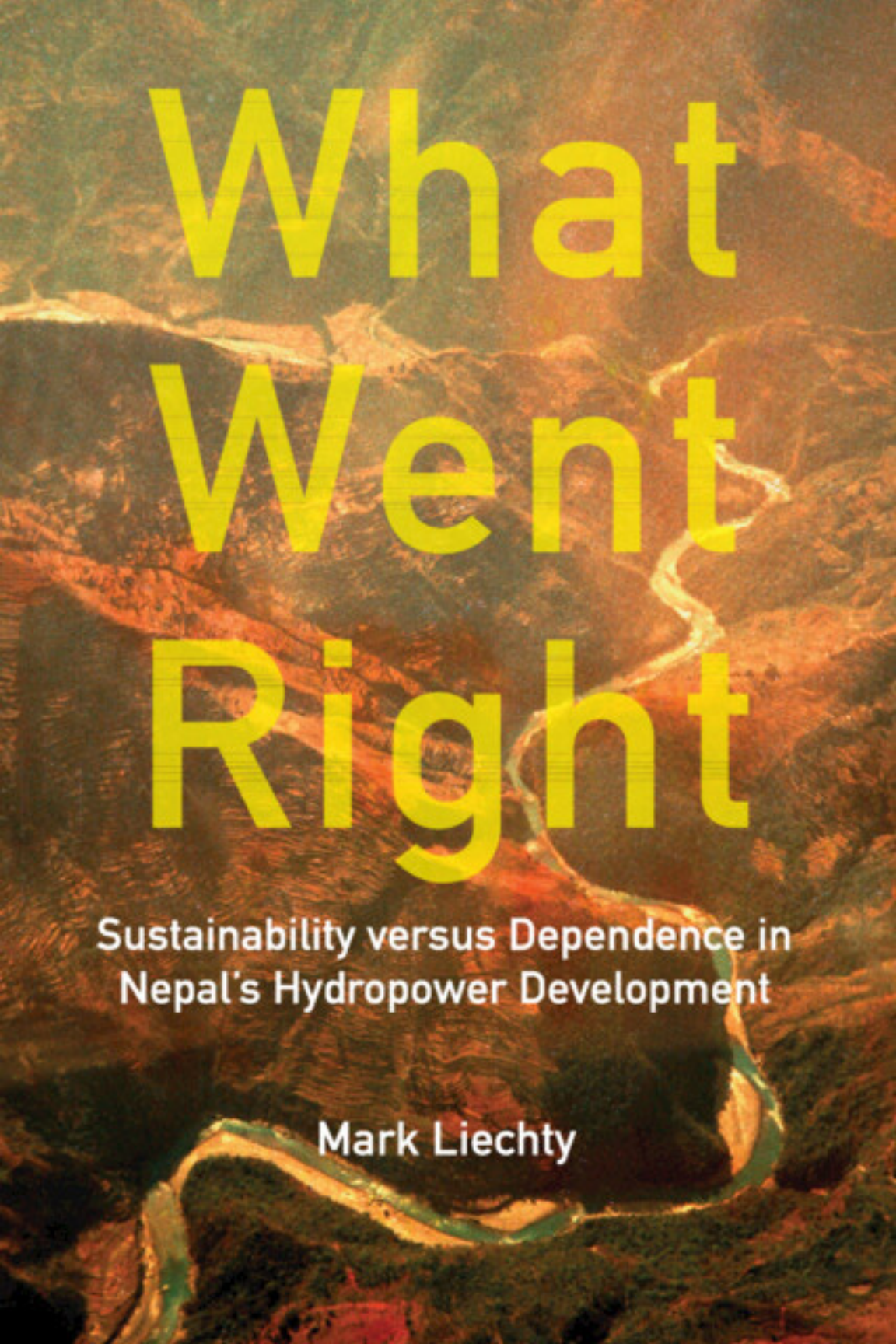

What Went Right
Sustainability versus Dependence in Nepal's Hydropower Development
Mark Liechty

ADVANCE PRAISE

Liechty skillfully tells the inspirational story of alternative development of hydropower infrastructure in Nepal. Over the course of five decades, Odd Hoftun and Balaram Pradhan did not just build power projects, through the Butwal Power Company, but laid the foundation for a vibrant domestic power sector in Nepal with thousands of competent engineers and technicians, over a hundred active independent power producers, and dozens of construction and manufacturing companies and engineering consultancy firms. This book is a must-read for development practitioners and aid agencies interested in critically examining how to get the best returns from international development assistance.

—**Bikash Pandey**, Director of Clean Energy, Winrock International, USA

Nepal's hydropower sector has been a flame that has, over the last seven decades, both illuminated her development space and attracted exuberant moths (national and international) to their doom. In this book, Liechty describes the success of a remarkably innovative moth whose story has not been properly told before. It is that of an alternative pathway whose relevance has only grown as the conventional development landscape faces the end of the Age of Aid and the rise of one of climate change concerns. It must be read, not just by Nepali hydrocrats but by all development professionals in international agencies as well.

—**Dipak Gyawali**, Nepal Academy of Science and Technology,
and former Minister of Water Resources of Nepal

This book tells a remarkable story of the growth of local hydropower development in Nepal. It formally starts in 1963 with an agreement between the Nepal government and a Christian organization, the United Mission to Nepal, for the establishment of the Institute of Technology and Industrial Development in Butwal. The driving force in this was Odd Hoftun, an experienced applied engineer from Norway. It was a time when development economists were discussing the pros and cons of quick turnkey infrastructural projects with external consultants, and so on, or going a slower route and

building a local engineering capability to construct and manage institutions in the hydropower sector. Odd Hoftun and his Nepali colleagues persisted with the second route and this book describes what happened from the early days to the present time. The book focuses on the story of the private construction company, the Butwal Power Company (BPC), which emerged from the early initiatives. This history includes public and private takeovers, major changes in government policy, local and foreign investors, and much, much more. *What Went Right* tells this story in careful detail and shows the influence of BPC on Nepal's current hydro sector. The book is a "page turner" as Liechty takes us from one set of major events in construction and politics to the next … and the influence of BPC's legacy is still unfolding in major ways.

—**Stephen Biggs**, SOAS, University of London

If asked, most of us would likely explain Nepal's many development challenges as stemming from its status as a flailing minnow sandwiched between the behemoths India and China, as an enduring Shangri-La mired in its ancient cultural and familial heritage, or as the inexorable legacy of harsh colonial imposition and contemporary neoliberal hubris. *What Went Right* provides a more nuanced and compelling alternative: Nepalis have long sought enhanced well-being, but on their own terms and by finding locally legitimate solutions to their particular development problems, especially as it pertains to harnessing energy from water. Mark Liechty carefully highlights how difficult, fraught, and contingent such a strategy is, and how long it takes to fully consolidate itself, but in so doing demonstrates how respectful partnerships, dogged persistence, and sustained grassroots improvisation can succeed where so many other top-down technical approaches have stumbled.

—**Michael Woolcock**, World Bank and Harvard University

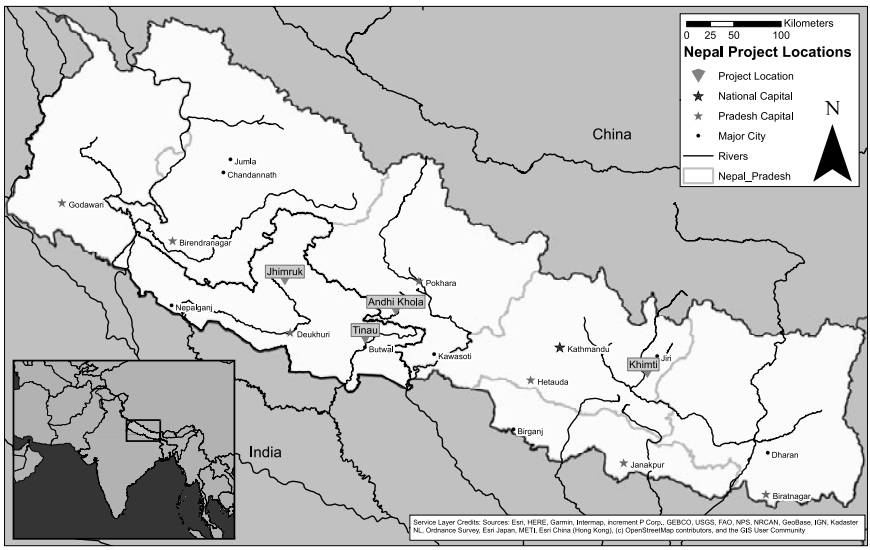
WHAT WENT RIGHT

What Went Right explores why Nepal's hydropower sector is one of the country's few development success stories. Unlike almost every other "developing" country, in Nepal local firms design and build complex hydropower facilities using Nepali engineers, builders, components, and labor. Nepal has largely avoided the trap whereby most poor countries are forced to accept energy infrastructure projects that are foreign designed, funded, and built—typically resulting in debt, dependency, and unsustainability.

This book traces the half-century history of the Butwal Power Company and the anti-establishment development logic of its founder, Odd Hoftun. A pioneering Norwegian engineer, development worker, and missionary, Hoftun insisted that, if Nepal was to create a modern national economy, Nepalis must develop technical skills needed to break the cycle of poverty, a view that led Hoftun to promote Nepali-driven hydropower development as the key to Nepal's industrial future. Counter to prevailing development logics (then and now), Hoftun insisted that all aspects of hydropower development (design, construction, manufacturing, maintenance) be done in Nepal, by Nepalis.

The book traces the struggle between two competing development paradigms: one that emphasizes gradual national human capacity building (at the expense of speed and efficiency) and another that emphasizes rapid, large-scale infrastructure building (at the risk of unsustainability and dependency). At stake is whether what passes for "development" primarily benefits the countries in which it occurs, or the banks, corporations, and other investors that finance capital-intensive projects. *What Went Right* brings a vision for sustainable development into vigorous conversation with other development strategies that have proven, repeatedly, to be less productive.

Mark Liechty is professor of Anthropology and History at the University of Illinois at Chicago. Liechty has studied Nepali history and culture for over three decades. He is the author or editor of five books on modern Nepal and middle-class culture and is a founding co-editor of the journal *Studies in Nepali History and Society*. He has co-edited, with Michael Hutt and Stefanie Lotter, *Epicentre to Aftermath: Rebuilding and Remembering in the Wake of Nepal's Earthquakes,* published by the Press in 2021.



Nepal Project Locations

Source: Holly Aslinger.

Note: Map not to scale and does not represent authentic international boundaries.

WHAT WENT RIGHT

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For
Odd and Tullis Hoftun
and
Balaram Pradhan

Human capacity building does not work by directive from above. Nor does it fit well under crisis management, where the time perspective is too short. It is more like having the faith and courage to *go and plant a seed*. Then adding water and some fertilizer, but otherwise standing aside, letting the process take its time—and simply watching it grow. Both people and institutions are living organisms that must be allowed to find their own way and shape.

—Odd Hoftun (from a presentation to the African Ministerial Conference on Hydropower and Sustainable Development, Johannesburg, South Africa, March 2006; italics added)

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PREFACE

Nepal's hydropower sector is one of the country's few development success stories. Nepal has engineering, construction, and manufacturing capabilities that drive a thriving national market in hydropower installation and production. While virtually every other comparable country in the "developing world" relies on foreign expertise and equipment, Nepali companies independently produce everything from simple water-powered grain mills to large-scale hydropower components, and from sophisticated hydraulic modeling services to skilled hydro-engineering and design services. Specialized Nepali construction firms draw on skilled Nepali labor to build large hydroelectric power plants of up to around 100 megawatts (MW) (Karki 2017: 122–123). Nepal has even begun to export these skills, services, and components to other parts of Asia and Africa (R. S. Shrestha et al. 2018: 6). Developments in Nepal's hydropower sector are still well behind those of advanced industrial economies, but they are also well ahead of other "least developed countries." As a whole, Nepal has no other industrial sector that even comes close to the success of its hydropower industry.

This book examines the history of Nepal's hydropower sector to ask why it is the conspicuous exception to the rule of Nepal's woeful underdevelopment. The answer, I argue, lies in the story of the Butwal Power Company (BPC) and the antiestablishment development logic of its founder Odd Hoftun, a pioneering Norwegian development worker, missionary, and engineer. From the early 1960s onward, Hoftun insisted that Nepalis should develop technical skills needed to thrive in a modernizing society, a view that eventually led Hoftun to promote hydropower development as the means to literally power Nepal's industrial future. Counter to the then (and now) prevailing logic, Hoftun insisted that, to the extent possible, hydroelectric design, construction,

and equipment should be locally sourced—even if it was, initially, crude and inefficient. Self-sufficiency and sustainability could only come, Hoftun argued, if every aspect of hydropower development could be done in Nepal, by Nepalis. In the face of ridicule from everyone—from foreign and Nepali peers to big international development agencies—Hoftun started small but, over the course of half a century, worked with Nepalis and other foreigners to establish a technical training institute and, gradually, a family of interlocking companies focused on hydrological design and engineering, equipment manufacturing, deep-mountain tunneling, and project installation. Starting with a tiny 50-kilowatt (kW) project in the 1960s and advancing through successively larger and more complex projects, by the 2000s Hoftun's now independent and Nepali-owned companies, and many subsidiary spin-offs from them, had emerged as the backbone of a robust indigenous hydropower sector able to compete successfully in bidding for projects around Nepal and beyond. Although Hoftun is a key figure, my aim is less to portray him as a hero than to systematically examine how his approach unlocked Nepali human potential in ways that other approaches to development have not.

Typically anthropologists and historians engage "development" in order to critique it. In a world where "First World"–driven "Third World" development initiatives have almost universally failed, in spite of the trillions of dollars spent, there is good reason to critically examine the institutional, ideological, and economic factors that both doom development initiatives to failure and guarantee their perpetuation. An entire interdisciplinary subfield—Critical Development Studies—has now intensively explored this problem (Veltmeyer and Bowles 2018; Veltmeyer and Wise 2018).

Much less often critically examined are the few bright spots on the global development landscape. My aim is certainly not to hold up Nepal's hydropower sector as some spotless paragon of development success but simply to examine how and why it managed to largely overcome the global development odds stacked against it. To be sure the Nepal story is rife with tensions inherent in any market-based approach (profiteering, corruption, perpetuation of social inequality, and so on). Still, by the standards of global capitalism, Nepal's hydropower experience is a success and one of the few ways that Nepal participates in the global economy aside from as an impoverished exporter of cheap manpower. By focusing on *what went right* instead of (or in addition to)

what went wrong, I see this book as a useful contribution to ongoing debates over international development, foreign aid, and development philosophy.[1]

Reminiscing about his career in Nepal, in 2015 Odd Hoftun—a sly smile on his face—told me, "There is one thing that, in retrospect, I have regretted … and that's that we didn't have a propaganda department! We never thought about that." Rather than letting his work (hopefully) speak for itself, Hoftun wished that they had been more intentional in sharing his vision with the Nepali public broadly and opinion leaders in particular. His ideas of gradually increasing human capacity in a slow but sustainable way caught on among like-minded Nepalis connected with BPC and its many projects. But beyond that small circle—in the face of those who supported big plans, using big money, in a big hurry—Hoftun's vision was easily overlooked. Most Nepali officials, foreign aid experts, and Nepali professionals "were thinking in the opposite way. And they are *still* thinking the same way! To build from the bottom up is not their way. They want to come in in the modern way and just get things done, their way," said Hoftun.

In this book I certainly do not aim to provide one-sided "propaganda." Rather, this study represents a chance to lay out a particular development vision to examine its strengths and weaknesses. Given that Hoftun's development vision has arguably borne rich fruit in Nepal's otherwise relatively barren development landscape, it is high time to bring Hoftun's vision into vigorous conversation with other development strategies that have proven, repeatedly, to be less productive.

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[1] The story of Nepal's hydropower development industry, and its unusual success, has been largely ignored—though this is beginning to change. A recent study of aid, technology, and development in Nepal (Gyawali, Thompson, and Verweij 2017) is highly critical of most donor-driven "development" initiatives in Nepal since 1951 but points to the Hoftun–BPC small hydropower development approach ("the BPC model") as one of Nepal's few development success stories. Even more pointedly, the authors of a recent paper point to what they call a "substantive paradox": "despite tremendous gains in local technical and institutional knowledge and even manufacturing in the hydropower arena, why is more positive recognition not given to the growing and strong hydro sector in Nepal?" (R. S. Shrestha et al. 2018: 6). This book aims to at least partially resolve this paradox by providing not just "positive recognition" but a detailed account of one crucial facet of Nepal's hydropower success story.

ACKNOWLEDGMENTS

As with most scholarly productions, this book is the result of contributions made by many, many people. First and foremost is Odd Hoftun, who graciously and patiently allowed me to interview him over an intensive two-week period in 2015. He also gave me unlimited access to documents ranging from handwritten notes, email logs, and news clippings to minutes, diaries (in Norwegian!), and annual reports. Odd also read and extensively commented on the book manuscript. While the book's framing and interpretations are mine, and I take full responsibility for them, I have tried to remain true to the task of analyzing Odd's development philosophy and documenting its evolution and consequences. Even if the final version does not always represent all of his personal priorities, I hope that this book clearly reflects the great respect that I have for Odd Hoftun, his work, and his legacy.

Another key contributor was Balaram Pradhan. Although I was only able to spend a relatively short time with him (before his untimely death in 2016), I felt that I got to know him somewhat just from the countless times that he appeared in the archival sources that I used. I also credit his suggestions for helping me clarify the objectives, priorities, and audience for this book.

I am also deeply grateful to the twenty-five or so Nepali and expat hydropower and development experts who kindly agreed to be interviewed about their experiences with, and perspectives on, the Butwal Power Company and its legacies. Almost all of them are quoted (or their views otherwise presented) in the text. In order to respect their privacy I have chosen not to acknowledge these people by name yet I want to be clear that the book would not have been possible without their cooperation and I am sincerely thankful for their contributions.

I would like to specially acknowledge the people who generously read and commented on various drafts of the manuscript: Stephen Biggs, Dipak Gyawali, Odd Hoftun, Marjorie and Russel Liechty, Paul Myers, as well as five reviewers who have requested anonymity. I am responsible for the remaining errors of fact and interpretation.

Finally, sincere thanks to the following: Martin Chautari for access to Hoftun's archived United Mission to Nepal (UMN) files; Naomi Liechty for companionship on several site visits in Nepal and for providing photographs for this volume; Holly Aslinger for preparing the map and timeline; Bikas Rauniar for the cover photo; Tullis Hoftun, Leif-Egil Lorum, Tor Møgedal, and Peter Svalheim for generous assistance, hospitality, and sharing of insights during my visits to Norway; Peter Lockwood, Duane Poppe, and Dan Spare for generously accompanying me on site visits in Nepal; and, for miscellaneous acts of assistance and support, to Erik Hoftun, Laura Hostetler, Dale Nafzinger, Biraj Pradhan, Tara Pradhan, Tara Lal Shrestha, and Mark Windsor.

ABBREVIATIONS

ADB	Asian Development Bank (headquartered in Manila)
AKWUA	Andhi Khola Water Users Association
BEW	Butwal Engineering Works
BPC	Butwal Power Company
BTI	Butwal Technical Institute
CDO	chief district officer
DCS	Development and Consulting Services (a division of UMN)
EDC	Electricity Development Center
EIA	environmental impact assessment
FITTA	Foreign Investment and Technology Transfer Act
GON	government of Nepal
HMGN	His Majesty's Government, Nepal
HPL	Himal Power Limited (corporate owners of the Khimti project)
IFC	International Finance Corporation (commercial finance wing of the World Bank)
IKN	Interkraft Nepal (Norwegian and Nepali group organized to invest in BPC)
INTERKRAFT	Norwegian hydropower utility consortium
IMF	International Monetary Fund
IPC	Independent Power Corporation (British commercial power developer)
IPCN	Independent Power Corporation Nepal
IPP	independent power producer

IPPN	Independent Power Producers of Nepal (trade group)
IRD	integrated rural development
ITID	Institute of Technology and Industrial Development
JICA	Japan International Cooperation Agency
JIDC	Jhimruk Industrial Development Center Pvt. Ltd.
JRP	Jhimruk Rehabilitation Project
KEC	Khimti Environment and Community (mitigation unit of HPL)
KHL	Khudi Hydropower Limited
KV	kilovolt
KW	kilowatt
MDS	Melamchi Diversion Scheme
MOWR	Ministry of Water Resources
MP	member of parliament
MPMP	Multi-Purpose Melamchi Project
MVA	megavolt-ampere
MW	megawatt
NEA	Nepal Electricity Authority
NGO	nongovernmental organization
NHE	Nepal Hydro and Electric Pvt. Ltd. (hydropower equipment manufacturer)
NIDC	Nepal Industrial Development Corporation
NOK	Norwegian krone
NORAD	Norwegian Agency for Development Cooperation (the Norwegian state development agency)
NPR	Nepal rupees
OPEC	Organization of Petroleum Exporting Countries
PPA	power purchase agreement
PPM	parts per million
REE	rural electrification entities
SEL	Shangri-La Energy Limited (Nepali investors in, and eventual owners of, BPC)
SLC	school leaving certificate
SPA	sales and purchase agreement

STATKRAFT	a Norwegian state-owned hydroelectric development corporation
UML	Unified Marxist–Leninist (Party)
UMN	United Mission to Nepal
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USD	United States dollar
WKV	Wasserkraft Volk

1

A CORPORATE VISION

Business as Development Philosophy

Two commonly cited facts about Nepal stand in uncomfortable tension. On the one hand, Nepal's thousands of rivers cascading down thousands of meters of Himalayan slopes have the *potential* to generate phenomenal amounts of clean, cheap, renewable hydroelectric power that could, in turn, fuel a vibrant, sustainable industrial and consumer economy, making Nepal the envy of its neighbors far and wide. But, on the other hand, today Nepal's main export in the global economy is human labor: mainly cheap, unskilled, and easily exploitable. Unable to find jobs at home, millions of Nepalis—10 percent or more of the country's population—work in low-wage occupations mainly in India, Southeast Asia, and the Gulf States. As one Nepali expert asked, "Why is there a lack of employment? Because there is lack of industrialization. And why don't we have industrialization? Because we lack necessary power for the purpose" (Shrestha 2011). As such, to say that Nepal is blessed with hydropower resources is something like a cruel joke: instead of exporting power and industrial goods, Nepal exports young men and women.

As any Nepali knows, this situation is hardly new. Nepal's hills and mountains have historically stood as food-deficit, population-surplus zones providing labor to surrounding lowland areas, just like many other poor mountainous regions around the world.[1] Part of Nepal's national identity revolves around its history of foreign-bound *lahure* mercenary labor (made

[1] Compare, for example, Switzerland's long-standing export of mercenary troops to Italy (think "Swiss Guards" at the Vatican) or the workers from Lesotho in South African factories.

famous by the British as "Gurkha" troops) and the figure of the brave, *bir-bahadur* Nepali hill man (Onta 1996).

A century ago, Norway was in a similar position. A cold, mountainous region with a short growing season, little arable land, and few (known) natural resources,[2] Norway was among the poorest countries in Western Europe.[3] But one resource that it did have was snow-fed mountain rivers. By the early twentieth century, tapping those rivers for hydroelectric power was a national priority. Norway began its gradual rise in hydropower production, industrialization, and standard of living. Today, 95 percent of Norway's electricity comes from hydroelectric generation, Norwegians heat their homes mainly with electricity, and have the highest per capita rate of electric vehicle use in the world, while Norwegian companies are global leaders in electromechanical equipment for hydropower generation.[4]

Odd Hoftun *lived* that transformation. Because his father was an electrical engineer who built and ran a small, community-owned hydel-generating plant in a rural, upland region of central Norway, Hoftun grew up literally surrounded by the challenges and rewards of turning moving water into electricity and then distributing it as a service to consumers.

> My father was the manager of a local electric utility involving generation as well as distribution, and I grew up in a power plant the same way as a farmer's son grows up on a farm. I learned that the business of an electric utility is to serve the public. It means being available any time during day or night—when things go wrong and need to be fixed. It is by nature a monopoly situation—very different from running an industry that produces goods for sale in the open market where competition immediately sorts out what is sound and what is fake. Therefore the utility has to be

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[2] Since then, North Sea oil has proven to be a huge boon to the Norwegian economy, but those resources were only tapped beginning in the 1960s.

[3] Norway was also forced to export labor—in the form of immigrants to North America and seamen. Norwegian ships and crews provided transport services around the world, a legacy that lives on today.

[4] For example, Kvaerner (now known as "Rainpower") still holds patented proprietary designs for high-head, highly efficient turbines.

> service minded and do its utmost to deliver what the public requires. (Hoftun 2004)

As a child and young adult, Hoftun watched as increased power production across Norway led to greater employment opportunities, more stable and sustainable livelihoods, and—in the broadest terms—increased national prosperity. Power production was a key to unleashing human potential and promoting national dignity. But surrounded by technology and technical problems, Hoftun also knew that without highly skilled human resources—from machinists to engineers to physicists—all the flowing water in the world would not produce electrical power. Water is only a resource when it is harnessed, and that requires major investments in both human and financial capital.

As a young man, one of Hoftun's main priorities was developing his own human capacity. Inspired by his father, at university Hoftun studied electrical engineering, but he wanted to equip himself with other skills as well. As Hoftun remembered,

> It was just after the war [WW II] and … Norway was very much worn down and behind in every aspect. Still there was great enthusiasm during those years after the war, at least until the coup in Czechoslovakia. That period was a fantastic time for young people. It was inspiring. To do something that was meaningful, that was the goal.

Hoftun saw university as a chance to prepare not just for a job but for a life in which he could "do something meaningful." As such, he took extra courses in economics, accounting, and construction—skills that prepared him to be a generalist, not just a specialist. "That was in my thinking from almost when I started there," Hoftun recalled.[5]

The "great enthusiasm," optimism, and service ethic that Hoftun describes emerged, for him, at the intersection of both secular and religious ideals. Like the rest of his generation, Hoftun had an intense desire to see his homeland

[5] Any quotation not accompanied by a formal citation is taken from interviews conducted by the author.

uplifted: service to the nation—to advance the common good—was an inspiring life goal. Like many Norwegians, Hoftun embraced a basic social-democratic political ethic that took shape in a relatively progressive, quasi-socialist, welfare state that publicly upheld the values of equality and justice. Although secular, many of these state values resonated with the values of Norway's (until very recently) state-affiliated reformed Lutheran (Protestant Christian) Church. Hoftun was raised in this denomination and, as a young adult, chose to anchor his identity and life's work in this faith tradition. The product of this specifically Norwegian state and Christian orientation, and trained as a generalist engineer, Odd Hoftun—along with his new bride, Tullis—left for Nepal as a missionary with the United Mission to Nepal (UMN) in 1958.

To understand Hoftun's work in Nepal, it is important to recognize the strongly convergent state/secular and church/religious morality that Hoftun, like many other northern Europeans, was socialized into. Where many Asians, North Americans, and others might see a sharp clash between state and religious values, Hoftun's Norway provided a model of how secular ethics could comfortably overlap with religious commitments. Social justice, service to others, equality, honesty, hard work—these and many other values could just as easily be accommodated within secular and religious worldviews.[6] In

[6] One thing that struck me in my conversations with Hoftun was how his Christianity coexisted alongside a very real sympathy for leftist, even radical leftist, politics. As hinted at in the block quote earlier, in the postwar years, many of Hoftun's generation in Europe had real hopes for some of the Socialist experiments underway around the world—as in Czechoslovakia, until it was snuffed out in a Stalinist coup. In another conversation I noted China's slide toward capitalist gerontocracy, to which Hoftun replied wistfully, "And yet we had such high hopes for China when it began." Similarly in Nepal, while most of his fellow missionaries would have been quick to equate any form of communist or Marxist ideology with godless evil, Hoftun recognized leftist Nepalis as at least potential collaborators. Balaram Pradhan, Hoftun's longtime friend and close associate in Nepal, was an outspoken member of Nepal's Unified Marxist–Leninist (UML) Party, a movement that Hoftun matter-of-factly described to me as "basically a social-democratic party." A party that many Westerners (especially missionaries) would have instinctively condemned, Hoftun saw as similar to many mainstream secular progressive parties in Europe. Similarly, when Nepal's Maoists laid down their arms and won the popular election in 2008, Hoftun was optimistic and

Nepal, Hoftun remained deeply, even stubbornly, committed to a particular vision of ethical practice. But, unlike many of his missionary colleagues from other national and faith backgrounds, Hoftun was comfortable with framing his ethics in secular terms. Many, many Nepalis told me that while Hoftun never tried to hide his Christian faith, neither did he ever try to impose it on Nepalis or imply that Nepalis were incapable of behaving ethically without becoming Christian. I believe this fact was fundamental to Hoftun's ability to attract dozens, even hundreds, of like-minded Nepalis who broadly shared his ethical vision and who, together, materialized it across half a century of shared work in Nepal.

TANSEN

In 1954 the United Mission to Nepal (UMN) established a hospital in an old rented building in Tansen bazaar in Nepal's Palpa district. When it became clear that the hospital needed its own larger, specialized medical facility, UMN acquired land a few kilometers east of the town and invited a young missionary and engineer from Norway, Odd Hoftun, to come and build it. When Odd and Tullis arrived in 1958, they found conditions in Nepal to be both strikingly foreign and uncannily familiar. Observing poor, landless Nepali day laborers crouched by the roadside breaking rocks with hammers (for use in road construction), the Hoftuns saw not just poverty but also visions of the past when they had seen poor Norwegians doing exactly the same thing only a few decades earlier (Svalheim 2015: 7). In a strange way, the Hoftuns had traveled to the other side of the world only to find a version of home. Nepal and Norway were vastly different but also surprisingly similar in terms of the challenges they faced and the resources they had to confront those challenges.

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looked forward to working with people like Hisila Yami and Baburam Bhattarai, who he believed would share at least a basic social justice ethic. My point is not that Hoftun is some kind of closet Marxist or Communist sympathizer, but rather that he is able to see in leftist politics the potential for pragmatic collaboration based on shared ethical values.

When it came to building a hospital—in addition to having limited practical experience in construction—Hoftun faced two big problems: a shortage of money and a shortage of skilled labor. Technically, Hoftun knew what he was supposed to do and how to do it. But with very little (and sporadically available) money to work with, steel and concrete imported from India were out of the question, and even bricks and timber were expensive and in short supply. Nothing happened quickly, and patience was one of the key lessons that Hoftun learned in his four years at Tansen. Another lesson was the need for improvisation and flexibility. Without money and standard materials, Hoftun had to innovate on the job, a task he worked on in collaboration with another breed of UMN workers known as Pax men—young American Mennonite[7] men who, expressing their pacifist convictions, volunteered to do service work overseas in return for exemption from military conscription in the United States. Almost all of these young volunteers had grown up on farms in rural USA where they had learned to solve problems with few resources. "They were *not* doing things in the latest fashion!" Hoftun recalls. "So, they got onto the practical problems that we had when we started from absolutely scratch in the beginning, and that worked very well." These Pax men were masters of, and for Hoftun models for, how to "make do"—how to get things done even without the right tool or the right materials. Their "can do" and "make do" abilities helped Hoftun develop his own ideas about how things could and should be done in Nepal (cf. Horst 2018: 177–178).

If lack of money was one problem, lack of local skilled labor was another. Hoftun needed Nepali craftsmen to help build this hospital, but there were virtually none available. Many people were looking for work, but the kind of worker Hoftun wanted was not there. Hoftun quickly recognized that if he wanted skilled labor, then he and others were going to have to train people themselves. So they did. The Tansen hospital got built using a variety of innovative, cost-cutting, locally sourced techniques. Hoftun watched as two things arose: a hospital and a core group of semiskilled Nepali masons,

[7] Mennonites are a Protestant Christian denomination who believe that followers of Jesus should, as Jesus taught, practice nonviolence, serve others, and "love your enemies."

woodworkers, electricians, blacksmiths, and so on.[8] What's more, once the hospital was done, the Nepali craftsmen took their skills and used them as the basis for their careers. It dawned on Hoftun that he had solved two problems: building a hospital and giving a group of people the skills to stand on their own feet. On-the-job training may not be the most efficient way to simply get a job done (like building a hospital), but it was a very efficient way of producing skilled labor that would make the next building job much more efficient.

It was from this realization that Hoftun began to contemplate a way to institutionalize the kind of skills training and job creation that had happened haphazardly on the Tansen hospital building site. Hoftun began to raise money for a trade school and approached the Nepal government with the idea, only to be turned down. The government did not want more Christian "mission schools." After a furlough and further thought, Hoftun came back to Nepal and pitched his ideas for a training institution, not to education officials (as he had done previously) but to the Ministry of Industry. And this time his proposal to promote industrial skills came with an ultimatum: allow the plan to go ahead in Nepal, or it will be taken to India. Once framed in terms of industry, not education, in 1963 the Nepal government agreed—on the condition that the new training institute be located in the Tarai, where transportation would be less challenging. Everyone agreed on Butwal because of its geographic centrality: on the border between the hills and the Tarai, it was also near the intersection of the old road from India to Pokhara and the new East–West Highway then under construction.

What follows is the story of how Hoftun brought together UMN and Ministry of Industry officials to establish an Institute of Technology and Industrial Development (ITID). Although the ITID agreement had a larger scope,[9] the institute was soon known popularly as the Butwal Technical

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[8] Tullis Hoftun contributed by teaching some of the most promising young craftsmen reading, writing, and basic mathematics.

[9] In addition to a technical training institute, the ITID agreement called for a design and engineering division, though this later function was not institutionalized until 1972 with the founding of the Development and Consulting Services (DCS). See Chapter 2.

Institute, or BTI. To provide electrical power for its own workshops, the institute built a small hydropower plant on the Tinau River (just above Butwal) that eventually grew into a 1-megawatt (MW) facility. In order to own and operate the plant and its distribution network, Hoftun and UMN registered the Butwal Power Company Ltd. (BPC) in 1965, in partnership with the Nepal government, which became a minority shareholder. By the time the Tinau project was finally completed in 1978, BTI was flourishing but Hoftun was beginning to formulate a new vision for further work centered on hydropower. From his experience in Norway, he knew the powerful "multiplier effect" that energy brought to any economy. With energy came jobs and industry, and with jobs came money circulating through the community, which, in turn, created more jobs. If, like Norway, Nepal could turn its moving water into power, that power would form the basis for an independent national economy. And as a Norwegian, familiar with Norway's history of conquest and exploitation by foreign states, Hoftun saw hydropower as a key element in fledgling Nepal's struggles to assert sovereignty and economic independence vis-à-vis its giant neighbors, India and China.

Hoftun also believed that for hydropower development to sustainably contribute to Nepal's industrialization and national independence (economic and political), it had to be firmly in Nepali hands. Even if well intentioned, power plants engineered, built, and maintained by foreigners would leave Nepal *dependent* on foreigners. Nepal needed the skilled labor to take a power project from concept to completion. As he had learned while building the Tansen hospital, Hoftun knew that creating skilled labor through on-the-job training was time consuming and inefficient. (If your goal is to simply get a hospital or power plant built fast, it is much more efficient to use money to import supplies and already skilled labor.) But he also knew that once those Nepali skills were in place, they would form the basis for greater and greater accomplishments. Looking back at his early career in Nepal, Hoftun laughs when noting that he stumbled upon ideas that would later become development mantras: appropriate technology, sustainability, bottom-up development, technology transfer, and, above all, capacity building. Capacity building is what would ultimately break what Hoftun often referred to as the "vicious circle": without experience, no jobs; and without jobs, no experience. On-the-job training would provide jobs and experience, on the basis of which

one was qualified for further jobs. Whether for an individual or a company or a nation, capacity building was the key to building competence, sustainability, and independence. As a Nepali former BPC administrator explained to me, BPC existed not to produce money, electricity, or even power plants but to produce "trained Nepalis."

BPC became the means by which to implement a vision of increased power production, job growth, improved standards of living, and national independence. After the 1 MW Tinau project, between 1981 and 1991 BPC and its subsidiaries built the 5 MW Andhi Khola power project. From 1988 to 1994 they built the 12 MW Jhimruk project. And from 1993 to 2000 BPC and partners built the 60 MW Khimti project. In the meantime, BPC was first nationalized (in 1995) and then privatized (in 2003), at which point it became the Nepali-owned hydropower developer and distributor that it is today.

Looking at BPC's trajectory it is impossible not to make an organic analogy: the company and its accomplishments were like a growing organism. In this book's epigraph, Hoftun himself compares human capacity building with planting a seed. But in my interviews with him, Hoftun was insistent that, while he may have known that he was planting a seed, he had no preconceived notions of what that seed would grow into.

> Although my background was in electric power business, that was not at all in my mind, either for coming to Nepal or for doing things after we started. Rather, it grew out of [unforeseen circumstances]. There was perhaps some vision of rivers and the power potential they had in terms of industrial development and building up jobs for people and the economy in general. That was the overall concern or aim…. [But] there was no idea about one project building up to the next. That just came out of the situation: we have to train people and get going on our own. We were just trying to figure out how to do things.

"The way things progressed was more or less accidental or coincidental, not planned long in advance," Hoftun continued. "There is nothing in BPC history that was really planned. It has grown up out of the environment of development in Nepal." This book examines how the seed that Hoftun

planted grew, with the help of many Nepali hands, in the distinctive political, cultural, and historical environment of modern Nepal.

But before telling that story (beginning in Chapter 2), it is essential to explore Odd Hoftun's development philosophy: its characteristics, how it evolved in Nepal, how Nepalis working with Hoftun understood it, and why many Nepalis recognized Hoftun's vision as a version of their own dreams for Nepal. It is this convergence, I believe, that accounts for the successes BPC achieved and, perhaps, for some of its challenges today.

DEVELOPMENT PHILOSOPHY

Many have noted that the Butwal Power Company (BPC) was an unprecedented organization in Nepal. For a church-related development organization (the United Mission to Nepal [UMN]) to support Hoftun's vision for promoting private enterprise by establishing a private commercial corporation (BPC) was as pioneering as it was controversial. And because the government of Nepal was from the beginning a shareholder in the company, BPC had folded into its corporate DNA three distinct, and in some ways conflicting, institutional logics. First was that of UMN: although church based, UMN was basically what would later be called a "nongovernmental organization" (NGO) dedicated to serving the disadvantaged and operating on a nonprofit, grant- and donation-funded basis. The second institutional logic was that of the government: a bureaucratic administrative body that exists to (hopefully) advance the national good, paid for by taxation (and, in the case of Nepal, international aid). And third was the logic of business and the market: profit-driven, competitive, and inherently risky. In effect, these three represent three epistemological stances: donor-driven service, prioritizing the national interest, and market-derived profit.

In some ways the BPC story—from its founding under UMN, to its nationalization and state ownership, to its eventual full privatization—seems to proceed sequentially through these three institutional forms (what I will call nonprofit, government, and business). But it is not that easy. In fact, all three sets of institutional logics and values have been present in BPC from the beginning and, to some extent, remain to this day. Analytically, it

is important to ask the relative weight given to any one of them at a given moment in BPC history. And, even more pointedly, we need to trace the tensions and contradiction between these three epistemological impulses: to seek equitable benefit sharing, to advance the national interest, and to profit.

Some of the basic questions I asked Odd Hoftun (and many others who had been involved in BPC) were: Why the corporate or business model? If the goal was to promote capacity building in the hydroelectric sector, why not form an NGO or foundation that would provide this service? Or why not work with the government to establish state-sponsored training programs? Why try to root your vision in the competitive capitalist market with its "survival of the fittest" logic? How can you preserve the values of service and human dignity in a corporation where the "bottom line" (profit) is usually the ultimate value? Or, as many of Hoftun's UMN colleagues pointedly asked over the years, how can a Christian, and especially *a Christian missionary*, even think about promoting big business that is inherently exploitative of the very people the missionary aims to serve? As one fellow missionary complained of Hoftun's UMN-backed enterprises:

> I cannot see the compatibility between a mission and the owner of a large industrial complex. The goals clash! Companies happen to be associated with big money (profit motive) and a position of power. How to reconcile this with our missionary calling of lowness (stepping down) and servanthood? Why do we want to run the risk of being misunderstood?[10]

Hoftun endured decades of criticism from missionaries for whom, as he said, "'company' is a bad word."

If the market-based corporate model was so bad, why not work to create a government-run public enterprise? In many ways BPC was, and still is, a "public utility." Its power distribution business requires it (in theory) to be "service minded." For Hoftun, the nationally owned, service-oriented public utility was an ideal. At least initially, he was happy to hand over the power

[10] Hoftun archival material at Martin Chautari, UMN Economic Development Board records, a letter to Wynn Flaten, EICS, from Ben van Wije, re: EID Long Term Plans, November 7, 1990.

projects BPC developed into government hands. But Hoftun quickly learned that public ownership did not necessarily translate into service for the public good. Whether due to lack of resources, lack of administrative efficiency in a young bureaucratic state, or due to sheer incompetence and/or corruption, Hoftun soon saw that placing hydropower infrastructure into government hands was an invitation for disaster.

If a government-owned enterprise was not the ideal platform on which to develop his human capacity-building ideas, why not start an NGO or foundation? For Hoftun, the private, nonprofit model is good to the extent that it allows its management to maintain control over the ethical principles that guide the organization. But the fatal flaw of the NGO model was, for Hoftun, its dependency on donor funding. Furthermore, NGOs tend to reproduce the logic of donor dependence in their own programs, which often treat aid recipients as charity cases who, in turn, become dependent rather than self-sustaining. But in terms of efficiency, looking around at the development world in Nepal, Hoftun saw the main danger of NGO donor dependency to be not a lack of resources but *an overabundance.* "To have too much money is like poison," Hoftun told me. Rather than fostering institutional budget management, problem solving, and independence, donor money promotes waste and inefficiency. "Too much money just destroys the will to make do with whatever is possible and keep the costs down. I learned that stuff while we built the hospital in Tansen. It was a good lesson."

Ultimately, Hoftun embraced the corporate, market, business model of institution building for a combination of practical[11] and personal reasons. Corporate institutions minimized some of the flaws of the other approaches, but they also offered the means by which to pursue a vision of ethical business practice that was rooted in Hoftun's specifically Norwegian Christian upbringing. Hoftun described to me a tradition or ethos within the Norwegian state church that promotes "Protestant frugal values but at the same time is not anti-business. [A Christian should] just work and

[11] As discussed further in Chapter 2, Hoftun also noted that the corporate model, with its relatively standardized legal framework and rules, was an internationally recognized form that facilitated transactions with other businesses and foreign donor agencies.