



Introduction: Embodying a Liberated Mind at Death

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Abstract

The Tukdam Project directed by affective neuroscientist Richard Davidson at the University of Wisconsin-Madison since 2013 has investigated Buddhist practitioners in India entering a Tibetan Buddhist post-death meditative state called *tukdam* (Tib., *thugs dam*), where the body demonstrates attenuated decomposition and presents an altered postmortem chronology process. Through a collaboration of Buddhist monastics, Tibetan medical physicians, and biomedical researchers as well as neuroscientists from the Russian Academy of Sciences led by Svyatoslav Medvedev since 2020 and India-based National Institute of Mental Health and Neuro Sciences (NIMHANS) Centre for Consciousness Studies since 2022, an international collaborative team has investigated the phenomenon from an interdisciplinary and cross-cultural lens. Yet, despite the varied paradigms and intellectual lineages of the research teams, they have skillfully employed instruments of knowledge, markers of physiological processes, definitions of consciousness, and varied paradigms of ontological and epistemological realities in Euroamerican traditions of biomedicine and science and Indo-Tibetan traditions of Buddhism and medicine. This special collection explores perspectives from the anthropologists who have served as researchers, managers, and leaders of the Tukdam Project since its inception, striving to collaboratively integrate competing and synergistic investigative regimes in exploring the biocultural nexus of suspended life and embodied mind in meditated deaths of liberation.

Keywords Death and dying · Ontology · Epistemology · Postmortem meditation · *Tukdam* · Tibetan Buddhism

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Culture, Medicine & Psychiatry Special Collection on: Liberating Mind at Death: Ontological Realities and Discourses with Science in Tibetan Tukdam Post-death Meditative State

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Introduction

In the human condition, as for living beings everywhere, we all experience death. But how we die and what dying might mean for us spiritually, socially, and culturally—in our communities, families, and belief systems—varies greatly. Although people across all cultures arguably try to die well and seek conditions to “achieve” “good deaths” for themselves and relations near and dear, what a good death looks like might have different characteristics and conditions (Ariès, 1975; Hertz, 1960; Kaufman & Morgan, 2005; Seale & van der Geest, 2004). At the threshold of life and death, what constitutes life and what constitutes death, what underlies presence or absence of consciousness, and what animates mind embodied or mind released—the liminal suspensions of existence and being, have little consensus across cultural perspectives let alone in the Euroamerican biomedical tradition. How to facilitate or “choreograph” a good death and what purpose it might serve for the individual and their sociocultural context has significant variation (Stonington, 2020).

In the Tibetan and greater Himalayan communities as well as among Tibetan Buddhist practitioners, the phenomenon of *tukdam* (Tib., *thugs dam*) is a meditative state achieved at the time of death. The individual appears radiant and alive for days to weeks at times beyond clinical death, bringing into stark relief the question of the demarcation of life as it transitions to death. From the Euroamerican perspective, it problematizes the “hard problem of consciousness” in the philosophy of mind of whether consciousness is merely an epiphenomenon of the brain (Chalmers, 1995), a systemic integration of information for our conscious experience (Tononi, 2004), or otherwise. The state of *tukdam* prompts us to interrogate the potential social, ontological, and epistemological implications of a model of mind in the “age of the brain” where the brain is seen as a mere organ enacting the “chemistry and physics of the soul” implementing the current neuroscience maxim that “mind is what the brain does” (Davis & Scherz, 2022; Gazzaniga, 2018; Minsky, 1988; Pinker, 2009; Stone, 1997). Though changes in the brain attributed to meditation and other contemplative practices as well as spiritual experience have been a focal area of research the last several decades (Davidson, 2021; Davidson & Dahl, 2018; Davidson & Schuyler, 2015; Davidson et al., 2003; Goldberg & Davidson, 2024; Goldberg et al., 2018; Richter et al., 2024), little work has looked at how such practices might change the body, the processes of embodiment, and their culminating expression in the dying and post-death state. Recent work has sought to untether brain-centric views of consciousness by positing understandings of consciousness as expressing through embodied and socially embedded forms, cognition as enacted through “a complex set of capacities and situated agents” (Noë & Thompson, 2004), and mind as intersubjective and intercontextual in experience (Fuchs, 2013; Noë, 2010; Thompson & Varela, 2001; Varela, 1996; Varela et al., 1992; Worthman, 2009). These boundaries continue to be pushed and thresholds probed (Thompson, 2010, 2017). The phenomenon of *tukdam* highlights the possibilities and potentialities of cultural practices that center the seat of consciousness at the heart and enacts

not only how “culture gets under the skin” but epitomizes the life course possibilities of intentional forms of embodiment cultivations in the living (Worthman & Costello, 2009; Kirmayer et al., 2020; Worthman et al., 2023a, 2023b). It probes possibilities of affecting the expression of embodiment in the dying process and the critical embodied mind in all its phenomenological experiences described by spiritual traditions.

Background

As the Fourteenth Dalai Lama, the spiritual leader of the Tibetan community, has engaged in conversations and collaborations with scientists over the years (Lama, 2018; Lama et al., 1999), he has encouraged the investigation of the psychophysiology related to contemplative practices to provide evidence for their benefits and encouraged greater familiarity with the skills to support greater happiness and well-being globally. He also motivated the investigation of the specific phenomenon of *tukdam* as well, leading to the formation of the Tukdam Project, the history of which is recounted in this collection of papers. Why did he promote inquiry of this state? He proposed that understanding this phenomenon from the perspective of various scientific disciplines in the Euroamerican tradition could shed light on this hard problem in the philosophy of mind on the origins of consciousness, a topic that had arisen often in his dialogues with scientists. He posited that *tukdam* could provide a potential context in which scientists might observe indications of consciousness, vitality, or mind distinct from or disassociating beyond gross activities of the brain. He also proposed that a better understanding of the phenomenon might encourage less fear around death more broadly.

Over the last ten years, a series of anthropologists have served the Tukdam Project as field researchers, project managers, and collaboration leadership. This special issue collection of contributions provides ethnographic, biocultural, medical, psychological, and ontological perspectives from these scholars. Tenzin Namdul served in the field from 2007 to 2008, for his doctoral work 2016–2017 and project management 2021–2022. Dylan Lott served as researcher then project manager from 2016 to 2020. Tawni Tidwell was project manager then project lead from 2020 to present. And Donagh Coleman has been an external collaborator from 2018 to the present, including for his doctoral research. Leslie Eisenberg has served as forensic anthropologist for the collaboration since 2021 alongside Alexander Fedotov as forensic pathologist and both continue to provide their joint forensic expertise to each case investigated by the study and in the development of new measures.

This collection of contributions explores different epistemological and ontological approaches to the *tukdam* phenomenon as a state in which highly experienced practitioners in the Tibetan Buddhist tradition are described to gain ultimate realization into the nature of mind at the time of death. Practitioners enter meditation amidst the dying process and continue past the biomedical definition of death—beyond cessation of cardiopulmonary and brain activity as measured by electroencephalogram (EEG), auditory brainstem response, electrocardiogram (EKG), blood oxygen saturation, and other neurophysiological measures. But what continues from the Tibetan perspective?

Both textual and oral accounts describe that a subtle consciousness remains—situated in the heart region, until the meditation is ceased, and then the body undergoes rapid decomposition and putrefaction. For Euroamerican scientists, there appears a significant plateau effect in the decompositional process—a suspended chronology, as such, to the paling or pallor mortis, blood pooling in dependent surfaces or livor mortis, and other attenuations of early postmortem signs. In *tukdam*, the skin remains supple and appearance radiant for a period of days to weeks, beyond what has been reported in the forensic literature to date (Tidwell et al., 2024a, 2024b). Likewise, the research team has not observed the state of rigor mortis or muscle stiffening in any cases investigated thus far, though all cases examined have occurred after this process has been purportedly completed. The phenomenon presents a possibility of detecting an EEG signal for up to or even beyond 30 minutes as seen among humans taken off life support and in various animal models until arterial blood pressure ceases (Auyong et al., 2010; Borjigin et al., 2013; Grigg et al., 1987; Norton et al., 2017; van Rijn et al., 2011; Xu et al., 2023). However, the earliest the team has been allowed to investigate a case is six hours past clinical death.

The contributions in this special collection explore themes around perception, systems of knowing, inferential claims, ontological realities, knowledge production, and cross-cultural ethical responsibility through the approaches, methodologies, and assumptions applied in the research on *tukdam*. The papers probe conceptualizations of a good death, a life well-lived, a liberated state of mind, definitions of consciousness, and the fruits of a lifetime of practice and ethical conduct. They describe approaches to death that exhibit an absence of fear, palpable courage, reverence, and decisive understandings of the nature of reality, relationship between mind and body, and the nature of existence. They also propose an expansive state of consciousness for which the ethnographic work describes is an ideal death emblematic of an exemplary life well-lived.

Finally, these contributions reflect on the constituencies and stakeholders for this research, different modes of evidentiary ‘truths’ underlying each paradigm, and the multiple realities that may co-exist or perhaps evade integration or resolution.

Although the contributions do not examine the dying experiences and postmortem expressions described in other spiritual traditions such as Jain *sallekhenā* (lit. thinning out of existence) (Braun, 2008; Chapple & Key, 2020; Maes, 2023, 2024), Hindu ascetics (Rowe, 1952), the incorruptibility of Catholic saints (Bouley, 2016; Cruz, 1991; Harvey, 2006; McBride, 2017), self-mummified monastics in Japan (Jeremiah, 2014), Sufi and Islamic experiences of death (Ostřanský, 2015; Smith & Haddad, 2002), among others (Goodrich, 1835; Hacke, 1699; Quigley, 2005), the investigation of *tukdam* has inspired other traditions to document their cases and share histories of their lineages, adepts, and exemplars.

Overview of the Collection

This special issue features three articles, one perspectives essay, one commentary, and one associated feature-length documentary film, each taking distinct perspectives on the endeavor of researching the post-death meditative state in the context of the Tukdam Project as an international collaborative research initiative.

In the first paper as a Perspectives piece “Death and Happiness,” Namdul brings us along his journey investigating *tukdam* as a study team member in the earliest phases of the Tukdam Project history and on the first official *tukdam* case investigated. He describes his first encounter with a practitioner in *tukdam* in 2012 and then his re-encounter in 2016 during his doctoral field work as he met the same subject in reincarnated form. His contribution acutely highlights his experience as a native anthropologist, or anthropologist who is a member of the community under study and community whose practices are being studied. Yet his identity is also multiple, fluid, and relational à la Kuwayama (2003). As an insider-outsider, he is acutely aware of his encounter with *tukdam* as a phenomenon novel and captivating despite being a member of the Tibetan community. Namdul describes signs recognized in *tukdam* states that are not assessed by the study—effects on proximal entities such as leaves sprouting from a nearby twig in water, meditative experiences for those present in the room with the *tukdam* practitioner, meteorological effects such as a clearing sky or rainbows appearing, and indications in the dreams of the practitioner’s close relations. Namdul reflects that *tukdam* is not only an indication and outcome of spiritual accomplishment for adept practitioners in the Tibetan Buddhist community, but a cultural model for an ideal death that serves as a moral heuristic ground to transform orientations to self and others. He also emphasizes its role in facilitating practices of compassion and benefiting others, infusing conditions for wisdom and insight, and framing a life well-lived highlighting the daily practices inculcated to do so.

In the second paper “Life in Suspension with Death,” Tidwell introduces readers to the current collaboration of the Tukdam Project, examining the epistemologies of the two intellectual traditions merging to investigate *tukdam*—the Tibetan Buddhist and medical tradition on one hand and the Euroamerican biomedical and scientific tradition on the other. She uses a pair of juxtaposed cases from the research collaboration to explore the state of *tukdam* as an ontological frame that illuminates the enactment of two paradigms of the body and two paradigms of an embodied mind at the time of death simultaneously implicating what constitutes life for each intellectual tradition. Her interest is in the ontological and epistemological contexts in which these two traditions might converge given correlations in values of evidentiary claims and the contrasting approaches in the metaphor of a landscape on which each intellectual tradition provides distinct instruments of knowledge to draw their “reality” map. She uses her contribution to probe the question of how distinct cultural paradigms might investigate the time course, physiological changes, and soteriological implications of the death and dying process.

In the third paper of the collection “*Thanato-technics: Temporal Horizons of Death and Dying*,” Lott introduces the term *thanato-technics* as a way to examine *tukdam* vis-à-vis the cultural, spiritual, and personal conceptions of peri- and post-mortem processes punctuated by technological interventions of measurement that frame temporal dimensions in death and dying processes. Lott builds on Bernard Stiegler’s (1998) use of the term *technics*, which Stiegler ascribes to the presence of traces in material forms through which humans are confronted with their own mortality on a daily basis. He describes how such inscriptions of technical skill and substantive tools provoke existential awareness. Lott examines the convergences and

divergences of Tibetan Buddhist and biomedical conceptions of death and dying through these thanatological *technics* of physical markers of temporality in peri- and postmortem processes. His contribution explores the thresholds of understanding our mortality through shared experiences of embodiment alongside the limits of our demarcations and traces on the material world.

In the fourth paper “Tukdam, Different Ontological Bodies, and Making Tibetan Deaths Visible,” Coleman is inspired, in the spirit of anthropologists like Viveiros de Castro, to turn “from questions of knowledge and epistemology towards those of ontology” (Henare et al., 2006: 8). He applies a creative engagement of Yogācāra Buddhist philosophy to “stretch and rework ‘indigenous’ concepts” in the Tibetan intellectual tradition for purposes of ontological anthropological exploration. He deploys various interpretations and strata of thought from medical and ontological anthropology as well as science, technology, and society (STS) studies to sketch out theory for how ontologically distinct bodies might come about. Somewhat provocative and performative in style, Coleman proposes tantric Buddhist bodies and deaths are incommensurable with and invisible to the modern medical gaze with its attendant evidentiary requirements of visibility, quantification, and technological measurability for claims of veracity and “grounds for the real.” While not making claims for cultural relativism in his application of the ontological turn, he does propose a perspective of radical alterity that pushes against ontological realism and the possibility for Euroamerican scientific statements to say anything “true” (Graeber, 2015). He proposes that, in the witnessing of *tukdam*, manifold ontological realities are simultaneously present. He reflects on his experience as a filmmaker documenting *tukdam* and the cases investigated by the Tukdam Project team to consider how producers, broadcasters, and media gatekeepers in his European documentary film world enact a similar gaze in the project of making *tukdam* “visible” and translating Tibetan knowledge in Eurocentric frameworks.

In the feature-length documentary film, “Tukdam: Between Worlds” (2022), Coleman as director follows the Tukdam Project in its interdisciplinary effort of neuroscientists, biomedical physicians, traditional Tibetan medical physicians, and Buddhist scholars and practitioners to investigate the phenomenon of *tukdam*. The film follows Dylan Lott who served as project manager at the time as well as the field team of Tibetan medical physicians from the Dalai Lama’s Tibetan Medical and Astro-science Institute, Men-Tsee-Khang, to investigate *tukdam* cases. It provides interviews from the principal investigator and study director, affective neuroscientist Richard Davidson as well as lead thinkers in the Tibetan Buddhist and medical communities. Juxtaposed with footage following the study, he features stories of several *tukdam* meditators and their families, attendants, and reincarnations. Coleman also interviews Vanessa Lopez as the mortician who examined and embalmed Tenga Rinpoche upon release of his *tukdam* state in 2012. Her observations of the quality of blood and fluids three and a half days post his clinical death inspired many of the measures applied in the Tukdam Project and examined by Tidwell in her paper.

In her commentary, Vincanne Adams, though not a formal project collaborator, provides key insights on the *tukdam* research as one of the longest tenured scholars in the anthropology of Tibetan medicine and the interstitial expressions of science and religion in the Tibetan world. She posits *tukdam* as similar to both culture

bound syndromes and boundary objects. The state of *tukdam* requires varied cultural frames to witness its myriad implications for ontological realities and epistemic lenses, making it “bounded” by paradigm and valuation of its signs, symptoms, and markers. Likewise, the same “object” provides a nexus for which instruments of knowledge, varied training lineages, and epistemological genealogies “see” distinctly as truth claims diverge upon the grounds of varied epistemic starting points and evidentiary procedures (Star & Griesemer, 1989). She reflects on the contributions in the collection and how each inspires specific considerations on the anthropological endeavor first and *tukdam* more specifically. She describes *tukdam* as an anthropological curiosity appearing to all who see it to be indisputably similarly informed yet also differentially characterized by the cultural idioms and epistemes that are used to explain it. She reflects on the way in which each paper takes up this problem distinctly, even offering models that attend to its sprawling inability to be captured reductively.

Although unable to contribute a commentary in this collection herein, as current collaborator on the study, forensic anthropologist Leslie Eisenberg has reflected on the ability of *tukdam* as an object of investigation to highlight the contingent nature of science as informed by assumptions, ideologies, and structures of evidence. She has described how “objective” science may never be “objective” amidst its matrix of practices, interpretations, and perspectives. The atypical decomposition patterns observed in the study of *tukdam* bring into question standard forensic methods used to estimate time of death and point to the need for further research to better account for potential cultural variability in how bodies decompose (Weisensee & Atwell, 2024). Since traditional techniques for estimating time since death were developed across large populations under normative dying contexts—from sudden, unnatural deaths to slow transitions in diseased states—the bulk of the literature in forensic science may not provide an accurate baseline for cases where the dying process may have been influenced by spiritual practices or other compartments of ethical, devotional, and moral aesthetics.

Eisenberg’s forensic anthropology colleague Diane France also noted that in 2023 alone, 31 papers were published in the *Journal of Forensic Sciences* on the post-mortem interval (Johnson, 2024). Regarding the forensic investigation of *tukdam*, France commented, “We are learning a significant amount about the external factors driving decomposition (e.g., temperature, humidity and insects), but we know relatively little about the internal factors (e.g., microbial activity). The *tukdam* phenomenon is unique and has the potential to greatly add to our understanding of the pattern and rate of the decomposition process.” Since most bodies in North America and Europe are typically moved soon after cardiopulmonary function has ceased or brain death has been assessed, there is little documentation of a body left to rest for three days or more in the postmortem period. *Tukdam* allows for reflection on how different cultural approaches to the dying process can inform practices of caring for loved ones cross-culturally during the dying transition and post-death process.

Associate Director of the *Tukdam* Project Geshe Lodoe Sangpo has also noted, “Buddhist practitioners view the dying state with reverence and as a critical physiological opportunity of the coarse body to disassociate from the subtle mind, a process they have been rehearsing through a variety of practice techniques throughout

their lives [...]. Their lack of fear in entering the dying state and, instead, their compassionate resolve that realization in such a state will allow them to bring greater benefit to sentient beings in the next reincarnation is a key context for their capacity at this critical transitional time” (Johnson, 2024). As such, *tukdam* proposes an important gateway to understanding the experience of dying for cultures and individuals who approach death without invoking a cascade of biochemicals of stress and existential fear. In response to the forensic findings of the Tukdam Project, Marcella Sorg, Research Professor in Forensic Taphonomy at the University of Maine–Orono reflected, “Can the actions of the decedent just proximate to death influence decomposition processes?” (Johnson, 2024). Likewise, can a lifetime of actions for a given individual influence decompositional processes, or perhaps even demonstrate a life well-cultivated as well as a death well-entered? This is the crux of *tukdam*.

Conclusion

In summary, the aim of this collection is to highlight anthropological, ethnographic, and theoretical perspectives on the phenomenon of *tukdam* as challenging conceptions of consciousness, the embodied mind, and an ideal death. It challenges brain-centric approaches to neuroscientific investigations of consciousness and the decedent—questioning approaches that disaggregate brain, body, mind, and consciousness as well as those which essentialize the experiences of life and death as discrete events and not conditioned, intercontextual, and intersubjective processes. The papers challenge concepts and methods applied to examining human capacities and experiences at the thresholds of being, as well as the markers, traces, *technics*, signs, and cues—biological, perceptual, material, and spiritual—in determinations of life and death, presence or absence of consciousness, and activity or cessation of mind. The collection looks at the facilitative conditions of dying as intrasubjective as well as intersubjective. As beings embedded within shared life-worlds, enacted in contextual spaces, and embodied within complex biological and energetic fluid matrices, our experience is nothing other than ineffable. Likewise, entering the great transition of death itself as well as bearing witness to and offering caring support for those amidst the poignant passage transcending out of this life—or manifested realization of liberation—provides only shimmering phantasmas of signatures in the universe of what the process might entail. Our efforts to trace those scintillating glimmers of the nature of reality and its expressions tease us with glimpses into the vastness of existence.

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