

Adequate Wilderness Protection is the Sign of the Maturity of Ecological Civilization
 ——An interview with outstanding ecological ethicist Holmes Rolston III. By Jinhua Ke, Ph.D

充分的荒野保护是生态文明走向成熟的标志

——世界著名生态伦理学家罗尔斯顿访谈

English text below

◎柯进华 霍尔姆斯·罗尔斯顿

编者按:霍尔姆斯·罗尔斯顿(Holmes Rolston III)是世界著名哲学家,他倡导当代哲学的荒野转向,对自然的内在价值进行了严密的哲学辩护,被广泛誉为“环境伦理学之父”。罗尔斯顿的学科视野开阔,先后研习过物理学、神学、生物学和哲学等学科。他在生态伦理学上的重大影响发轫于1975年在国际权威期刊《伦理学》上发表《存在一种生态伦理学吗?》一文,该文引发了国际学界对环境伦理学的持续关注。此后,罗尔斯顿在生态哲学、生态伦理学领域发表一系列论文、出版一系列著作,其中许多作品成为相关领域的必读经典,被翻译成十几种文字,并多次再版,国际影响广泛,如1986年出版的《哲学走向荒野》(*Philosophy Gone Wild: Environmental Ethics*)、1988年出版的《环境伦理学》(*Environmental Ethics: Duties to and Values in the Natural World*)、2012年出版的《新伦理学:为下一个千年的地球生命》(*A New Environmental Ethics: The Next Millennium for Life on Earth*,2020年再版)等。罗尔斯顿于1992年成为科罗拉多州立大学第一位文科终身荣誉教授,2003年因在生态伦理学方面的卓越贡献而荣获坦普顿奖(Templeton Prize)。

罗尔斯顿对荒野有着深沉的热爱,自称是“走向荒野的哲学家”,其荒野情结贯穿于他的思想和生活,是当今世界对荒野问题进行了最深入探讨的哲学家之一。在此次采访中,罗尔斯顿重点强调:荒野是自然中能够保持其自发性和自然进化过程的部分;荒野是“生命世界的根”,孕育和支撑包括人类在内的一切生命;荒野是价值的一个生发源;荒野是人类的他者,塑造了人类的身心,丰富了人类的心灵和精神世界;即使是高度发展的人类文明,也需要依赖荒野自然来支撑和维系。罗尔斯顿一直致力于倡导一种新伦理学来引导现实的荒野保护,这种新伦理学主张一种包容性的爱,反对仅仅视自然为供人类利用的资源,倡导人类作为地球唯一的道德代理人应肩负起荒野保护的责任和义务;荒野保护不仅为了人类的生态福祉和可持续发展,也为了非人类生命自身的善;荒野保护的更大目标是可持续的生物圈。希望此次访谈能激发更多的人关注荒野问题,认识到荒野是生态文明建设的必要基础、充分的荒野保护是生态文明走向成熟的标志,从而推动中国的荒野保护和管理,让“野性中国”成为“美丽中国”的重要支撑。

[作者简介]柯进华,哲学博士,浙江树人大学马克思主义学院副教授(浙江杭州 310015);霍尔姆斯·罗尔斯顿(Holmes Rolston III),美国科罗拉多州立大学荣休教授,国际环境伦理学会(ISEE)及其会刊《环境伦理学》(*Environmental Ethics*)创始人之一,美国国会和总统顾问委员会环境事务顾问

[基金项目]浙江树人大学省属高校基本科研业务费专项资金项目

此次访谈以邮件笔谈的方式进行,其间文稿历经多次中英文转换,最终文稿英文版经罗尔斯顿审定后再由采访者翻译成中文。在此特别感谢中美后现代发展研究院执行院长王治河博士为促成此次访谈所做的卓越工作。

一、荒野观

柯进华:尊敬的罗尔斯顿教授,非常感谢您接受我的采访!您是世界公认的“环境伦理学之父”,您的著作是生态哲学、生态伦理学领域的必读经典,我曾反复阅读,受益匪浅。您有着丰富的荒野体验,足迹遍布世界各地的荒野区,自称是“一位走向荒野的哲学家”,荒野情结贯穿于您的思想和生活。从自然禀赋来看,中国是世界上生物多样性最丰富的国家之一,存有大量的荒野地,被称为“巨型荒野国家”(mega-wilderness nations)之一;^①但作为人口最多、经济总量最大的发展中国家,中国的荒野保护正面临巨大挑战。荒野是维护良好生态环境、支撑和促进经济社会发展的根基,荒野保护已成为中国推进生态文明建设的重要内容。今天我想就荒野观与荒野保护问题向您请教。

罗尔斯顿:谢谢你对我的关注!顺便说一句,我曾去过中国的一些荒野区,如黑龙江省凉水自然保护区和五大连池自然保护区、四川省卧龙大熊猫保护区以及云南省靠近西藏的保护地。

柯进华:荒野观常常决定人们对待自然的基本态度,并对现实的荒野保护产生重大影响。关于“荒野”的界定,1964年的美国《荒野法案》认为荒野指的是那些土地及其生命共同体不受人类束缚的(untrammeled)地区,其显著特征是未被开发,在那里人类就是一个不作逗留的访客;戴夫·福尔曼

(Dave Foreman)将荒野定义为“任性之地”(self-willed land);^②您将荒野描述为“自主运行的世界”(the world that runs itself)。^③我觉得以上定义的共同之处是都强调荒野保持不受人类支配的自主性,这些定义至今对界定荒野和指导荒野保护仍有建设性意义。基于求同存异的原则,我将荒野界定如下:荒野是指未受现代人类影响或者影响很小、保持自然主导的方式运行的地区,它包括荒野地和生活于其中的野生动植物和其他生命形式,其显著特征是未开发的、保持野性的、独立于人的和自发性的。不知道您是否赞同我以上的定义?您现在如何界定荒野?

罗尔斯顿:我至今仍然认为你引用的那些定义是有益的。中国与美国及其他一些新生国家不同。中国人几千年来一直居住在中国这片土地上,广泛种植水稻和其他作物,并为此精心安排设计了灌溉系统。相比之下,欧洲人在新世界仅仅居住了几个世纪;大约在此之前的一万到一万五千年里,美洲土著(印第安人)人口稀少,他们的农业相对较少,没有发展工业。我认为这意味着中国人会认识到被驯化的景观中的野性元素。欧洲国家往往更像中国,因为他们几千年前就定居在那里。但非洲仍然与众不同,人类在那里已经生活了数千年,并且极大地影响了那里的景观。人类是从非洲进化而来的,但直到最近,非洲人民一直缺乏工业和技术,成群的野生动物在那里存活至今。非洲地区可以被视为荒野。

柯进华:您先后提出过“哲学转向荒野”、“价值转向荒野”和“美学转向荒野”等命题,能不能概括一下您对荒野情有独钟的主要原因?

罗尔斯顿:我认为人类需要欣赏三类景观:城市、乡村和荒野。与自发性的野生自然产物相比,整

^①J. E. Watson, O. Venter and J. Lee, et al., "Protect the Last of the Wild," *Nature*, vol.563, no.7729, 2018, p. 27.

^②Dave Foreman, "The Real Wilderness Idea," in Michael P. Nelson and J. Baird Callicott, eds., *Wilderness Debate Rages On: Continuing the Great New Wilderness Debate*, Athens: University of Georgia Press, 2008, pp. 382-383.

^③Holmes Rolston III, *A New Environmental Ethics: The Next Millennium for Life on Earth*, New York and London: Routledge, 2012, pp. 173-178.

个文明是人类的心灵和双手创造的人工制品 (the whole of civilization is mind and hand producing artifacts)。我们常常惊异,荒野大地上的生命是奇妙的。自然是价值的生发源 (originating source of value), 我们通过自然来体验我们的根, 这些野生的、创生性的根在人类到来之前就已经存在。荒野为我们提供了安居乐业的地方, 使我们通达一个深层的维度。我们重新接触自然的确定性。生命, 包括与这个行星环境相适应的人类生命, 是大自然最主要的奥秘。在所有的历史博物馆中荒野是最意味深长的, 它是世界在过去 99.99% 的时间里真实面貌的遗迹, 是锻造我们的熔炉。与造物的相遇重新塑造了我们。

在所有的农田上, 甚至在城市里, 例如在城市的公园里, 都有荒野的元素。大自然永远萦绕不去。如果你想知道大自然是否已经终结, 就去看看当一块空地的前主人搬走后会发生什么。人们可能首先会认为这里已经没有了自然, 因为到处都是人工制品的废墟——易拉罐和破碎的混凝土块等。但大自然又回来了, 很快就会有野草发芽; 如果有雨水而且土壤没有受到太多污染, 野草就会生长茂盛。我们可以用一种更为哲学的方式说, 大自然仍然知道如何评估这个地方; 或者当它冲走人类的破坏痕迹后, 它知道什么样的价值仍然可以在那里维持。从这个意义上说, 一片空旷的城市土地看似是一个自然已经终结的地方, 但如果再多观察一段时间, 它将雄辩有力地证明自然不会也不可能终结, 尽管它曾被人类管理和不当管理过。在文化里、在与文化相伴的过程中和文化的底层, 永久的自然总是存在。人类可以延缓自然力, 但如果人类退场, 自然力就必将王者归来。

柯进华: 著名的环境思想史家纳什 (Roderick Nash) 1967 年出版了影响广泛的著作《荒野与美国思想》, 他认为荒野是美国文明建立不可或缺的原材

料, 荒野是美和自由的象征, 是美国文明的象征, 代表着美国人的独特身份和精神特质。奥尔森 (Sigurd F. Olson) 认为荒野是美国人获得心灵健康的必需品: “荒野之于美国人而言, 是一种精神的需要, 一种现代生活高度压力的矫正法, 一种重获平衡和安宁的方式。”^① 还有其他代表性人物的荒野观点, 我在这里不一一赘述。请问他们的荒野观能代表美国大众对待荒野的基本态度吗? 随着工业化和城市化的进一步发展, 据说美国现存的荒野地只占国土的 5% 左右, 大多数人的生活是远离荒野的, 不知道当前美国大众对荒野的基本态度有没有改变?

罗尔斯顿: 那要看情况。在我年轻的时候, 我生活的地方尽管有一些原始地区, 但没有荒野。1964 年, 当最初的《荒野法》通过时, 13 个州的 54 个地区 (910 万英亩) 被划定为荒野。从那时起, 国会已经上百次地颁布相关新增法案, 荒野系统几乎每年都在增长, 现在已有 750 多个官方荒野区域, 面积近 1.1 亿英亩。总的来说, 整个美国约有 5% 的土地受到保护, 面积相当于加利福尼亚州。但由于阿拉斯加州拥有美国一半以上的荒野, 因此美国只有约 2.7% 的毗连地区受到保护, 大致相当于明尼苏达州的面积。我最喜欢的美国荒野区之一, 是一个绵延数百英里的巨大峭壁, 叫作“中国墙” (the “Chinese Wall”), 这是大自然塑造的, 并非中国人建造。

漫步于荒野之中, 我常常追问是什么文化诱使我忘记了自己有着自然的根。野性并不仅仅属于过往, 它仍然是创生性的母体。我背着背包在荒野中轻快地走着, 当我凝神数息时呈现出来的是每一个细胞都包含一个呼吸链, 从微生物到人类, 它是一种已经进化了 15 亿年的叫作“细胞色素 C 分子”的电子载体 (an electron carrier called the cytochrome-c molecule)。在荒野中, 人不是衡量万物的尺度。

一些神学家曾经问霍尔丹 (J. B. S. Haldane) 从

^①Sigurd F. Olson, *The Meaning of Wilderness*, edited and with an introduction by David Backes, Minneapolis/London: University of Minnesota press, 2001, p. 61

生物学中学到了什么。他回答说,上帝“偏爱甲虫”。在所有的已知动物物种中,大约有四分之三是昆虫。根据某些标准,昆虫是最成功生命形式,其中甲虫类的数量占比很大。上帝狂热地创造甲虫,甲虫经过进化又狂热地形成多样化的物种。野生生物拓宽了生命存在的深度和广度。

柯进华:在与克里考特(J. Baird Callicott)关于是否应该允许原住民在美国现存荒野区居住的争论中,您坚持认为不该允许原住民在现存荒野区居住。在我看来,您的理由主要基于现代文明与荒野之间存在的张力,这样理解对吗?

罗尔斯顿:在一些国家的一些地方,我可能会认可土著人以自己的生活方式生活在荒野中(例如在澳大利亚)。但在美国,我们既有荒野地,也有指定给印第安人的土地,但这些美洲土著人的生活方式并不是完全土著化的,他们不同程度上都是现代人。他们有汽车、在杂货店购物,有的经营赌场赚钱。有趣的是,在一些地方,美国土著人将他们部落的一些土地指定为荒野。

柯进华:康芒纳(Barry Commoner)提出的生态学四条法则中的第三条是“自然界所懂得的是最好的”。^①根据自组织系统理论,地球生态圈可以被看作是一个结构精良的自组织系统,所有自然界产生出来的东西,都要经过这个自组织系统的检验。凡被纳入地球自组织系统且有益于自然生命存在和延续的事物,均能被地球自组织系统保留,否则将被淘汰。当前,肆虐全球的新冠疫情已经持续近两年,新冠疫情能否被看作是地球自组织系统对人类作出的惩罚或发出的警告?新冠疫情让您对人与荒野的关系问题作了哪些反思?

罗尔斯顿:我确实对新冠疫情作了一些反思,并惊讶地发现这种病毒如此之小,以至于没有复杂的显微镜就看不见它,从某种意义上说它甚至不是活物,仅仅是一种病毒寄生虫,但却可以阻碍全人

类的成就、愿望和自由。这种微小的生物对我们这些自认为强大的人类造成了巨大的破坏,让我们感到惊愕。一种病毒可能危害全球健康,这在过去会被看作是危言耸听。现在人类已经能够登上月球、研究暗物质,或者向小行星发射探测器,甚至可以分析 130 亿年前的宇宙大爆炸,但回到地球上,我们却不确定未来到底会发生什么,不管是近期的还是遥远的。自满的人类傲慢自大,如今被迫谦逊。大自然依然存在,野性自然既有可预测的方面又有无序的方面,我不知道人类现在已经吸取到什么教训。

柯进华:迄今为止,中国人总体上对“荒野”概念的接受度较低。在汉语中,“荒野”一词带有“危险”“混乱”“荒凉”“贫瘠”“无用”“野蛮”“落后”等贬义。从词源学角度考察,在《说文解字》中,“荒”是指不长草或者长满了野草的土地。不管是否长草,“荒”都是指未被开发、无法开发或者不值得开发的土地。在漫长的农业文明时代,“荒地”意味着在农业文明中对人类没有价值的土地。在《说文解字》中,“野”即“郊外也”,它首先是一个空间概念,与西方的“野性”(wildness)概念不同。与“荒野”相比,中国人更偏爱“自然”一词。在中国文化中,自然有着丰富的内涵,不仅指物质性的世界,还代表事物的规律和本性,如道家的“道法自然”;更为独特的是,自然本身具有道德属性,比如中国传统经典《周易》讲“天地之大德曰生”。中国古人普遍认为自然有“生生之德”,因为自然孕育生命、维持生命并珍爱生命;自然既是人类赖以生存的物质基础,也是人类应该效法的道德榜样;自然代表人类必须遵循的规律,也代表事物依其本性而存在的状态。

看似有点矛盾的是,荒野在中国文学艺术中却有着重要的地位。中国古代的诗与画描绘或构建了一个内涵丰富的“荒山野水”意象,体现了中国独特的地理环境、审美情趣、传统信仰和哲学,至今仍深刻影响着中国人的审美观、自然观、生命观、人生观

^①巴里·康芒纳:《封闭的循环》,侯文蕙译,长春:吉林人民出版社,1997年,第32页。

和文化心理。正如您将白头翁花(Pasque flower)视为荒野的象征,在某种意义上可以说,山水是中国荒野的象征。

罗尔斯顿:“野”(wild)是一个狂野的词、复杂的词。当一个孩子的行为变得“狂野”,或者当市场变得“疯狂”、混乱和不可预测时,这时的“野”是一个贬义词。我们总是希望我们文化中的事物能够被教化和控制,但是正如我一直在思考的,“野”也可以指野生自然的创造性维度。“自然”也是一个复杂的词,有很多层次的含义。那些制造东西的人可能会说他们的产品是“天然的”,以有益于他们的销售。在这一意义上,美国人不喜欢“不自然的”(unnatural)东西,他们不愿做“违背他们本性”的事。在当下的美国,“自然的”事物是令人向往的,其中一些是他们/它们与生俱来的,另一些则是他们培育出来的。

柯进华:正如您所说,超越人类中心主义的新生态伦理学“只能是出于对自然的爱”,^①“荒野是一个活的博物馆,展示着我们的生命之根”。^②荒野是生命进化的竞技场,荒野比任何一所大学都更能够教育人们崇尚自然和敬畏生命。中国传统文化中包含亲近自然、爱护自然和珍爱生命的宝贵资源,如中国传统的山水文化和天人合一思想,又如道家的“无为”理念和儒家的“生生”思想等,它们有助于培育人们爱护荒野的情怀和智慧。中国需要系统发掘优秀传统文化中的荒野观,同时借鉴西方荒野思想,建构具有中国特色的生态荒野观,培育大众尊重荒野、爱护荒野的情怀,为中国荒野保护和生态文明建设提供重要的精神理念支撑。荒野保护地的建设将为大众体验荒野、亲近自然提供良好的场所。

罗尔斯顿:的确!我们在室内很难体验敬畏感或崇高感,鸡皮疙瘩更常出现在户外体验中。如我们俯瞰峡谷的无底深渊时,这种感觉是非常美妙

的;当暴风雨接近高潮时,人的头发在充满电荷的空气中竖起,那种可怕的寒冷也是如此;一个松果里蕴含一片森林的想法也是如此。所有这些体验都不可能在大都会的博物馆中获得。

二、荒野保护

柯进华:当今的全球变暖、气候变化和物种大灭绝等是工业文明导致的生态系统紊乱和退化的体现。荒野具有人工环境所无法比拟的复杂性、多样性、创造性和自我调节性等,充分的荒野保护是保护生物多样性的关键。但令人遗憾的是,人类至今未能有效减缓生物多样性的丧失速度,其中各种不合理的开发利用,是导致荒野退化、碎片化和丧失的主要原因。保护现存的荒野是当前公认的风险最小、效率最高和成本最低的荒野保护措施。下面我想就荒野保护问题向您请教。

首先,我们需要明确荒野保护的实质和目标。在我看来,荒野保护并不排斥人类的合理需求,而是需要建立有效机制来限制对荒野的某些类型的利用或改变其利用方式,以保存自然的野性和自主性;荒野保护的直接目标是有效保护生物多样性和生态系统多样性,守住生态安全边界,提升生态系统的健康、质量和稳定性,促进地球生命的繁荣,避免因自然的过度人工化而导致物种大灭绝和人类文明走向自毁。不知您是如何看待荒野保护的实质的?

罗尔斯顿:地球数十亿年积累的创造性财富已经交到人类这个物种身上,心灵之花已经开放,道德已经出现。美国人,世界舞台上的后起之秀,爆炸式地发展着他们的新世界,最近已经意识到他们所在的大陆上那些丰富多样的生命所面临的威胁,并对新的保护责任以及随之而来的好处有所警醒。美国人希望濒危物种能在那里存活,既作为国宝,也

^①罗尔斯顿:《哲学走向荒野》,刘耳、叶平译,长春:吉林人民出版社,2000年,第35页。

^②罗尔斯顿:《哲学走向荒野》,刘耳、叶平译,长春:吉林人民出版社,2000年,第213页。

出于他们所主张的为这些事物自身。

柯进华:承认自然的内在价值是否是有效保护荒野的必要条件?一类人指出,荒野保护首先是一个科学问题而不是一个道德问题,是人类在正确认识生态规律的基础上对自然规律的自觉遵循,具体来说是对自然的生态权力(nature's ecological power)的遵循。自然规律本来就是无法违背的。只是由于荒野为人类提供重要的生态系统服务价值,荒野保护关系到人类的利益,才使得荒野保护有了伦理道德意义。但荒野保护的伦理道德意义根源于人类的利益,是对大众生态福祉的维护,因此,荒野保护仍然只属于人类社会伦理范畴,人类对荒野自身并不负有道德责任。您如何看待这一看法?

罗尔斯顿:我确实希望荒野保护能够成为人类需要的生态系统服务,但这只是我的回答的一半。我也希望荒野保护能使人类关心这个奇妙地球上的生物。有时我们必须选择与自然隔离,让自然自己运行;有时我们选择与自然合一,因为人类在很大程度上是自然的一部分。自然支撑我们的系统,塑造了我们是什么样的存在。

柯进华:从宏阔的生命演化视角来看,您认为荒野保护除了谋求人与自然、文明与荒野的和谐共生这一重要目标之外,还有没有更为远大的或终极的目的,比如荒野保护的终极目标是保护地球生命的自然演化过程、保护物种的进化潜能,或者说是保护可持续的生态系统、可持续的生物圈?

罗尔斯顿:即使是最先进的文化,也需要某种包容的环境适应性。人类生活在人工技术圈(technosphere)之中,但仍然居住在生物圈。从生态的角度看,说人类在这部戏剧中的角色是确立世界的全部价值,这是狭隘和无知的。生态并不是人类头脑中主观的东西。从生态学的角度来看,地球是有价值的,这意味着进化的生态系统能够产生价值,并且长期以来一直如此。这一过程的一个后期的、非凡

的产物是人类,人类可以声称自己有独特的价值。但当人类来到地球时,他们发现地球是有价值的,能够产生有价值的经验(valued experiences)。主观价值事件(the subjective value events)是叠加在全球的、客观的价值生产和支撑上的一个子集。许多人已经报道了自我实现是如何在荒野环境中培养的。大自然是一个“认识你自己”的地方。大自然有时是一个展示我们人类能做什么(show what we humans can do)的舞台;在其他时候,我们人类希望能参与大自然的表演(be let in on nature's show)。

一个完全敌对的环境会屠杀我们,生命不可能在那里出现;一个完全和平的环境会使我们停滞不前,生命也不可能在那里出现。我们在文化中形成我们的古典人性,我们在科学中形成我们的现代人性,但人性都起源于人类所面对的带有对抗性的自然。自然坚决要求我们工作,而这种劳动甚至痛苦是其根本的经济压力(its fundamental economic pressure)。先驱、朝圣者、探险家、殖民者和殖民者们热爱边疆,因为它带来的挑战和锤炼将纤维注入了人的灵魂。我们为荒野的逝去而哀叹的一个原因是:我们不想完全驯服造就我们天赋的这一原始元素。

柯进华:的确,现代人容易遗忘的一个常识是:荒野孕育了人类并塑造了人类的心智。关于荒野与人性的内在联系,世界著名生物学家爱德华·威尔逊(Edward Osborne Wilson)对此也有深入探讨。^①人们在荒野保护的动机和具体措施上是存在争议的,在美国主要表现为资源保护主义(Conservation)与自然保护主义(Preservation)之争,这也可能是世界荒野保护遭遇的主要争议之一。资源保护主义者将自然视为资源,因为认识到了自然资源的有限性,所以提出保护自然资源和“科学高效”地管理利用自然资源,以实现经济社会的可持续发展。简言之,资源保护主义的目的是科学管理和合理地开发利用自然。而自然保护主义者认为,不能将荒野仅

^①参见柯进华:《荒野与人性:爱德华·O. 威尔逊的荒野观研究》,《自然辩证法研究》2019年第7期。

仅视为供人类利用的资源,荒野本身具有内在价值,并且是价值的源泉和创造者,我们需要为了荒野自身而保护荒野的伦理维度,荒野保护的核心是保留荒野的生态完整性和野性。因此,自然保护主义者提出保留现存的荒野,使现存荒野不受或尽量少受人类的干扰。简言之,自然保护主义者主张人类应肩负起保护现存荒野的伦理责任,他们认为荒野保护是一种道德行为,具有超功利性的一面。克里考特认为,我们应该废弃“荒野区”(wilderness area)这一术语,用“生物多样性保护区”(biodiversity reserve)来取代。^①您对此提出反对,能否谈谈您反对的主要理由?是否可以将您与克里考特关于荒野的争论视为资源保护主义与自然保护主义之争的一个体现和延伸?

罗尔斯顿:我的主要反对意见是:“生物多样性保护区”意味着我们正在拯救我们的自然资源,这是基于人类自身的利益,太短视了,甚至根本上是自私的。我们拯救自然是因为自然对我们有好处,还是因为自然本身的产物和过程及其动植物有着自身的善?这个至关重要的问题有一个简短的答案:两者都有。

人类是自然界最丰富的成就,但不是自然界唯一的成就。在与我们崇高地位的悬而未决的紧张关系中,我们必须判断出多样性的存在比只有人类的世界更为丰富。我们需要根据自然来定义自己,而不仅仅是根据我们来定义自然。现在有人说,我们正在进入自然终结的人类世。但我认为我们并不想生活在后自然世界(post-natural world)里,不想生活在一个人造星球上。我并不认为人类能聪明到可以重新设计他们的星球。

单凭“生物多样性保护区”进行荒野保护,将会是一个贫乏的生物区。细想一下植物。植物是一个

自发的生命系统,通过控制程序自我维持。它执行这个程序,使用反馈循环来检查其性能。它自我组合和重组,维持秩序以对抗无序的倾向。植物没有可预见的目标,它们不是一种生命主体。然而,每种植物都发展并保持着一种植物的身份,在自身和环境之间划定了一条边界,如橡子变成橡树、橡树独自直立。

这个植物学程序编码在DNA中,如果没有它,植物就会坍塌成腐殖质。因此,基因集实际上是一个规范集,它区分了什么是和什么应该是,但这并不意味着植物是道德代理人。生物体是一个评价系统,为自己选择资源。惰性的岩石是独立存在的,对环境没有任何主张。但是,植物依靠自身将环境作为资源和排泄场,从中汲取能量和物质并进行排泄。因此,植物从土壤(岩石也是如此)中生长出来,然后再利用土壤来制造资源(这与岩石不同)。从客观的角度来看,生物体的形态和新陈代谢是一种有价值的状态。“活性的”(vital)一词现在比“生物的”一词更为丰富。一种野生植物早在保护生物学家出现之前就已经在从事保护其生物特性和种类的工作。珍视自然的人类应该尊重植物本身——保护生物学的自然系统。

柯进华:您是否认为有必要坚持某种形式的价值分级?大多数人坚持认为,人类作为一个物种有着崇高的地位;人类不是自然界中的普通一员,因此,不管是在物种层面还是在个体层面,人类都具有最高的内在价值。在现实生活中,我们必然会遭遇价值冲突问题,价值分级理论有助于指导人们解决这一问题。根据我对您的著作的理解,您倡导的是生态整体主义,认为生态系统过程具有某种压倒一切的价值。您似乎认为作为整体的生态系统的价值要高于物种的价值,物种的价值要高于生命个体

^①J. Baird Callicott, "Contemporary Criticisms of the Received Wilderness Idea," in Michael P. Nelson and J. Baird Callicott, eds., *The Wilderness Debate Rages On: Continuing the Great New Wilderness Debate*, Athens: The University of Georgia Press, 2008, pp. 355-374.

的价值。您的这些看法算不算是一种价值分级？

罗尔斯顿：我们首先要明确，对生存最重要的东西是生物圈。如果生物圈退化，其他一切都会相应地消失。在地球 4000 万个世纪的生命史中，我们已经进入了第一个这样的世纪，其中的一个物种——人类可能危害整个地球的未来。荒野地保护不是博物馆的工作。如果你愿意，可以说这些过程具有原始特征。但荒野保护倡导者并不寻求阻止自然变化，他们不会把荒野“封冻”得严严实实。今天，荒野保护倡导者寻求保护的是动态的和仍在进行的荒野过程。提出一个更为全面和完善的“荒野保护”概念的目的，是为了永久延续不断进行着的进化和生态过程的完整性。

柯进华：生态环境的悲剧往往是社会悲剧的延伸，反过来又加重着社会悲剧。荒野保护常常与各种社会问题密切相关甚至交织在一起。各国因为生存境遇、社会关系和文化传统等的差异，其荒野保护面临不同的状况和困难。总体上，与发达国家相比，发展中国家由于需要迫切解决生存和发展等问题，再加上资金、技术方面的相对落后，导致在荒野保护上面临更多困难。印度学者古哈(Ramachandra Guha)曾指责说：首先，美国的荒野保护是美国人进行资源保护的一种托词；其次，美国的荒野保护问题是发达国家提升生活品质的问题，而发展中国家、第三世界国家要优先解决的是发展经济、解决生存的问题；第三，在第三世界建立荒野保护区常常是为了满足生活富裕的旅游者们的兴趣而迫使大量的原著居民迁移，实质上是将资源从穷人的手中转移到富人那里，这无疑是一种生态帝国主义。^①您认为发展中国家的荒野保护面临的主要挑战是什么？对此您有哪些提醒或建议？

罗尔斯顿：啊！我发现我们的生活步入了一个双重恶化的“棘手”世界(wicked world)。首先，这里

是在新的意义上使用“棘手”一词，即指不完整、相互矛盾、相互影响、相互冲突和不断变化的要求往往难以识别或处理。一个棘手的问题(a wicked problem)是难以解决或者无法解决的。如果试图解决这边的问题，就会改变那边正在发生的事情，使那边的人们不高兴。在更远的地方，在几十个其他地方，人们可能对此感到不高兴或因此得到帮助，而这些通常是不可预测的，悲剧在于好与坏是紧密结合在一起的。依据我们通常认为的进步，这种取舍被放大了。这是“第二十二条军规”，一个难以解决的两难，由于存在相互冲突又相互依赖的条件，因此无法解决。

早些时候，我们可能会说这个问题是“混乱的”“难处理的”“无定形的”“无序的”，或许我们所能做的就是“勉强应付”(muddle through)。但如果将这个问题看作“棘手的”，强调这个问题是严重的、费力的、紧迫的，就具有道德含义了。如果我们拖延下去，问题就会变得更糟甚至恶化。我们面临一个泥潭，一个“第 22 条军规”。我们要应付一个迫在眉睫的棘手问题。人类对自然或综合性生态系统的短期和长期影响往往是未知或不可预测的，而错误的后果是令人恐惧的、不可逆转的，并且往往是隐藏的和不断升级的。

除此之外，还有传统意义上的“邪恶”。尤其是作为当地社区和国家中的个人，人们倾向于自私自利。政客们坚定地掌控自己的权力；选民们选择立法委员来获得他们想要的，并增加他们所谓的“津贴”，以维护他们自己和他们孩子以及他们孩子的孩子。

也许我们必须采取务实的适应战略。我们所能做的最好的事情就是召集尽可能多的利益相关者，看看各方的支持者们经过拉锯式的商议后能否在足够多的问题上达成一致，以便在我们这个奇妙的

^①Ramachandra Guha, "Radical American Environmentalism and Wilderness Preservation: A Third World Critique," *Environmental Ethics*, vol.11, 1989, pp. 71-83.

地球上测试一个可持续的、健康的、尊重生命的、富有道德关切的和变化范围可接受的五年计划。我们需要弄清楚是怎么走到现在这一步的,下一步我们要去哪里?我们计划在现有知识的基础上实现最佳的即时结果。我们也同意将来再次会面,看看是否可以通过作一些修改再商定另一个五年。这是一种更明智的“勉强应付”。我们能得到的鼓励是,我们面临的棘手悖论没有比我们用来寻求解决方案的超大型大脑/头脑更复杂。

柯进华:迄今为止,人类是唯一的道德代理人。为了生态保护,人类有时需要责无旁贷地牺牲自己的一些短期的或部分的利益。您的一个令人鼓舞的洞见是:“只要做正确的事,从长远来看,事情最终会变成双赢。”^①

三、荒野保护与生态文明建设

柯进华:当今全球生态环境整体上仍在持续恶化,生态文明建设成为人类文明发展的必由之路。可喜的是,越来越多的人认识到了这一点并在为实现文明的生态转向而奋斗。令人鼓舞的是,中国政府率先提出生态文明建设理念,将生态文明建设纳入国家发展战略,并作为基本国策写入党章和宪法。目前中国对生态文明愿景的基本描述是:“坚持人与自然和谐共生”,“必须树立和践行绿水青山就是金山银山的理念,坚持节约资源和保护环境的基本国策,像对待生命一样对待生态环境,统筹山水林田湖草系统治理,实行最严格的生态环境保护制度,形成绿色发展方式和生活方式,坚定走生产发展、生活富裕、生态良好的文明发展道路,建设美丽中国,为人民创造良好生产生活环境,为全球生态

安全作出贡献”。^②其中,民众的生态福祉在很大程度上得到了强调。

您一直致力于倡导一种新伦理学、种际伦理学,这种伦理学要求克服人类中心主义,要求人类为了自然本身而去履行相应的责任义务,反对把自然仅仅视为资源,而是将自然视为内在价值的源泉、创造者和人类安顿身心的家园,以尊重、欣赏和爱的方式去对待自然。这与为满足人类需求和欲望而去科学管理、改造和利用自然有着很大区别。从您的新伦理学出发,您如何看待中国的生态文明理念?能否为我们描述一下您心目中的生态文明愿景?

罗尔斯顿:我们很少使用“生态文明”一词,但我们经常使用意思相近的词语。我们谈论“维持生态系统服务”“可持续性”“可持续发展”“环境经济学”“景观生态学”“生态系统完整性”等。我们通常认为,保护“可持续的生物圈”是第一要务。

柯进华:中国生态文明建设也非常强调人与自然是一个生命共同体,坚持人与自然的和谐共生,这与您所强调的“可持续的生物圈”是相通的。现代人大多生活在城市,其次是乡村,很少人有体验荒野的机会,因此对荒野的认知和关注往往是最少的。从人类生存和可持续发展这一宏大视野看,荒野环境、乡村环境和城市环境三者在现代人类生活中是不可或缺的。您在《哲学走向荒野》中很早就提出合理的生态格局:“最理想的世界不是一个完全为人类所消费的世界,而是给城市、乡村与荒野都留有适当的空间的世界。”^③您能否简要阐述一下这三者之间的关系?

罗尔斯顿:随着对自然美景、乡村和野外体验的减少,人们的生活将变得贫乏。人类对地方感^④(a

^①Holmes Rolston III, *A New Environmental Ethics: The Next Millennium for Life on Earth*, New York and London: Routledge, 2012, p. 152.

^②习近平:《决胜全面建成小康社会 夺取新时代中国特色社会主义伟大胜利——在中国共产党第十九次全国代表大会上的报告》,北京:人民出版社,2017年,第23—24页。

^③霍尔姆斯·罗尔斯顿:《哲学走向荒野》,刘耳、叶平译,长春:吉林人民出版社,2000年,第317页。

^④罗尔斯顿强调的“地方感”类似于中国人讲的乡愁、故乡情结。

sense of place)——归属于一个坐落在特定景观上的社区——的渴望由来已久。所有人都需要一种“我的国家”的感觉,一种建立在可持续景观上的、他们关爱的社区的感觉。我们在管理这些地方时,也应该对在人类到达那里居住之前就已经“在位”的生命保持敏感。我们所需要的道德规范确实包含构建一种地方感的需要,但人也需要一种居住在景观上的具体感觉。

柯进华:深层生态学家普遍认为,现代人若想真正走向成熟的文明,就一定要到荒野中去“认识和体验”。^①通过与您交流,我更加坚定了自己的一个观点:荒野保护是生态文明建设的核心内容之一,充分的荒野保护是生态文明走向成熟的标志。荒野孕育了人类,支撑着人类文明。荒野保护并不排斥人类的合理需求,荒野保护是当今全球生态危机背景下人类积极寻求人与自然和谐共生的重要途径。成熟的生态文明能够科学认知荒野不可替代的多重价值,特别是其生态价值和精神文化价值;它在科学认知人与自然内在亲密关系的基础上,能够发展出一种尊重自然、欣赏自然和爱护生命的伦理学来自觉规范和约束人类行为,促使人们肩负起为荒野自身的原因去承担保护荒野的责任和义务;它完全有能力在实现人类物质生活和精神生活共同富裕的情况下,为人类自身和地球其他生物提供良好生存环境,让荒野永远保持其野性、自发性和独立性,让自然的演化永续进行,让地球生命繁荣昌盛。

保留荒野的理念是生态文明思想发展的重大成果之一。套用您的话来说,衡量一种生态文明思想是否深刻的尺度之一,就是看它是否把荒野看作

与文化是互补的,而给予她应有的尊重。^②中国当前生态文明建设的重要内容是合理布局城市、乡村和荒野,优化生产、生活和生态空间的开发保护格局,实现城市、乡村与荒野在差异化发展基础上的和谐共荣;城市和乡村生态文明建设的重心是实现生产空间的集约高效、生活空间的宜居适度,减少对生态环境的污染破坏;而荒野地区生态文明建设的重心是以生态科学和新的生态伦理学为指导来约束人类行为,尽量减少对荒野的干扰,以保护生物多样性和文化多样性,拓展环境容量,提升生态系统质量和稳定性。近年来,中国自然保护区和国家公园建设取得了可喜的成绩,它们的面积和管理水平都有所提高。希望更多的人能关注荒野保护;希望中国能尽早出台相关政策和法律法规来优先保护现存荒野,将荒野保护地作为一种独立的自然保护区类型有效保护起来,让“荒野”成为“生态文明”的必要基础,让“野性中国”成为“美丽中国”的必要支撑。

罗尔斯顿:与荒野这个他者的相遇将激发人们对户外大格局的思考。我希望每个人都能在与荒野这个他者的相遇中有所转变。

(罗尔斯顿有意将此次访谈的中英文版收入他的个人数字图书馆,有兴趣的读者可以登录网站查阅。罗尔斯顿的个人网站:<https://sites.google.com/a/rams.colostate.edu/rolston-csu-website/>;科罗拉多州立大学数字档案链接:<https://mountainscholar.org/handle/10217/100484>。)

责任编辑:胡颖峰

^①George Sessions, *Deep Ecology For the 21st Century*, Berkeley: Shambhala, 1995, pp. 323-407.

^②罗尔斯顿在《哲学走向荒野》中写道:“衡量一种哲学是否深刻的尺度之一,就是看它是否把自然看作与文化是互补的,而给予她应有的尊重。”参见霍尔姆斯·罗尔斯顿:《哲学走向荒野·代中文版序》,刘耳、叶平译,长春:吉林人民出版社,1997年,第11页。

planet, and this is not a far-fetched daydream that cannot be reached.

Adequate Wilderness Protection is the Sign of the Maturity of Ecological Civilization: An Interview with World-famous Ecological Ethicist Holmes Rolston III

◎Ke Jinhua & Holmes Rolston III

Holmes Rolston III is a world-famous philosopher who claims himself to be “a philosopher going toward the wilderness”. He has a deep love for the wilderness and his wilderness complex runs through his thought and life. He is one of the philosophers who have advanced the most in-depth discussion on the wilderness issue in the world. This interview focused on the concept of wilderness and wilderness protection. In this interview, Rolston emphasized the following points: wilderness is the part of Nature that can maintain its spontaneity and its process of natural evolution; wilderness is “the root of the world of life”, which breeds and supports all life, including human beings; wilderness is an originating source of value; wilderness is the other of human beings, which shapes human body and mind and enriches human soul and spiritual world; even highly developed human civilization needs to rely on wild Nature for support and maintenance. Rolston has always been committed to advocating a new ethics to guide the practice of wilderness protection. This new ethics proposes an inclusive love, disapproves of only viewing nature as a resource for human to make use of, and advocates that human beings, as the only moral agent in the world, should shoulder the responsibility and obligation of wilderness protection because wilderness protection is not only for the human’s ecological well-being and sustainable development, but also for the goodness of the non-human life while the greater goal of wilderness preservation is to protect a sustainable biosphere. Wilderness is essential for the ecological civilization, and adequate wilderness protection is the sign of the maturity of ecological civilization. We hope that more people will pay attention to the wilderness and make “Wild China” an essential support for “beautiful China”.

On the Role of Digitalization in the Innovation of Waste Classification and Treatment: A Case Study of “Huge Recycling” in Zhejiang Province

◎Sun Xuyou

With the policy advocacy and practical innovation of waste classification, digital technology has generally penetrated into the process of urban waste classification and resource utilization, and has become an innovation engine to boost waste classification and treatment. The case study of “Huge Recycling” in Zhejiang Province found that digital technology intervenes in the waste classification process, realizes the optimization of “waste” flow process and the reconstruction of “subject” interest relationship through the “chain” of governance mechanism, the “structurization” of the governance subject relationship and the “multiple integration” of governance objectives, and promotes the modernization of waste classification governance system and governance capacity. In order to ensure the sustainability of digital promotion of waste classification and treatment innovation, it is necessary to consolidate the social foundation such as residents’ environmental protection participation and community organization network.

The Governance Effectiveness, Difficulties and Countermeasures of Garbage Exchange Supermarket from the Perspective of Modern Environmental Governance System: A Study Based on a Survey in S County, Anhui Province

◎Wang Linyang & Wu Jinfang

Constructing a modern environmental governance system is the basic guarantee for perfecting waste classification while giving full play to the role of corporate entities in waste recycling is a key step. The garbage exchange supermarket in S County, Anhui Province has obvious advantages in improving the ef-

Adequate Wilderness Protection is the Sign of the Maturity of Ecological Civilization

—An interview with outstanding ecological ethicist Holmes Rolston

By Jinhua Ke, Ph.D

Dr. Ke: Professor Rolston, you are widely regarded as “the father of the discipline of environmental ethics” in the world. It is a great honor to have a dialogue with you, and thank you for accepting my interview on “the Chinese view of wilderness and its wilderness protection.” Your work is required reading in the field of environmental ethics and the philosophy of ecology. I have read it repeatedly and benefited a lot. I am deeply grateful for that. You have rich wilderness experience

and claim to be “a philosopher going toward the wilderness.” Wilderness runs through your thought and life. From the perspective of the natural endowment, China is one of the countries with the richest biodiversity in the world and also has a large number of wild lands, so much so that China has been called one of the “mega wildness nations” (Cao Yue, etc. 2019). On the other hand, as a developing country with the largest population and economy, China’s wilderness dilemma is becoming increasingly prominent, and wilderness protection is facing broader challenges.

Wilderness is the foundation to support and promote economic and social development and maintain an excellent ecological environment. It has become a significant part of China’s ecological civilization construction. Today, I would like to focus on the issue of “the Chinese view of wilderness and its wilderness protection” and ask you for advice.

Rolston:

Thanks for your interest. Incidentally, I have been in Chinese wilderness several times – in north China in the Liangshui (Cold Water) Nature Reserve and the Wudalianchi Nature Reserve, on the Wolong Panda Reserve, and on protected lands in Yunnan Province out near Tibet.

1. The View of Wilderness

Dr. Ke: The view of wilderness usually determines people’s basic attitude towards wilderness and has a great impact on actual wilderness protection. Now I would like to discuss your views on wilderness.

The first is the definition of wilderness. According to the 1964 Wilderness Act in the United States, “A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the Earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” Dave Foreman defined wilderness as “self-willed land” (Dave Foreman, 2000); you also described it as “the World that runs itself” in your book *A New Environmental Ethics* (2012). The common ground in the above definitions is that they all emphasize the independence of wilderness from human domination. These definitions are still constructive to define wilderness and guide wilderness protection. Based on the principle of seeking common ground while reserving differences, I define wilderness as follows: Wilderness refers to an area that is not dominated or has little impact by modern humans and operates naturally. It includes wilderness land, wild animals and plants and other forms of life living within it. Its remarkable characteristics are undeveloped, wild, independent and spontaneous. I wonder if you agree with my definition. How would you define wilderness now?

Rolston:

I continue to think that the definitions you cite are useful. But China as a nation is different from America and some other New World nations in that China has been a landscape inhabited by humans

for many thousands of years, widely cultivating rice and other crops, arranging elaborate irrigation schemes to do so. In contrast the New World landscapes have been inhabited by Europeans for only several centuries and before that were rather thinly populated by native Americans (Indians) for some ten or fifteen thousand years, who had comparatively little agriculture and no industrial development. That means, I think, that the Chinese will recognize elements of wildness in domesticated landscapes. European nations are often more like China in that they too have been settled landscapes for several thousand years.

Africa is still different in that humans have been there for millennia, and dramatically affected the landscape. Humans evolved in Africa. But African peoples lacked industry and technology until recently, and hordes of wildlife did survive and still survive in contemporary times. Areas of Africa can be considered wilderness.

Dr. Ke: You have successively put forward such propositions as “philosophy turning to the wilderness,” “value turning to the wilderness,” and “aesthetics turning to the wilderness.” Can you summarize the main reasons why you love wilderness so much?

Rolston:

I think there are three kinds of landscapes that humans need to appreciate: the urban, the rural, and the wild. The whole of civilization is mind and hand producing artifacts in contrast to the products of wild spontaneous nature. We need to wonder, and life on wild Earth is wonderful. Nature is an originating source of value. We experience our roots, these wild generative roots at work before humans arrived. A wilderness puts people in their place. We reach a dimension of depth. We recontact the natural certainties. Life, including human life fitted to this planetary environment, is the principal mystery that has come out of nature. Wilderness is the profoundest historical museum of all, a relic of how the world was in 99.99 percent of past time, the crucible in which we were forged. Encounter with creation re-creates us.

There are elements of the wild on all farm lands and even in cities, in city parks, for example. Nature is forever lingering around. If you wonder whether nature has ended, watch what happens on a vacant lot when its former owners move away. One might first think that there is no nature left, since the lot is filled with the rubble of artifacts--pop cans and broken concrete blocks. But nature comes back, and soon there are weeds sprouting up, a lush growth of them, if there is rain and the soil is not too contaminated. We could say, in a more philosophical mood, that nature still knows how to value the place, or knows, as it flushes out the human disruptions, what values to put in place that can still be sustained there. In that sense, a vacant city lot, which might seem to be a place where nature has quite ended, is, if watched a little longer, a place that testifies eloquently to how nature, managed and mismanaged by humans though it may be, does not and cannot end. In, with, and under culture, there is always this once and future nature. Humans stave off natural forces, but the natural forces can and will return, if one takes away the humans.

Dr. Ke: Roderick Nash published his influential book *Wilderness and the American Mind* in 1967. He believes that wilderness is an indispensable raw material for the establishment of American civilization. “Wilderness” is a symbol of beauty, freedom, and American civilization. “Wilderness” represents the unique identity and spiritual characteristics of Americans. Sigurd Olson also believes that wilderness is a necessity for Americans to obtain and maintain mental health: “Wilderness to the people of America is a spiritual necessity, an antidote to the high pressure of modern life, a means of

regaining serenity and equilibrium.” (see in *The Meaning of Wilderness*, 2001). I wonder if their view of wilderness can represent the basic attitude of the American public towards wilderness? Or, in fact, the American public today is mainly a conqueror’s attitude towards the wilderness? With the further development of industrialization and urbanization, it is said that the existing wilderness land in the United States accounts for only about 5% of the land. Most people’s lives are isolated from the wilderness. I wonder whether the current basic attitude of the American public towards the wilderness has changed?

Rolston:

That depends. When I was a young man, there was no wilderness, though there were some primitive areas. When the original Wilderness Act was passed in 1964, 54 areas (9.1 million acres) in 13 states were designated. Since then, Congress has enacted additions a hundred times and the wilderness system has grown almost every year and now includes over 750 official wilderness areas, nearly 110 million acres. Overall, about 5% of the entire United States is protected--an area about the size of California. But because Alaska contains just over half of America's wilderness, only about 2.7% of the contiguous United States is protected--about the area of Minnesota. One of my favorite US wilderness areas contains, interestingly for the Chinese, a dramatic cliff face that extends hundreds of miles, called the “Chinese Wall.” I have ridden much of it horseback. But nature constructed this cliff face, not the Chinese!

In the wilderness I am reminded of what culture lulls me into forgetting, that I have natural roots. Wilderness does not merely lie behind, it remains the generating matrix. Laden with my pack, moving briskly along, I turn my thoughts to respiration. Present in every cell containing a respiratory chain - from microbes to humans - is an electron carrier called the cytochrome-c molecule that evolved over 1.5 billion years ago. In wilderness, man is not the measure of things.

J. B. S. Haldane was asked by some theologians what he had learned about God from biology. He replied that God has “an inordinate fondness for beetles.” Perhaps three-fourths of the known animals are insects, by some criteria the most successful form of life, and a disproportionate number are Coleoptera. God went wild making beetles. Evolution went wild in speciation. Wild creatures can stretch us out of ourselves into the depth and breadth of being.

Dr. Ke: Do you agree to make a certain distinction between the relationship between human beings and nature and the relationship between human beings and wilderness to avoid some confusion? Since human beings are not only the product of nature, but also the product of social culture, I think it is necessary to distinguish the two. As an organic part of the whole of nature, man depends on nature, so it is necessary to transform and make use of nature. However, in the relationship between human beings and wilderness, wilderness is opposite to human civilization in some aspects. From the etymological point of view, civilization includes the meaning that human beings use tools to transform or dominate nature to meet human wishes and human needs. As a wild nature and as spontaneous nature, wilderness is a part of nature that is less disturbed by human activities and still maintains its autonomy. Nowadays, there is little wilderness left. The correct way for human beings to treat wilderness should be protection rather than exploitation: human beings should actively restrict their behavior, delimit their actions, exit from the wilderness as far as possible and reduce the interference to the greatest extent to the wilderness; and in the meantime, maintain respect, appreciation, and love for the wilderness ideologically and emotionally.

Dr. Ke: In your argument with J. Baird Callicott on allowing aborigines to live in wilderness protection areas, you insist that the existing wilderness reserves should not allow aborigines to live there. In my opinion, your reason is based on the tension between modern civilization and the wilderness. Is this correct?

Rolston:

In some places in some nations, I might allow aborigines to live in wilderness in an aboriginal life style (in Australia, for example). But in the United States, we have both wilderness lands and lands designated for the Native Americans. But the lifestyle of these Native Americans is not remotely aboriginal; they are more or less modern people. They have automobiles and shop in grocery stores. They make money operating gambling casinos. In some places, interestingly, Native Americans have designated some of their tribal lands as wilderness.

Dr. Ke: The third of the four laws of ecology proposed by Barry Commoner is “nature knows best.” (Barry Commoner, 1974). According to the theory of a self-organizing system, the biosphere of Earth is a well-structured self-organizing system. All things produced in nature must be tested by this self-organizing system. If anything incorporated into the Earth’s self-organization system is beneficial to the existence and continuation of natural life, it can be retained by the Earth’s self-organization system, otherwise, it will be eliminated. At present, the COVID-19 epidemic has been raging around the world for nearly two years. According to preventive Ethics, does it make sense to consider the COVID-19 epidemic as a punishment or warning from the Earth? What reflection does the COVID-19 epidemic bring to you about the role of man in nature? Has your view of wilderness changed because of the epidemic?

Rolston:

The COVID-19 epidemic has little to do with American wilderness conservation directly. The parasitic virus originated in China, probably because of the way the Chinese handle animals, using some wild animals for food and mixing them with domestic animals. Other viruses and epidemics have appeared in Africa and India, again where there is a lot of contagious interaction between wild animals and people.

We have done some re-thinking about wild nature, surprised that a virus so small that you can’t even see it without complicated microscopes, and which isn’t even alive in one sense, but only a viral parasite, can stymie human achievements, aspirations, and freedoms all over the globe. Those of us who live in developed nations have been startled by the power of this virus, by how much science doesn’t know and how much our political leaders failed to listen to warnings. This minute critter has played havoc with us mighty humans. That a virus could jeopardize global health has been an alarmist wake-up call. We alone can go to the moon, study dark matter, or send probes to asteroids. We can analyze the Big Bang 13 billion years ago. But back on Earth, we are unsure what the future holds, near or far. The complacent were arrogant. The proud have been humbled. Nature is still there, wild nature, both predictable and chaotic. We are wondering: Have we learned any lessons?

Dr. Ke: In sharp contrast to the American view of wilderness, so far, the Chinese people generally have a low acceptance of the concept of wilderness. Compared with wilderness, the Chinese people prefer the concept of “nature.” In Chinese, the word “Huang ye” (荒野) has derogatory meanings such as dangerous, chaotic” “desolate, barren, useless, barbaric, backward” and so on. From the perspective of etymology, in *Shuowen Jiezi*, “Huang” (荒) refers to land where even wild grass cannot

grow or the land full of wild grass. No matter whether there is grass or not, “Huang” refers to the land that has not been cultivated, cannot be cultivated, or is not worth cultivating. In the long era of Chinese agricultural civilization, “Huang” means the land that has no value to mankind. In *Shuowen Jiezi*, “ye” (野) means “suburban.” Therefore, “ye” is first of all a spatial concept rather than the “wildness” in the West. Beyond the suburbs are called “ye”, beyond “ye” is called “lin” which is literally means forest, and the outside of the forest is called “jiong” (冢). Therefore, the western “wilderness” refers to a much more wider area than the “ye” in ancient Chinese, in ancient China, the scope of “jiong” is more consistent with the wilderness in the West.

In the United States, wildness sometimes represents the inherent creative power of nature (the evolution of life: creating life, renewing life, developing life, and diversification of life). It is also a symbol of freedom, all lives have freedom to live according to their own will. In China, wildness is mainly used to describe the characteristics of wild animals. Although sometimes it is also used to describe human personality, Chinese people generally believe that wildness is the embodiment of barbarism and lack of cultivation. An adult should not have wildness because an educated person should be elegant. In a word, the Chinese prefer the word “nature” to wilderness. In Chinese culture, “nature” has rich connotations. Generally speaking, “nature” not only refers to the material world but also represents the law and the nature of things, such as “the law from nature” of Taoism. What is unique is that ancient Chinese believe nature itself has moral attributes. For example, the Chinese traditional classic *The Zhou Book of Change* says that “the greatest virtue of heaven and earth is its creation of life.” Here, “heaven and earth” refers to nature. The ancient Chinese generally believed that nature has the virtue of creating life, and nature breeds, maintains, and cherishes life. Nature is not only the material basis for human survival but also a moral example that human beings should follow; nature represents not only the law that human beings must follow but also the state in which things exist according to their nature.

What seems contradictory is that wilderness plays a significant role in Chinese literature and art in some ways. Ancient Chinese poems and paintings depict or construct an image of “desolate mountains and wild rivers” (荒山野水) with rich connotation. It embodies the unique landscape, aesthetic taste, traditional beliefs, and philosophy of China, which still has a profound impact on Chinese people's aesthetics, view of nature, outlook on life, and cultural psychology. Just as you regard the Pasque flower as a symbol of wilderness, “desolate mountains and wild rivers” is one of the concepts closest to the western “wilderness” in Chinese culture. In a sense, “desolate mountains and wild rivers” is the symbol of Chinese wilderness.

Rolston:

“Wild” is a wild word, a complicated word. It can have a bad sense, as we say when the behavior of a child has gone “wild,” or when the market goes “wild,” chaotic and unpredictable. We hope that affairs in our culture can be cultivated and controlled. But, as I have been developing the idea, “wild” can also refer to the creative dimensions in wild nature, as you also agree. “Nature” too is a complex word, with many layers of meaning. Those who manufacture something may want to say that their produce is “natural” to help them sell it. Using it this way, Americans don’t like to be “unnatural.” They don’t want to do what goes “against their nature.” Now the “natural” is desirable, and some of this is what they are “born with” as well as what they have cultivated.

Dr. Ke: Just as you said, “wilderness is a living museum, displaying the roots of world life and an arena for life evolution; wilderness can educate people better to respect nature and reverence for life

than any university.” (*Philosophy Gone Wild*, 1986) Chinese traditional culture contains precious resources to cultivate people to respect and love nature, such as the ideal of “constant reproduction” in Confucian thought and the wisdom of “noninterference” with the Taoists. China not only needs to systematically explore the excellent thought about wilderness in traditional culture but also needs to learn from the West so as to establish an ecological wilderness view with Chinese characteristics, abandon people's indifference, even hostility and conquest mentality towards the wilderness, cultivate people's feelings of respecting and loving wilderness, and offer a foundation for wilderness protection and ecological civilization in China. The construction of wilderness reserves in China will provide a good place for the public to encounter the wilderness.

Rolston:

Amen!! It is hard to get a sense of awe or of the sublime indoors. Goose pimples more frequently come outside. The sense of abyss overlooking a gorge is aesthetic, as is the eerie chill when, nearing a stormy summit, one's hair stands on end in the charged air. So also is the thought that in one pine cone lies a possible forest—all experiences unlikely to be had in the Metropolitan Museum.

2. Wilderness Protection

Dr. Ke: Today's global warming, climate change, and species extinction can be considered as the embodiment of ecosystem disorder and degradation caused by industrial civilization. Wilderness has incomparable complexity, diversity, creativity, and self-regulation compared with the artificial environment. Effective wilderness protection is the key to protect biodiversity and the fundamental way to “keep the natural ecological security boundary” and “improve the quality and stability of ecosystem.” So far, China has failed to slow down the loss of biodiversity. The main reason is the degradation, fragmentation, and loss of wilderness caused by people's irrational or unjustified exploitation. Preserving the existing wilderness is currently recognized as the least risk, most efficient, and lowest cost measure for wilderness protection. However, wilderness protection has not received sufficient attention yet in China. Sadly, many biologists and ecologists, etc. often face the dilemma of lacking an ideal wilderness environment for scientific research. Wilderness protection has become a short board in the construction of ecological civilization in China. Now I would like to consult you about wilderness protection.

To begin with, we need to clarify the essence and objectives of wilderness protection. In my opinion, wilderness protection does not exclude the reasonable needs of mankind but establishes an effective system to limit some types of utilization of wilderness or change the way of utilization to preserve a wild and spontaneous nature. A specific goal of wilderness protection is to protect biodiversity effectively, hold the ecological security boundary, improve the health, quality, and stability of the ecosystem, promote the prosperity of life on earth, and avoid species extinction and self-destruction of human civilization caused by excessive artificial nature. What do you think of the essence of wilderness protection?

Rolston:

Several billion years' worth of creative toil have been handed over to the care of this late-coming human species in which mind has flowered and morals have emerged. Americans, late-comers on the world scene and explosively developing "their" new world, have recently awakened to the threat to rich diversity of life on their continent, awakened to new duties of preservation, with accompanying benefits. Americans want these endangered species to be there too, both as national treasures and as

something with a claim to care in its own right. We have a sort of national hymn called “America the Beautiful” in which we sing of our “mountain majesties and fruited plains.”

Dr. Ke: Given the evolution law of life, human beings as a species may become extinct one day. From the perspective of broad life evolution, do you think wilderness protection has a more ambitious or ultimate goal in addition to seeking the harmonious coexistence between human beings and nature, civilization, and wilderness? For example, the ultimate goal of wilderness protection maybe is to protect the natural evolution process of life on Earth, the evolutionary potential of species, or the sustainable ecosystem, the “sustainable biosphere”?

Rolston:

Some sort of inclusive environmental fitness is required of even the most advanced

culture. Humans live in a technosphere but remain residents in a biosphere. It seems parochial, uninformed ecologically, to say that our part alone in the drama establishes all its worth. Ecology is not something subjective that goes on in the human mind. In an ecological perspective, that Earth is valuable would mean that the evolutionary ecosystem is able to produce value, and has long been doing so. A late, remarkable product of the process is humans, who can claim to be of value in a unique way. When humans come, they find Earth often *valuable, able* to produce *valued experiences*. The subjective value events are a capstone subset superposed on the global, objective production and support of value. Many persons have reported how self-actualization was fostered in a wilderness setting. Nature is a place to “know thyself.” At times, nature is a place to *show what we humans can do*; at other times, we humans want to be *let in on nature's show*.

An environment that was entirely hostile would slay us; life could never have appeared within it. An environment that was entirely irenic would stagnate us; human life could never have appeared there either. Our culture, in which our classical humanity consists, and our science, in which our modern humanity consists, has originated in the face of oppositional nature. Nature insists that we work, and this laboring and even suffering is its fundamental economic pressure. The pioneer, pilgrim, explorer, and settler loved the frontier for the challenge and discipline that put fiber into the American soul. One reason we lament the passing of wilderness is that we do not want entirely to tame this aboriginal element in which our genius was forged.

Dr. Ke: In addition, there are disputes on the motivation and specific measures of wilderness protection. The debate on wilderness protection in the United States is mainly focused on the dispute between conservationism (resource conservationism) and preservationism (wilderness preservationism), which may also be the main dispute encountered by wilderness protection in the world. Conservationists regard nature as resources, they have realized the limitation of natural resources, so they put forward the protection of natural resources and the scientific management and effective use of natural resources to achieve the sustainable development of the economy and society. In short, the purpose of conservationism is to manage nature and exploit nature “scientifically.” However, preservationists believe that wild nature cannot be regarded as a resource for human use only. Wilderness itself has internal value and is the source and creator of value. The core of wilderness protection is to retain the ecological integrity and wildness of wilderness. Therefore, it proposes to retain the existing wilderness as much as possible so that it will not or as little as possible be disturbed by human beings. Briefly, preservationism advocates that human beings should shoulder the ethical

responsibility of protecting the existing wilderness. Wilderness protection is a kind of moral behavior with a super-utilitarian side.

Dr. Ke: J. Baird Callicott argued that we should jettison the term “wildness area” and replace it with “biodiversity reserve”, using conservation biology to actively manage the nonhuman world. (J. Baird Callicott, 2008) Can you tell us the main reasons you object to replacing “wildness area” with “biodiversity reserve”? Can your argument with J. Baird Callicott about the wilderness be regarded as an extension of the above conservationism and preservationism debate?

Rolston:

My main objection is that “biodiversity reserve” implies that we are saving our natural resources, and that is a human self-interest foundation. That is too short-sighted, ultimately selfish. Do we save nature because it is good for us, or because nature, its products and processes, the fauna and flora have a good of its own? That vital question has a short answer: Both.

Humans are nature's richest achievement but not nature's only achievement, and in unresolved tension with our lofty rank we have to judge that diversity in being is richer than would be a world with only humans. We want to get ourselves defined in relation to nature, not just to define nature in relation to us. Some now say we are entering an Anthropocene Epoch bringing the end of nature. But I do not think we Americans want to live in a post-natural world, certainly not on an Artifacts planet. I do not think humans are smart enough to re-engineer their planet.

The “biodiversity reserve” only is poor biology. Consider plants. A plant is a spontaneous life system, self-maintaining with a controlling program. It executes this project, checking against performance in the world, using feedback loops. It composes and recomposes itself, maintaining order against disordering tendencies. Plants do not have ends-in-view. They are not subjects of a life, and in that familiar sense, they do not have goals. Yet each plant develops and maintains a botanical identity, posting a boundary between itself and its environment. An acorn becomes an oak; the oak stands on its own.

This botanical program is coded in the DNA, informational core molecules, without which the plant would collapse into the humus. The genetic set is thus really a *normative set*; it distinguishes between what *is* and what *ought to be*. This does not mean that plants are moral agents. But the organism is an evaluative system, selecting resources for itself. An inert rock exists on its own, making no assertions over the environment. But the plant, though on its own, must claim the environment as source and sink, from which to abstract energy and materials and into which to excrete them. Plants thus arise out of earthen sources (as do rocks) and turn back on their sources to make resources out of them (unlike rocks). From an objective perspective, the morphology and metabolism that the organism projects is a valued state. *Vital* is a more ample word now than *biological*. A wild plant is already engaged in the biological conservation of its identity and kind, long before conservation biologists come on the scene. What humans who value nature ought to do is respect plants for what they are in themselves--natural systems of conservation biology.

Dr. Ke: Is recognizing the intrinsic value of nature a necessary condition for effective wilderness protection? Do you think it is essential to recognize the inherent value of nature in the practice of wilderness protection? As far as wilderness protection is concerned, a group of people pointed out that wilderness protection is first and foremost a scientific issue rather than a moral issue. It is the conscious compliance of human beings with natural laws based on a correct understanding of

ecological laws. Specifically, it is the compliance with “nature’s ecological power,” because the laws of nature cannot be violated. Since wilderness provides important ecosystem services for mankind which are related to human interests, wilderness protection has ethical and moral significance. However, the ethical and moral significance of wilderness protection is rooted in human interests; it is the maintenance of public ecological well-being. Therefore, wilderness protection still belongs to inter-human ethics, and human beings have no moral responsibility for the wilderness itself. What do you think of this idea? So far, since most people do not recognize the intrinsic value of the non-human world, what if people only carry out wilderness protection based on an objective understanding of ecosystem services, with the goal of protecting human’s ecological well-being and sustainable development, do you think this kind of wilderness protection is also feasible in practice, and even more appealing and operable in the current social context?

Rolston:

I hope I have already answered this question. I do want wilderness protection to protect the ecosystem services humans need. But that is only half my answer. I also want wilderness protection to care for creation on this wonderland Earth. We have to choose sometimes the nature of our apartness, and let nature do its own thing, and sometimes the nature of our partness, how far we humans are part of nature, with nature generating our support systems and what kind of beings we are.

Dr. Ke: Do you think it is necessary to hold a certain form of gradation of value? Most people insist that human beings, both as a species and as an individual, have the highest intrinsic value, and human beings are not an ordinary member among species in nature. In real life, we are bound to encounter the problem of value conflict. The gradation of value theory may help to guide people to solve the value conflict in reality. You have been opposed to a gradation of value in the past, has this changed now? According to my understanding of your works, you advocate ecological holism, the natural process of the ecosystem is an overriding value. You seem to think that the value of the ecosystem as a whole is higher than that of species, and the value of species is higher than that of an individual. If so, is this a gradation of value?

What comes first is what is most important to survive: the biosphere. If that degrades, all else is proportionately lost. We have entered the first century in the 45 million centuries of life on Earth in which one species can jeopardize the planet's future. Wildland preservation is not museum work. One can say, if one wishes, that these processes have a primeval character. But wilderness advocates do not seek to prevent natural change. They do not deep freeze wilderness. What wilderness advocates seek to protect today is dynamic and ongoing wild processes. A more sophisticated and refined concept of wilderness preservation aims rather to perpetuate the ongoing integrity of evolutionary and ecological processes.

Dr. Ke: Last, as ecological sociologists said, the tragedy of the environment is often the extension of social tragedy, which in turn aggravates social tragedy. Wilderness protection is closely related to and even intertwined with various social problems. Due to the differences in social relations, living conditions, and cultural traditions, wilderness protection in different countries is facing various difficulties. Compared with developed countries, developing countries face more difficulties in wilderness protection due to the urgent need to solve the problems of survival and development, etc.,

which is coupled with the relative backwardness of capital and technology. Ramachandra Guha, an outstanding Indian scholar, once accused: first, American wilderness protection is an excuse for Americans to protect resources. Secondly, the problem of wilderness protection in the United States is to improve the quality of life in developed countries, while the priority for developing countries and third world countries is to develop the economy and solve the problem of survival. Moreover, the establishment of wilderness reserves in the third world is often to meet the interests of wealthy tourists and force a large number of original residents to migrate. In essence, it transfers resources from the poor to the rich, which is undoubtedly ecological imperialism.(Ramachandra Guha,1989) What do you think of his view? What do you think are the main challenges facing wilderness protection in developing countries? What are your reminders or suggestions for the wilderness protection in the developing countries and third-world countries?

Rolston:

Alas, we are finding that we have come to live in a doubly compounding wicked world, first using “wicked” in a recently novel sense. A wicked problem is difficult or impossible to solve because of incomplete, contradictory, interacting, mutually conflicting and changing requirements that are often difficult to recognize or manage. Trying to fix it here shifts what is going on over there, displeases them, and further yonder, in dozens of other places people are upset or helped, often unpredictably. The tragedy is that the good is close-coupled with the bad, and the trade offs get amplified with what we usually think of as progress. It’s catch-22, a wicked dilemma from which there is no escape because of mutually conflicting inter-dependent conditions.

Earlier we might have said that the problem was “messy,” “unwieldy,” “amorphous,” “disorderly,” or that all we could do was to “muddle through.” But naming the problem “wicked” adds that the issue is serious, demanding, urgent, with moral dimensions, and gets worse, even malignant, if we procrastinate. We face a quagmire, a super catch-22. We muddle through an imminent messy super problem. The short-range and longer-range effects of what humans are doing on natural or synthetic ecosystems is often unknown and unpredictable. The consequences of mistakes are alarming, irreversible, often hidden and cumulatively escalating.

Add to this the traditional sense of “wicked,” especially how humans as individuals, in their local communities, and in their nations are inclined to act in their self-interest, with politicians resolute on holding on to their power, with voters selecting legislators who will give them what they want, and increase what they call their “entitlements,” defended for themselves and their children, and their children’s children.

Perhaps we have to move with a pragmatic adaptive strategy. The best we can do is get together as many of the stakeholders as we can and see if the partisans, pushing and pulling, can agree on enough of the issues to test a five-year plan — featuring sustainability, or health, or respect for life, moral concerns, or acceptable ranges of variability, on a wonderland Earth. How did we get here and where do we want to go next? We plan to achieve the best immediate outcome based on current knowledge. We also agree to meet again and see if there are modifications on which we can agree for another five years. That is a more intelligent muddling through. We take some encouragement that the wicked paradox we face is less complex than the hyperimmense brain/minds we use to seek solutions.

Dr. Ke: So far, the human species is the only moral agent, human beings sometimes have to sacrifice some short-term or partial interests in order to protect nature, this is the unshirkable

responsibility and obligation of mankind. One of your encouraging insights is: "When the right thing was done, things turned out win-win in the long term." (2012)

3. Wilderness protection and ecological civilization

Dr. Ke: Given the continuous deterioration of the global environment and ecology, the construction of ecological civilization has become the only way for a sustainable human civilization. Fortunately, more and more people have realized this and are striving to accomplish the ecological transformation of civilization. It is encouraging that the Chinese government took the lead in putting forward the ideal of ecological civilization construction and has incorporated the construction of ecological civilization into the national development strategy as a basic national policy; moreover, it was written both into the Constitution and the Party Constitution of Communist. At present, the basic description of Chinese's vision of ecological civilization is: "Ensuring harmony between human and nature": "we will implement the strictest possible systems for environmental protection, and develop eco-friendly growth models and ways of life. We must pursue a model of sustainable development featuring increased production, higher living standards, and healthy ecosystems. We must continue the Beautiful China initiative to create good working and living environments for our people and play our part in ensuring global ecological security." among them, the ecological well-being of the people has been greatly emphasized.

You have always been committed to advocating a new environmental ethics, an inter-specific ethics, which requires overcoming anthropocentrism of inter-human ethics, and requiring human beings to perform corresponding responsibilities and obligations for nature's "own sake." It opposes regarding nature only as a resource, but as the source of internal value, the creator and the home for human beings to settle both their body and mind and treat nature in the way of respect, appreciation, and love. It is very different from the scientific management, transformation, and utilization of nature to meet human needs or desires. Can you briefly explain the relationship between the three? From the perspective of your new ethics, what do you think of the Chinese ideal of ecological civilization and what suggestions do you have for the construction of ecological civilization in China? Can you outline your vision of ecological civilization for us?

Rolston:

Life would be impoverished with reduced experience of natural beauty, rural and wild. Yearning for a sense of place is a perennial human longing, of belonging to a community emplaced on landscape. All peoples need a sense of "my country," of their social communities in place on a sustaining landscape they possess in care and in love. What we do managing such places ought also to be sensitive to values that are already "in place" before we humans arrive to dwell there? Part of the needed ethic does demand a constructed sense of place; but a person also needs an embodied sense of residence on a landscape.

Deep ecologists generally believe that "if modern people want to really move towards a mature civilization, they must go to the wilderness to comprehend and experience the wilderness." (George Sessions, 1995) By the communication with you, I have strengthened one of my views: "Effective wilderness protection is a sign of the maturity of ecological civilization." Wilderness breeds human beings and supports human civilization. Wilderness protection does not exclude the reasonable needs of

human beings. It is an important way for human beings to actively seek the harmonious coexistence with nature under the background of global ecological crisis. A mature ecological civilization should be scientifically understand the irreplaceable multiple values of wilderness, especially its ecological value, spiritual, and cultural value, it should also have enough inclusive love to respect and cherish nature too. Based on the cognition of internal and intimate relationship between human beings and nature, a mature ecological civilization can propose new ethics of respecting nature, appreciating nature and loving life can be developed to regulate and restrict human behavior and urge us to shoulder the duty and responsibility for the own sake of wilderness; it should be capable of providing a good living environment for human beings and other creatures on the earth under the condition of realizing the common prosperity of human material and spiritual life while the Wild will always maintain its wildness, spontaneity and independence, so that the Earth can maintain continuous natural evolution and life on Earth can be prosperous.

the ideal of wilderness preservation is one of the great achievements in developing ecological civilization. To use your words: “one of the measures to measure whether an ecological civilization ideal is profound is whether it regards wilderness as complementary to culture and gives her adequate respect.” At present, one of the essential contents of ecological civilization construction is: we need a overall rational arrangement of cities, villages, and wilderness, optimizing the development and protection pattern of production, life, and ecological space, and realizing the harmonious and common prosperity of cities, villages and wilderness on the basis of differentiated development strategy: the focus of urban and rural ecological civilization construction is to realize the intensive and efficient production space and the livability of living space, reduce the pollution and damage to the environment and ecology; while the focus of ecological civilization construction in wilderness areas is to restrict human behavior under the guidance of ecological science and a new ecological ethics, minimize our interference to the wilderness, protect biodiversity and cultural diversity, expand environmental capacity, and improve the quality and stability of the ecosystem. In recent years, gratifying achievements have been made in the construction of China’s nature reserves and national parks, and their area and management have been improved; I hope more people will care about wilderness protection; It is hoped that China will enact relevant policies, laws and regulations as soon as possible to give priority to the protection of the existing wilderness and effectively protect the wilderness reserve as an independent type of nature reserve; Let “wilderness” become an important foundation for ecological civilization, and let “wild China” become an important support for “beautiful China”.

In recent years, the area for nature reserves and national parks in China has expanded, and gratifying achievements have been made. I hope China will give high priority to wilderness protection and introduce relevant policies, laws, and regulations as soon as possible to effectively protect wilderness reserves as an independent type of nature reserves, so as to make wilderness reserves a significant basis for the accomplishment of “ecological civilization” and “beautiful China.”

Rolston:

I hope that each Chinese reader of this interview has been and will continue to be moved by the self-transforming encounter with wild others that triggers thinking big about the big outdoors.

Dr. Rolston’s website is:

<https://sites.google.com/a/rams.colostate.edu/rolston-csu-website/>

Dr. Rolston's Colorado State University Library Digital Archives are at:

<https://mountainscholar.org/handle/10217/100484>