** private support.¹⁹ The success to date of the Colorado State University campaign, among others, to raise \$500,000,000 to support students and faculty research offers corroboration for my comment. Long-term success depends on the continuation of the public-private partnership.

Nonetheless, the best evidence that belief in the social compact, however interpreted, has eroded comes from 1) the social and economic trends identified by Dan Peck; 2) the jarring fact that only about 18 of 100 freshmen entering high school this fall will have earned a college degree of some kind ten years from now²⁰; and 3) this generation of young adults will be the first in American national history less educated than its parents. These startling facts make the case plainly for action. We cannot afford to sit back and assume that the good times will return. In the age of the so-called "New Normal," we must have new thought and action to regain the ground we have lost nationally and internationally.

IV

Without seeking to prescribe in detail what needs doing, I hope to gain your assent to the emerging crisis the dimensions of which go well beyond the details of the current recession and our political malaise. The country needs the leadership that can come from the united voice of the business and higher education communities demanding attention to the policies and investments with the potential to move us forward as a country. I have not discussed the role of the research universities as the source of new products, processes, and technologies for the economy we want and need to replace the old industrial economy that once sustained the American middle class. But the critical importance of the contributions of those distinctively American institutions stands beyond dispute.²¹ The information or knowledge economy demands a highly educated workforce equipped to deal with the need to learn continuously on the job. The low- and mid-skills of mass production, while they served well during the earlier period, will have a much less fulfilling place in this new economy and society.

How can we achieve that purpose unless we insist that our colleges and universities also embrace the unique demands and possibilities of the new information age? In fact, many of them have already begun to make the necessary transition. A recent study of innovation in the modern world argues that the colleges and universities failing to integrate online learning into their portfolios will suffer the fate that Peter Drucker warned them

about three decades ago, rapidly becoming non-competitive educational dinosaurs in the 21st century.²² The great universities of today have in place all they need to make the transition, including the will, but not necessarily the wherewithal. Because of their success in recruiting and retaining outstanding faculty members committed to cutting edge research and student success, they have an advantage over the more recent for-profit institutions much given to "cherry-picking" for maximum return. The first accredited public institution completely dedicated to online learning has recently emerged in Colorado dedicated to serving the public interest by providing educational services to those who find the traditional on-campus experience and the for-profit online expense and unfulfilled promise inadequate to meet their needs.²³ We must have an educational system capable of meeting the needs of people where they are, rather than insisting that those in need come to the institutions.

You have surely concluded by now that I see the solution to our current challenges in the revitalization of the old social compact imposing on the current generation the obligation to educate the next. The compact also has within it the imperative for the current generation to structure the education so as to empower the emerging generation to respond to the new challenges as they arise, just as the generation of the 1860s did to usher in and support the industrial era. We cannot possibly succeed if we try to return to ways and means that served us well in the past. While the ideals retain their currency and relevance, the conditions of today demand responses suitable to meet the new demands, including innovative means of finance.

In that regard, I will offer for consideration two ideas with potential, one discussed several years ago and another more recent in origin. When the end of the Cold War seemed to offer, however briefly if futilely, the possibility of a "peace dividend," former Senator Bill Bradley -- who had in the 1990s forecast the decline of the middle class, and who believed fervently from his own personal experience in higher education as the means of access to the middle class -- proposed setting aside a large portion of the "dividend" into a trust fund to make "self-reliance" loans in the form of an up-front commitment to any American up to age 35 to finance an education.²⁴ Those Americans receiving the loans would incur the responsibility to do well and to repay the loans on an income-contingency basis so as to extend the opportunity to the next generation. Unfortunately, because the "peace dividend" failed

to materialize, Bradley's suggestion became law in a revised form allowing to student debtors the income-contingency repayment plan he proposed for the "self-reliance" loans but without the trust fund. While the revised version helped many young people, it did not accomplish the larger purpose of providing the up-front commitment toward the major portion of the cost of an education for all Americans.

In his recent book entitled *Aftershock*, intended to rally Americans to the need for structural changes in the wake of the Great Recession, Robert Reich argues for the elimination of tuition and fees "at all public colleges and universities," with federal loans available to assist all students choosing to attend private institutions.²⁵ All graduates of public institutions, who can also qualify for federal loans if their needs exceed the Pell Grant stipends, and the graduates of private institutions who have taken federal loans,

should be required to pay a fixed percentage – say, 10 percent – of their taxable earnings for their first ten years of full-time work into a fund that finances public colleges and universities and provides loans to students²⁶

In Reich's view, this financing approach has the potential to sustain higher education while also assuring that students can choose their courses of study on the basis of their individual passions and societal needs rather than anticipated compensation premiums, as so often occurs today.²⁷

To re-structure the social compact will require something like the Bradley suggestion or the Reich solution, as well as a societal commitment to establish a pre-K-12 educational system based solidly on the three characteristics of a "good system" proposed by Craig Barrett, former President of Intel: Competent and committed teachers, high expectations, and a good bit of tension in the system.²⁸ While we have had some promising starts over the last few years, invariably the emergence of tension has led us to lower the expectations and thus to quash the energy and commitment of the good teachers we managed to assemble. Higher education cannot succeed in its efforts to fulfill the obligations of the social compact unless pre-K-12 does its part. The ongoing effort to establish national educational standards and assessment protocols already underway in Colorado and most other states, if sustained, can make the difference and will signal the American reaffirmation of the traditional social compact in terms dictated by conditions of the 21st not the 19th century.²⁹ Only then can we hope to reverse the trends that have so alarmed Dan Peck and Robert Reich and must galvanize us to action. Only then can we once again, as a committed and united society, manage a transition, this time from the decaying industrial to a dynamic knowledge-based economy, and re-establish the foundation for the American middle class.

1 George M. Dennison, President *Emeritus* and *Emeritus* Professor of History of The University of Montana, currently serves as the Chief Academic Officer of the Colorado State University System.

2 *The Atlantic* (26 Aug. 2011, at <http://www.theatlantic.com/magazine/archive/2011/09/can-the-middle-class-be-saved/8600/>).

3 Robert B. Reich, *Aftershock: The Next Economy & America's Future* (New York: Vintage Books, 2011), *passim*.

4 David Potter, *People of Plenty: Economic Abundance and the American Character* (Chicago & London: University of Chicago Press, 1954), *passim*.

5 Larry K. Faulkner, "The Changing Relationship between Higher Education and the States," (Washington, D.C., Feb. 2005), at http://www.utexas.edu/president/past/faulkner/speeches/ace_021305.html.

6 7 USC 304 (1862).

7 Christopher P. Loss, *Between Citizens and the State: The Politics of Higher Education in the 20th Century* (Princeton & Oxford: Princeton University Press, 2012), *passim*, for an argument characterizing higher education as the intermediating institution between the federal government and the citizen in a society highly distrustful of central authority.

8 <http://www.eric.ed.gov/PDFS/EDO66141.pdf>.

9 Loss, *Between Citizens and the State*, Chapters 6-7.

10 Colorado Department of Higher Education, *The Degree Dividend. Building our economy and preserving our quality of life: Colorado Must Decide* (Denver, Nov. 2010), p. 11.

11 Tom Friedman, *The World is Flat* (New York: Farrar, Straus & Giroux, 2005), *passim*.

12 Tom Mortenson in *Postsecondary Education OPPORTUNITY*, various issues, at <http://www.postsecondary.org/common-detail.asp?id=1585>.

13 Also see Tyler Cowan, *The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better* (New York: Dutton, 2011), *passim*.; and David B. Grutsky, Bruce Western, & Christopher Wimer, Eds., *The Great Recession* (New York: Russell Sage Foundation, 2011), *passim*.

14 For a recent reaffirmation of this point, see Joel I. Klein & Candolezza Rice, *U.S. Education Reform and National Security, Independent Task Force Report No. 68* (New York: Council on Foreign Relations,

2012), *passim*.

15 See "It's not so much *when* Bologna will arrive in the U.S. . . . but *how*," at [www.sheeo.org/hepconfsite/hepc2009/Thursday/1200%20Lunch%20Bologna%](http://www.sheeo.org/hepconfsite/hepc2009/Thursday/1200%20Lunch%20Bologna%20).

16 Derek Bok, *Our Underachieving Colleges* (Princeton and Oxford: Princeton University Press, 2006), *passim*.

17 Mamie Lynch, Jennifer Engle, and Jose L. Cruz, *Priced Out: How the Wrong Financial-Aid Policies Hurt Low-Income Students* (The Education Trust, June 2011), *passim*.

18 With the emphasis supplied, see the Delta Project, 2010, at <http://www.deltacostproject.org/resources/pdf/Trends-in-College-Spending-98-08.pdf>, *passim*., at p. 29 specifically.

19 A syllogism coined by the National Association of State Universities and Land-Grant Colleges, now the Association of Public and Land-Grant Universities.

20 See *Degree Dividend*, p. 16, for Colorado's estimate of 22 graduates, slightly better than the national average.

21 See Jonathan R. Cole, *The Great American University: Its Rise to Preeminence, Its Indispensable National Role, Why It Must Be Protected* (New York: Public Affairs, 2009), *passim*.

22 See Henry J. Eyring and Clayton M. Christensen, *The Innovative University: Changing the DNA of Higher Education from the Inside Out* (San Francisco: Jossey-Bass, A Wiley Imprint, 2011), *passim*.

23 Colorado State University-Global Campus, accredited in August 2011, the first new accreditation in Colorado in more than forty years.

24 See <http://www.umich.edu/-psycours/561/candidat.html>.

25 See Reich, *Aftershock*, pp. 136-7.

26 *Ibid*.

27 For another alternative, see George M. Dennison, "Student Loans and Access to Higher Education," accepted for publication in Summer 2012 by *The Montana Professor*.

28 Craig Barrett, Keynote Address for a Community Educational Conference, Missoula, Montana, Fall 2010.

29 Jacqueline E. King, "Implementing the Common Core State Standards: An Action Agenda for Higher Education," *passim*., at <http://www.acenet.edu/AM/Template.cfm?Section=Search§ion=reports2&template=/CM/ContentDisplay.cfm&ContentFileID=8794>; and Carl Krueger, "The Common Core Standards: Implications for Higher Education in the West," WICHE Policy Insights (June 2011), *passim*.