

## AMERICA'S LARGEST CLASSROOM EXPANDING THE ROLE OF EDUCATION IN OUR PARKS

# Dynamic learning landscapes: *The evolution of education in our national parks*

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[Ed. note: This article is reprinted with permission from *America's Largest Classroom: What We Learn from Our National Parks*, © 2020 by Jessica L. Thompson and Ana K. Houseal, published by the University of California Press, Oakland, California.]

### Introduction

For more than 100 years we have been using parks in the United States as dynamic learning landscapes. Renowned historian Dr. Robin Winks called the national parks “the single greatest university in the world” (McDonnell 2001). Now with over 400 parks in all 50 states and US territories, this “university” hosts more than 90,000 education programs annually, serving over seven million students. More than 300 million visitors flock to national parks each year, not just for recreation and scenery, but for learning. In fact, research shows that approximately 95% of learning takes place outside the formal classroom (Falk and Dierking 2010), much of that happening in places like museums and parks through direct experiences. The National Park Service (NPS) may just be the largest network of informal or *free choice* learning venues in the world. This chapter chronologically explores the learning movement that began over a century ago in our parks and continues today.

### Education: A founding purpose of national parks

The first documented national park educational programs began in 1886 at Yellowstone National Park. US Army infantrymen, deployed to protect the park, began to answer visitor questions and give what became known as *cone talks* at Old Faithful and the Upper Geyser Basin. The infantrymen were the first park ranger–interpreters, sparking

visitors’ curiosity and awe. An 1888 letter to the editor of the *Livingston Enterprise* described one such talk: “The Corporal delivers a lecture similar to a man who is shooting off a magic lantern” (Bawden 2013, para. 11). Park educators have been shooting off the “magic lanterns” of learning ever since.

Founding NPS Director Stephen Mather was fully invested in national parks’ educational value, stating in 1917 that “one of the chief functions of the national parks and monuments is to serve educational purposes” (Mather, 1917: 7). Mather estab-

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lished the National Parks Education Committee in 1918 to promote educational activities. The committee was led by Robert Sterling Yard, a publisher and promoter of NPS who became its first chief of the Educational Division. Its objectives were as follows (Pitcaithley 2002):

- Educate the public in respect to the nature and quality of the national parks.



Nature walk at Rock Creek Park. | NPS

- Further the view of the national parks as classrooms and museums of nature.
- Use existing publicity and educational systems so as to produce a wide result.
- Combine in one interest the sympathy and activity of schools, colleges, and citizen organizations in all parts of the country.
- Study the history and science of each national park and collect data for future use.

When no funding was budgeted for Yard's salary, Mather demonstrated his commitment to national park education and paid Yard out of his own pocket. Due to NPS's lack of resources, Yard went on to co-found what is now the National Parks Conservation Association, partially to help promote national parks for learning.

### **National parks and the nature study movement**

The late 1800s and early 1900s were also the height of the international nature study movement, which espoused an interactive approach to learning through direct observation rather than from a textbook. Nature study supporters believed that direct contact with nature had the ability to nurture affection for the environment and “bring joy in an industrialized world” (Lorsbach and Jinks 2013: 9). Luminaries such as John Muir and Enos Mills also stimulated interest in learning about the natural world. Mills started nature guiding in the

Rocky Mountains and called the national parks “the school of nature,” writing:

Why not each year send thousands of school children through the national parks? Mother Nature is the teacher of teachers, these parks are the greatest of schools and playgrounds. No other school is likely to inspire children, so to give them vision and fire their imagination (Mills and Schmeckebier 1917: 366).

Two of Mills's students, Esther and Elizabeth Burnell, became the first government-licensed nature guides in a national park. They worked for a hotel but were approved by NPS in 1917 (Danton 1988: 5). This idea of experiential learning in real and beautiful places was at the heart of the beginning of national park education. After Mather observed nature study activities at Lake Tahoe, he was inspired to establish the Free Yosemite Nature Guide Service in 1920 (Russell 1960). Thus began the NPS profession of park naturalist. Ansel Hall from Yosemite became NPS's first chief naturalist in 1923 (Pitcaithley 2002).

### **The emergence of interpretation as an educational discipline**

A few years later, a group of national park superintendents adopted a resolution reinforcing the

importance of parks as places for learning, stating that:

The mission of the National Parks [Service] is to provide not cheap amusement, but healthful recreation and to supplement the work of schools by opening the doors of nature's laboratory to awaken an interest in natural science as an adjunct to the commercial and industrial work of the world (Pitcaithley 2002).

By 1925, with a more stable budget, the Park Service reestablished its Division of Education with Hall in the lead. At the recommendation of a 1929 NPS Educational Advisory Board, the division grew into the Branch of Research and Education under the leadership of zoologist Dr. Harold C. Bryant. Bryant built the division around four key principles, notably using the word *interpretation* when referring to educational programming for the general public (Pitcaithley 2002):

- Simple, understandable interpretation of the major features of each park to the public by means of field trips, lectures, exhibits, and literature;
- Emphasis on leading the visitor to study the real thing itself rather than depending on secondhand information;
- Utilization of highly trained personnel with field experience, able to interpret to the public the laws of nature as exemplified in all the parks and able to develop concepts of the laws of life, useful to all; and
- A research program that would furnish a continuous supply of dependable facts suitable for use in connection with the educational program.

During this period, the beloved national park *campfire talk* was born, along with many other types of park-based programming, including auto caravans, camera caravans, water cruises, nature and historic trails, exhibits, lectures, museums, libraries, college

*... to gain an understanding of the greater truths that lie behind any statements of fact.*

and university field studies, and a Junior Nature School designed specifically for children (Bryant and Atwood 1932). Support for park-based learning continued to grow along with the national park system, and in the 1930s the idea of interpretation began to take hold to describe the work of park naturalists, historians, and archaeologists who conducted educational activities with the public.

### **Interpretation and education grow**

Congress codified NPS's role in historic preservation and historical education with the 1935 Historic Sites Act, directing the secretary of the interior to develop "an educational program and service for the purpose of making available to the public facts and information pertaining to American historic and archeological sites, buildings, and properties of national significance" (p. 2). This support was internal as well, evidenced by a 1940 Ranger Conference at the Grand Canyon, which recommended working with schools and teachers and starting outreach programs.

Progress toward building robust education and interpretation in the parks was put on hold during World War II. However, after the war, NPS Director Conrad Wirth began Mission 66, a ten-year effort to build out park infrastructure in time for the Park Service's 50th anniversary in 1966. The idea was to attract people to parks by making car access affordable to middle-class Americans. Mission 66 built many visitor centers, exhibits, museums, and other visitor amenities in parks across the country, expanding park-based learning to a new generation—the baby boomers (Davis 2003).

During this time, writer, teacher, and philosopher Freeman Tilden began writing about national parks and became interested in the field of park interpretation and education. His 1957 seminal work *Interpreting Our Heritage* (reprinted in 1977) is perhaps the most influential book ever written about the profession, which simply and elegantly outlines six timeless principles. Tilden stressed the importance of inspiration and provocation as chief aims of interpretation, rather than merely a transfer of knowledge. He writes that "the purpose of Interpretation is to stimulate ... a desire to widen [one's] horizon of interests and knowledge, and to gain an understanding of the greater truths that lie behind any statements of fact" (1977: 33). Tilden



pushed interpreters to be guides in the search for meanings inherent in park resources. In his book *The Fifth Essence*, Tilden describes the idea of the soul of things beyond their tangible form. His work helped move park-based learning beyond the study of facts to personal relevance and inspiration, to exploration and discovery of meanings (1968).

To meet the learning needs of ever-growing visitation and also in preparation for its 50th anniversary, NPS established the Stephen T. Mather Training Center for interpretive rangers on the campus of the former historically black Storer College in Harpers Ferry, West Virginia. Later, the Park Service would co-locate the Harpers Ferry Center for Interpretive Media next door.

### The environmental education movement

Another postwar educational shift was the move-

ment from cataloguing or naming objects and facts to identifying and describing the relationships among things in ecological systems, placing an emphasis on conservation. The 1960s marked the emergence of the environmental movement, and NPS Director George B. Hartzog, Jr., embraced the idea of environmental education as a means to develop public understanding of the forces that shape the environment and to produce individual awareness of personal responsibility for environmental quality (Sherwood 2011). In 1967, NPS Assistant Director for Interpretation Bill Everhart postulated that interpreting park resources alone was not enough, writing that:

We have not effectively carried out an educational campaign to further the general cause of conservation.... Only through an environmental approach to interpretation can an organization like ours, which has both Yosemite and the Statue of Liberty, achieve its purpose of making the park visitor's experience fully significant (Mackintosh 1986, chapter 3).

In 1968, the Park Service worked with consultant Mario Mensesini to develop the National Environmental Education Development (NEED) program and its materials for schools and parks. NEED had five strands of study: (1) variety and similarities, (2) patterns, (3) interrelation and interdependence, (4) continuity and change, and (5) adaptation and evolution. These strands were meant to be embedded in education and interpretive programming. The NEED strands were also taught as part of the environmental living program, introducing overnight immersion environmental education experiences in more than 80 parks at designated environmental study areas (Mackintosh 1986).

Environmental education took on even more profound importance after Neil Armstrong's historic walk on the moon in 1969. Armed with photos of Earth as seen from space, the public gained a new perspective of the planet—the effects



Children reading at Kingle Nature Center, Rock Creek Park. | NPS

of pollution were visible from space. In response to this realization, the first Earth Day was held in 1970. After this celebration, the Park Service established an environmental education task force to “expedite the establishment of an environmental education program that is integral to operations at all levels of the NPS—a program which will also assist public and private organizations concerned with the promotion of a national environmental ethic” (Mackintosh 1986, chapter 3). In 1972, the NPS Office of Environmental Interpretation was established. While the NEED program supported the use of national-level curriculum materials rather than programming that focused on park-specific themes, it is credited with placing a new focus on involving visitors and students as *participants*, instead of regarding them as passive spectators.

### **Living history**

The concepts of involvement and immersion were taken a step further through *living interpretation*, also known as *living history*. The notion of “going back in time” became popular and reached an all-time high during the nation’s bicentennial in 1976. However, some programs were geared more toward entertainment, were not historically accurate, or trivialized the historical events they were supposed to commemorate. In 1980, the Park Service issued careful guidelines for living history programs, ensuring their accuracy and relevance to park resources and themes. Still, the idea of bringing history to life through costumed interpretation, demonstrations, and museum theater remain viable and effective methods (Mackintosh 1986).

### **Interpretation as a management tool**

The 1980s marked a return to local park-specific-themed interpretation, as well as a movement to use educational programming to accomplish management objectives, such as promoting safety, preventing vandalism, and encouraging resource protection behaviors. In his twelve-point plan, Director William Penn Mott, Jr., directed the Park Service to “stimulate and increase our interpretive and visitor service activities for greater public impact” (NPS 1985: 9). As part of the movement to bring parks to people, Mott placed special emphasis on “urban recreational areas as major education centers” and encouraged parks to place their stories into the context of the values of the entire national park system and to quality of life (NPS

1985: 9). Under the direction of Chief of Interpretation Michael Watson, the Service embraced The Interpretive Challenge, based on the idea that “a visit to a National Park breaks the routine of life: it gives life context, value, and meaning. Among these natural wonders and historic settings learning becomes fun” (Raithel 1989: 1). The Interpretive Challenge placed emphasis on professional excellence, evaluation, education, program integration, and media. NPS’s Washington office began publishing a quarterly journal titled *Interpretation*, and in 1989, for the first time, interpretive operations were reflected in a separate section of the NPS Management Policies. During this time, leadership of interpretation and education was embedded in the Division of Park Operations.

### **Parks as classrooms**

To celebrate the 75th anniversary of NPS in 1991, Director James Ridenour convened a symposium in Vail, Colorado. The subsequent publication, *National Parks for the 21st Century: The Vail Agenda*, made sweeping recommendations for interpretation and education, asserting that “the Service should revise its philosophy, policy, and management approaches to reflect the legitimate role the agency has as a national public education system” (NPS 1991: 89). The Vail Agenda also placed a specific emphasis on reaching a diverse public both in parks and in communities, using communication technologies and developing a “complete K–12 curriculum for school teachers to integrate the national parks into the classroom” (NPS 1991: 90). This would manifest as the Parks as Classrooms program.

Parks as Classrooms was in part shaped by a 1993 task force report, released under the leadership of Chief of Interpretation Corky Mayo, which called for improving public education by assisting teachers with innovative educational methods (Chief, Division of Interpretation, 1993: 1). Diverging slightly from the Vail Agenda, Parks as Classrooms asserted that the best education programs were built through local partnerships between parks and schools. Further, it held that programs should be cocreated *with* teachers if they were going to be relevant and sustained. For the first time, a dedicated competitive funding source was established to support parks in developing curriculum-based education programs. With ever-tightening budgets and more constraints on schools, school administrators

could not justify out-of-school field trips unless these activities aligned with curriculum objectives. Rather than a national-level parks curriculum, individual parks worked collaboratively with local or state school systems to ensure park programming aligned with these school curricula. Two influen-

*... we will create and deliver activities, programs, and services that honor, examine, and interpret America's complex heritage.*

tial field interpreters, Patti Reilly and Kathy Tevya, developed a national course to train park educators on developing and managing curriculum-based programs, which included methods for creating teacher professional development experiences. These practices are still in place today.

The 1993 report also called for fundraising and mass marketing to promote parks for learning. The congressionally chartered nonprofit partner of NPS, the National Park Foundation (NPF), embraced Parks as Classrooms, fundraising millions of dollars to create grants and support educational programming in parks. One grant, Parks as Resources for Knowledge in Science (PARKS), a partnership with the National Science Teachers Association, sought to help integrate the National Science Education Standards into programs. NPF also invested in evaluation, bringing a new level of rigor and documentation of participant outcomes to programming. For example, the PARKS program reached 90,000 students, who showed increases in stewardship for national parks and higher levels of perceived science learning. The majority of teachers participating indicated the program had given them new ideas to incorporate into their own science teaching. Program evaluation gives NPS information necessary to improve programs over time and to better tailor future initiatives to desired participant outcomes.

### **The interpretive (r)evolution**

In the early 1990s, the field of interpretation in the NPS underwent an identity crisis. Leaders felt the profession was unfocused and ill-defined, resulting

in a renewed focus on interpretive training and an endeavor to evolve the profession. Under Mayo's leadership, along with David Dahlen and David Larsen of the Mather Training Center and hundreds of field interpreters, the Interpretive Development Program (IDP) was established. The IDP was a performance-based competency program (the first of its kind for the field of interpretation) that set professional standards, highlighting interpretation's ability to connect the interests of the visitor and the meanings of the resource. One basic tenet of the IDP was "the visitor is sovereign." In other words, in the tradition of Tilden, it was not the interpreter's job to tell people what to think or feel, rather to inspire the visitor to develop their own meanings and connections—both emotional and intellectual. While the focus of the IDP was still on the interpreter developing the ideas and delivering the programs, this new philosophy laid the groundwork for the current movement to audience-centered interpretation and human-centered programming (NPS 1998).

### **NPS online**

Parknet was established in 1994 as NPS's first online web presence. It was soon embraced as the busiest "visitor center" in NPS, opening up a whole new audience for park programs. Parknet would evolve into [nps.gov](https://www.nps.gov), one of the most-visited websites of the US government. Online NPS resources for teachers would also grow with an Education Portal. This site was the entry point for thousands of lesson plans, educational activities, videos, virtual park experiences, webcams, an online junior ranger program, and a plethora of social media sites. Through a partnership with the National Council for Social Studies, NPS developed Teaching with Historic Places, which paired park rangers with teachers to create park-based history lessons for classroom instruction. Teaching with Historic Places is now a robust website of history education resources.

### **The role of partners**

A 1997 Education Initiative Symposium, convened in Santa Fe, brought leaders in the field of education, including park partners, together with NPS staff to consider the future of NPS Education—and collaboration with partners was key (NPS 1998). Collaboration with partners has been central to interpretation and education going back to the early

days when Mather engaged the help of organizations such as the Smithsonian and the American Association of Museums to help establish national parks as places for learning. Today, a system of more than 70 nonprofit cooperating associations run park bookstores across the country and support interpretation and educational programming and research. Cooperating associations play an integral role in park interpretive operations. Numerous partners, such as Nature Bridge and the Cuyahoga Valley Conservancy, run park-based residential education centers and provide interpretive and educational programs in parks along with thousands of volunteers.

### **The turn of the century**

With a new century on the horizon, Director Robert Stanton hosted a major national park conference, Discovery 2000, to discuss the future of parks. The conference highlighted interpretation and education as well as branding and marketing. Stanton also asked the National Park System Advisory Board to examine NPS in the context of a changing society. The result was the 2001 report *Rethinking the National Parks for the 21st Century* (National Park System Advisory Board 2001). The Board's Education Committee, led by renowned historian Dr. John Hope Franklin, called for the Park Service to “embrace its mission as educator” and take its place as part of the nation's education system (National Park System Advisory Board 2001). As a result, the NPS National Leadership Council embraced a six-month seminar series on park-based learning, organized and strongly influenced by NPS Chief of Policy Loran Fraser. The result was a report titled *Renewing Our Education Mission* (NPS 2003). The report is significant in that the entire national leadership of NPS embraced an education vision together and connected park-based experiences to promoting the principles of democracy:

Interpretation and education is a primary organizational purpose of the National Park Service, essential to achieving our mission of protecting and preserving our nation's natural and cultural resources. We envision a national park system that is recognized as a significant resource for learning, where people and organizations collaborate on teaching and learning about the interconnections

of human culture and nature, natural systems, the values of America's diverse heritage, and the principles of democracy. Parks are an integral part of the nation's educational system providing unique and powerful individual learning experiences that help shape understanding and inspire personal values (NPS 2003: 2).

### **The interpretation and education renaissance**

Among its recommendations, *Renewing Our Education Mission* called for a business plan for education and chartered a National Education Council, a cross-section of NPS employees at all levels to advise the leadership body (NPS 2003: 7, 10). The National Education Council produced the first ever data-driven business assessment and plan for interpretation and education, which documented funding and staffing trends by region (NPS 2004). The business plan data, along with projected demographic changes, supported strategies laid out in the 2006 Interpretation and Education Renaissance Action Plan (NPS 2006a: 6). The prescribed “interpretive renaissance” was based on five pillars:

- Connecting *all* Americans to their national parks, including “ethnic, socioeconomic, and disabled groups that have . . . not been well connected to national parks” (NPS 2006a: 6), with a focus on collaborating *with* audience groups, rather than creating programming *for* them (a nod toward inclusive, audience-centered programming);
- Using new technologies—at the dawn of the smartphone the Park Service recognized that it must embrace technology to stay relevant, rather than resist it;
- Embracing education partners—there was a realization that as many as 70,000 volunteers and partners were delivering interpretation and education services as compared with approximately 4,000 uniformed park interpretive rangers and guides;
- Developing and implementing professional standards, building on the progress of the IDP; and
- Creating a culture of evaluation—increasingly focusing programs on outcomes and making social science data-driven decisions around staffing and programming.



One of the major outcomes of the interpretation renaissance was a Servicewide Evaluation Summit, sponsored by NPF, the National Education Council, and the Advisory Board Education Committee. The summit's goal was to "generate useful dialogue about creating a culture of evaluation within Interpretation and Education characterized by continuous learning and decision making based on audience analysis and outcome data" (NPS 2006b: 1). The entire NPS leadership, representatives from across the field and partner groups, and three former NPS directors attended the summit. Never before had such a large and comprehensive representation of the NPS leadership and field gathered to think collectively and exclusively about interpretation and education and how to measure it. A focus on asking the right questions, holding people accountable for learning, exploring the role of technology in place-based learning, prioritizing cultural competence, and evaluating visitor experiences were some of the themes explored. As a capstone, using new technology, the National Leadership Council held a live video conference with park staff across the country to share the ideas that emerged from the summit (NPS 2006b).

### **The NPS centennial: Embracing a larger role**

Leading into the 2016 centennial of NPS, the National Parks Conservation Association convened a Second Century Commission of prominent citizens to make recommendations to the president, Congress, and NPS for a second century of parks. Their report, *Advancing the National Park Idea* (National Parks Conservation Association 2009a), emphasized education and learning and connecting people to parks as key to the survival of national parks in a new century. The commission also emphasized the value of parks to the nation in building human capital and supporting democracy. Facing rapidly changing technologies, major demographic shifts, and the reality of climate change, the commission focused on the need for parks to be truly inclusive and relevant to all people's lives, promoting science literacy and civic engagement. Among its recommendations, the commission called for new legislation that "clearly secures its educational mission for the second century" (National Parks Conservation Association 2009b). The commission also called for reestablishing a senior executive-level position to lead interpretation and education,

elevating the department's role within the structure of the Park Service.

Director Jon Jarvis embraced the commission's recommendations and appointed many of the commissioners to the NPS Advisory Board, including Dr. Milton Chen of the George Lucas Educational Foundation to lead the education committee. Jarvis emphasized the immense value of the national park system to the nation for ecological preservation, health, economic prosperity, and education.

The Park Service's 2011 *Call to Action* report, which called for a second century of stewardship and engagement, focused extensively on connecting people to parks, education, and community engagement. The *Call to Action* espoused an expansive vision:

In our second century, we will fully represent our nation's ethnically and culturally diverse communities. To achieve the promise of democracy, we will create and deliver activities, programs, and services that honor, examine, and interpret America's complex heritage. By investing in the preservation, interpretation and restoration of the parks and by extending the benefits of conservation to communities, the National Park Service will inspire a 'more perfect union; offering renewed hope to each generation of Americans (NPS, 2011: 5).

The *Call to Action* challenged the Park Service to "embrace a larger role, building an understanding of our country's shared heritage and preparing American citizens for the duties and responsibilities of citizenship" through education (NPS 2011: 13). A theme of Jarvis's tenure was parks as *places for learning*. He appointed an associate director for interpretation, education, and volunteers, and many years after becoming a junior ranger, I was honored to take on that challenge.

Together with national park education partners; NPF; a strong National Council for Interpretation, Education, and Volunteers; the Mather Training Center; regional chiefs of interpretation, the National Park System Advisory Board Education Committee; scholars from a variety of universities; field interpreters; and many more, we embraced



the challenge of the centennial. We focused our efforts on relevance and inclusion, placing interpretation of events and ideas in their greater context, climate change education, and developing interpretive skills for the 21st century. With the help of author Lotte Lent from George Washington University, the Advisory Board Education Committee published an Interpretive Skills Vision Paper that laid out three targeted goals for interpretation (Lent 2014: 3):

- **Audience desires:** to facilitate meaningful, memorable experiences with diverse audiences so that they can create their own connections (onsite and virtually) with park resources.
- **NPS mission:** to encourage shared stewardship through relevance, engagement, and broad collaboration.
- **Societal needs:** to support global citizens to build a just society through engagement with natural and cultural heritage, by embracing the pursuit of lifelong learning.

### Part of the educational ecosystem

With inspiration from Dr. John Falk of Oregon State University, the Advisory Board envisioned NPS as part of a complex *educational ecosystem* consisting of formal and informal education facilitators—schools, libraries, museums, zoos, aquaria, universities, and the media—where learning happens 24/7/365, anywhere, life-wide and life-deep, with interpreters as facilitators of learning. This shift squarely places learners at the center of programming and establishes a collaboration between the learner and the interpreter. As a result, through the leadership of Katie Bliss at the Mather Training Center, a new set of interpretive competencies are emerging for a new century of learning. A new five-year strategic plan, *Achieving Relevance in Our Second Century*, seeks to put the vision paper’s goals into action and reflects the ongoing evolution of interpretation through an emphasis on relevance and inclusion, educational leadership, active engagement, and business acumen (NPS 2014).



Students learning in Yosemite National Park. | ANA HOUSEAL

... to increase quality of life, help realize the vision of democracy, ensure that all Americans' stories are shared....

### A Centennial Act

On December 16, 2016, President Obama signed the National Park Service Centennial Act into law. Title three section 301 states that

the Secretary shall ensure that management of System units and related areas is enhanced by the availability and use of a broad program of the highest quality interpretation and education.

This law firmly establishes interpretation and education as central to the mission and purpose of NPS and underscores its importance in the future of the National Park System and the nation. Why? As stated in *Achieving Relevance* and in the spirit of over 100 years of park-based learning, to

leave the world in a better place ... to increase quality of life, help realize the vision of democracy, ensure that all Americans' stories are shared, improve education and health, and support environmental and institutional adaptation and resilience (NPS 2014: iii).

With people at the center, true collaboration with partners and learners, and the interpreter as facilitator, we can realize this vision together.

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