

# Shorinjiryu Kenkokan Karatedo:

## History, Breath Science, and the Biomechanics of the Vertical Fist

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### Section One: A Brief History of Shorinjiryu Kenkokan Karatedo and Its Australian Legacy

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#### Origins and the Vision of Kaiso Kori Hisataka

Shorinjiryu Kenkokan Karatedo is, in this writer's view, one of the most historically layered and technically sophisticated styles of Karatedo to emerge from the post-war martial arts renaissance in Japan. Its origins lie not in the well-trodden corridors of Okinawan village dojos alone, but in the broad, restless curiosity of one exceptional individual: Masayoshi Kori Hisataka (1907–1988), known by the honorific title Kaiso — meaning 'founder' or 'restorer.' Born in Shuri, Naha, Okinawa, Kaiso Hisataka represented a bridge between the ancient civil defence and warrior traditions of the Ryukyu Kingdom and the modernising impulses of Showa-period Japan.

From his earliest years, Hisataka trained under masters of extraordinary calibre. His primary karate instructor was Master Chotoku Kyan (1870–1945), widely regarded as one of the greatest Okinawan karateka of his era and a virtuoso of taisabaki — the art of body shifting and evasion, evident in the Kenkokan kata and Randori of Sankakutobi (triangular jumping step). From Kyan, Hisataka absorbed not only devastating technique but a tactical philosophy of moving into the attack, closing the gap immediately, and countering with overwhelming force. This represents a clear divergence from Funakoshi's precept of 'karate ni sente nashi' — no first attack in karate. The first kata taught in Shorinjiryu Kenkokan, Naihanchin, opens in its omote form with a knife-hand strike, a characteristic sen sen o sen (pre-emptive strike) move that grounds the system in a

pragmatic, combat-orientated realism rather than the defensive philosophy of Shotokan tradition.

Kaiso Hisataka also trained in weapons under Sanda Kanagusuku, a former Ryukyuan police superintendent and pioneer of Okinawan kobudo, mastering the Kudaka family weapon traditions known as Shishiryu or Lion Dog Bo. He trained in judo at the prestigious Kodokan in Tokyo, attaining the rank of fourth dan under Sanpo Toku (1887–1945) — a feat that underscores his extraordinary gifts. In 1929–1930, Hisataka toured Taiwan with Masters Kyan and Ryosei Kuwae, demonstrating karate at the Taipei Butokuden and participating in numerous challenge matches against practitioners of diverse martial arts, oral tradition recording him undefeated throughout. This immersion in both Chinese and Japanese combat environments expanded his technical vocabulary and planted the seeds of what would become a genuinely synthetic and scientifically grounded system.

During the Second World War, Hisataka was stationed in Manchuria, where he encountered Master Minoru Mochizuki — a direct student of both Jigoro Kano and Morihei Ueshiba — enriching both traditions through cross-pollination: aikijutsu techniques entered Shorinjiryu, while Mochizuki absorbed elements of Hisataka's Kudaka Ryu karate into his own Yoseikan system.

Following Japan's defeat, Hisataka founded the first Kenkokan School of Shorinjiryu Karatedo on 10 June 1947, initially in Kumamoto prefecture. The dojo relocated to Tokyo's Setagaya Ward before establishing its permanent headquarters — the So Hombu Dojo — in the Waseda district of Shinjuku Ward in 1955 -2019. The name 'Kenkokan' translates as 'Hall of Health and Virtue,' or literally 'Fist Training Hall'; 'Shorinjiryu' invokes the legendary Shaolin Temple traditions of China — both appropriate designations for a system that blended physical rigour with moral development.

Among Hisataka's distinctive innovations was the systematic use of protective equipment — rigid chest protectors adapted from kendo bogu — enabling practitioners to test techniques at full power without excessive injury. His philosophy was characteristically

counter-intuitive: protect the targets, not the weapons. This approach laid the groundwork for the Koshiki competition system later developed by his son Masayuki from 1978. Kaiso also formalised the use of the tate ken — the vertical fist — as the primary striking configuration of the style, a decision with deep roots in Okinawan tradition and far-reaching biomechanical rationale explored in the second section of this essay.

## **International Expansion and the Role of Canadian and Australian Students**

In 1963, Kaiso Hisataka dispatched the first contingent of senior students to the United States, led by his son, 23-year-old Masayuki Kukan Hisataka. This group demonstrated Shorinjiryu at the 1964 New York World's Fair; in 1967, a second contingent appeared at Expo '67 in Montreal, after which Masayuki remained in Canada for several years teaching at McGill University, CEGEP St-Jérôme, and the National Theatre School of Quebec. Canada became one of the most fertile environments for Shorinjiryu's growth in the West, producing an extraordinary generation of practitioners including two current executive members of WASK, Hanshi Wayne Donovan and Hanshi Michel Laurin, whose influence would eventually reach Australia and beyond. Hanshi Wayne Donovan having trained with the founder of Shorinjiryu Kenkokan In Tokyo in 1977 and subsequently bringing a very strong Canadian team to the WKKF championships held in Brisbane in 1986. Michel Laurin made a comprehensive tour of Australia in 1991 together with Shihan Brown and Shihan Phil Hooper.

When Kaiso Hisataka retired from full-time teaching in 1974, Masayuki returned to Tokyo to assume direction of the So Hombu Dojo and continue the style's global expansion. It was during this period that the Koshiki competition system was developed around the Super Safe protective equipment — a polycarbonate helmet with visor and rigid chest protector — enabling full-contact sparring and controlled hard contact in sanctioned WKKF Championships with greatly reduced injury risk. The first World Koshiki Karatedo Championships were held in Tokyo in 1980.

## **Shihan Scott Brown and the Founding of Australian Shorinjiryu**

The story of Shorinjiryu in Australia is inseparable from Shihan Scott Brown, a founding member of the World Alliance of Shorinjiryu Karatedo (WASK) and the style's chief representative on the Australian continent. Brown began his martial arts journey in 1973 in Kyokushinkai karate under Aubrey Brookes in Cardiff, Newcastle, before exploring several other styles including Goshin Ryu and UKB Shotokan under Hanshi Patrick McKean. He discovered Shorinjiryu Kenkokan Karatedo in August 1978, commencing training under Shihan Laurie Vanniekerk — an instructor directly appointed by the Hisataka family to establish the Kenkokan style in Australia — and it is within Shorinjiryu that Brown still remains today.

Driven by an uncompromising appetite for authentic transmission, Brown travelled to Japan in October 1979 to train as an uchi deshi — a live-in student — at the So Hombu Dojo in Waseda, Tokyo, and the Shimbukai Dojo in Kinshicho, under Hanshi Masayuki Hisataka. The uchi deshi system is among the most demanding forms of martial arts apprenticeship in the Japanese tradition: unlike regular students, an uchi deshi immerses themselves completely in the rhythms of the dojo, training multiple times daily, assisting with teaching, maintaining the space, and absorbing the culture of the art through constant proximity to the So Shihan. This first period lasted just over six months, concluding in November 1980. During this immersion Brown had the rare privilege of training directly under Kaiso Kori Hisataka himself on multiple occasions, despite the founder's semi-retirement. Approximately one month before completing this period, he received his 2nd Dan promotion — along with Michel Laurin — from Kaiso Hisataka, together with the dojo name Ken Sei Kan (Fist Spirit Hall).

Training alongside Brown throughout this period was Hanshi Michel Laurin — a remarkable practitioner from Quebec who would go on to become a six-time World Koshiki Karate Champion and three-time All Japan Koshiki Champion, and who later founded the International Shorinjiryu Shindo organisation. Their encounter in the disciplined crucible of the Waseda & Shimbukai dojos — one from NSW, one from Quebec — represents one of the most vivid chapters in the international history of Shorinjiryu Kenkokan Karatedo. Senior Japanese practitioners training alongside them included Senoo, Kondo, Ishigawa, Yoshizawa, Miyazaki, and Yamashita.

Returning to Australia in December 1980, Brown opened Ken Sei Kai organisation under the KenSeiKan Dojo banner, establishing branches across North and Central Western New South Wales. When Shihan Vanniekerk stepped back from SKK karate in the mid-1980s, Brown and Phil Hooper (4th Dan, Queensland) became the primary custodians of the Shorinjiryu kenkokan tradition in their respective states. In 1985 Brown undertook a second uchi deshi period at the Hombu Dojo — this time for seven months — deepening his technical understanding of the Kihon, Yakusoku Kumites, TenChiJin, Gokyono Kumites, and the senior kata of Sochin, Kudaka no Nijushio, Sankakakutobi Dai, and Kusanku. Where the first period had given him his foundation, the second gave him the mature comprehension of a senior instructor capable of carrying the tradition forward independently. He received his Shihan title from Hanshi Hisataka on 8 October 1986.

Brown relocated Ken Sei Kai to Sydney in late 1986 and began teaching professionally, expanding to encompass fifteen dojos across multiple Sydney and NSW locations with 365 regular students. From 1989 to 1996 he ran a parallel school martial arts programme serving approximately five hundred school-aged students — an immense contribution to the propagation of Shorinjiryu values at the community level. In 1995, Hanshi Masayuki Hisataka appointed Brown as Australian Chief Instructor for Shorinjiryu Kenkokan Karatedo, formal recognition of his stewardship of the tradition across the continent.

Between 1996 and 1998 Brown pursued an undergraduate degree in Asian and International Studies at the University of Western Sydney, with emphases in Japanese history, culture, and a sub-major in philosophy — a deliberately chosen academic framework to better bridge the cultural divide between the Japanese martial tradition and Western students. He consolidated this with a Bachelor of Teaching Secondary, graduating May 2003. In 1999, on the basis of his martial accomplishments, academic studies, international tours with So-Shihan Hisataka across Australia (1986), India (1988), Hong Kong (1999), and Greece (2004), and his sustained leadership within Australian Shorinjiryu, Brown was promoted to 6th Dan, Shihan along with Phillip Hooper, by Hanshi Masayuki Hisataka. He subsequently hosted the 2000 World Koshiki Karate-do Championships in Australia — a landmark event for the style's Oceanic presence.

Brown's twin uchi deshi periods at the Hombu Dojo — totalling roughly fourteen months of complete immersion — remain among the most serious investments by any Australian practitioner in the authentic perpetuation of a Japanese karate tradition. His story illustrates what Shorinjiryu demands and produces at its best: not merely technical proficiency, but the whole-person formation that comes from sustained, honest, and humble engagement with a living transmission.

## **Section Two: Breath Retention, Biomechanics, and the Vertical Fist in Shorinjiryu Kenkokan**

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### **The Science of Breath Retention During Striking**

From the onset of training at the Hombu Dojo, So Shihan Hisataka emphasised what he termed the unique aspects of Shorinjiryu Kenkokan: the use of the vertical fist (tate ken) for punching, the heel of the foot (ko sokute) for kicking, and breath retention on impact with an internal mental kiai. It is essential to understand from the outset that the breath involved is not a forced large inhalation but a natural, relaxed rhythm using subtle lower diaphragmatic retention on execution followed by natural exhalation after impact. There is no large thoracic or clavicular inhalation. Sustained training at the Hombu Dojo — particularly the intense sessions of Anzen Bogu striking — demanded a relaxed mind and naturalised physical movement; without it, long training periods were simply not sustainable. All impacting emphasised three fundamentals: weight drop, hip twist, and a foot stamp to accentuate power with appropriate biomechanics.

One of the most immediately striking characteristics of Shorinjiryu Kenkokan — and one that sets it apart from the majority of contemporary karate systems, including most sport karate formats — is this practice of retaining the breath during the execution of powerful strikes. While mainstream karate training typically instructs practitioners to exhale sharply at the moment of impact, Shorinjiryu has preserved an older and physiologically sophisticated approach whose legitimacy is now confirmed by peer-reviewed biomechanical science.

The human body generates striking power not through the isolated action of the arm or leg but through a coordinated sequence of muscular contractions originating from ground contact, travelling through the legs, amplified by hip rotation and torso engagement, and finally expressed through the limb at the point of contact — the kinetic chain. For this chain to transmit force efficiently, the core must function as a rigid, stable column. A loose, unconstrained core is like a chain with a weak link: energy dissipates into it rather than transmitting through it.

The mechanism by which the core achieves this rigidity is primarily through intra-abdominal pressure (IAP). When a controlled diaphragmatic breath is taken and held while bearing down — the Valsalva manoeuvre, named after the seventeenth-century Italian anatomist Antonio Maria Valsalva — pressure within the abdominal cavity rises dramatically. A systematic review of sixteen studies (PMC6945051, 2020) recorded IAP in excess of 200 mmHg during heavy squats performed with breath retention, compared to substantially lower pressures during normal breathing. This elevated pressure acts as a hydraulic cushion around the lumbar spine, simultaneously creating the rigid torso structure through which ground-reactive force can be efficiently transmitted to the striking surface.

### **Peer-Reviewed Evidence: Valsalva and Force Production**

The scientific foundation for breath retention in maximal exertion is robust. Hackett and Chow (*Journal of Strength and Conditioning Research*, 2013; PMC2883611) established comprehensively that the Valsalva manoeuvre increases intra-abdominal and intra-thoracic pressure, thereby improving trunk stability and providing additional stiffness for proximal muscle attachments — with direct implications for force production in the extremities. Research on the Valsalva in resistance training has consistently demonstrated that breath retention during maximal exertions can increase force output by 10 to 20 percent compared to normal breathing, while simultaneously reducing spinal compression.

The 2020 systematic review (PMC6945051) of sixteen studies confirmed the highest IAP values during the Valsalva in squats (exceeding 200 mmHg), followed by deadlifts and slide rows (161–176 mmHg), with increased intra-muscular pressure on the erector spinae directly associated with spinal stabilisation — the core mechanical benefit directly applicable to the power transfer in a karate strike. A 2025 study in *BMC Sports Science, Medicine and Rehabilitation* (DOI: 10.1186/s13102-025-01460-4) confirmed that the Valsalva increases intra-thoracic pressure providing core stabilisation during maximal bench press, with the performance-stability benefit clearly established.

A brief Valsalva manoeuvre is, in fact, physiologically unavoidable during any effort exceeding approximately 80 percent of maximum voluntary contraction. The body performs it automatically — which explains why untrained individuals instinctively hold their breath when moving heavy furniture or performing any explosive physical action. The traditional Japanese martial arts recognised this principle centuries before it was formalised in biomechanical research, encoding it into their technical curricula as standard practice.

### **Breath Retention in Other High-Power Sports: Corroborating Evidence**

The principle is not unique to the martial arts. The tennis serve provides an instructive parallel. Players habitually take a breath and briefly retain it during the preparation and early execution phase of the serve, creating the intra-abdominal pressure necessary to stabilise the trunk as the kinetic chain fires from ground through legs through hips through torso to racket. Research published in the *Journal of Strength and Conditioning Research* found that dynamic stroke velocity and isometric force were significantly greater when subjects used vocalised exhalations directly after the racquet strikes the ball compared to silence ( $p < 0.001$ ); separately, players generate up to 3.8 percent more force on forehand strokes when vocalising at impact. These results are entirely consistent with the biomechanical model: brief retention creates the rigid column; the exhalation or grunt at the moment directly after impact provides the final neuromuscular activation spike.

The tennis serve is particularly illuminating because it involves precisely the same kinetic chain as a Shorinjiryu karate strike. Effective servers maximally utilise the sequential activation of lower body, core, and upper body musculature — legs driving ground-reaction force upward, hips rotating and transmitting into the trunk, the trunk transmitting into the shoulder and arm. If the core is soft or the breath is flowing freely during this critical transition, force leaks and racket head speed decreases. The structural requirement is identical to that of the SKK karate strike.

In powerlifting and Olympic weightlifting the case is even more directly documented. Heavy squats, deadlifts, and cleans demand a maximally rigid torso against which lower-body forces can push the bar upward. This is accomplished through a deep belly breath

held under tension — not a chest breath, but a diaphragmatic expansion creating 360-degree pressure around the lumbar spine. The principle is the same regardless of discipline: when maximum force must be expressed through a biological system under load, the core must be pressurised and rigid. Elite powerlifters and Olympic weightlifters universally employ breath retention during their heaviest lifts for precisely this reason.

### **The Shorinjiryu Approach: Internal Retention vs. Forced Exhalation**

The contrast between Shorinjiryu's approach and that of mainstream Japanese and sport karate reflects a fundamentally different understanding of the physiology of striking. Most modern karate styles, particularly those shaped by the sport competition environment, teach practitioners to exhale sharply — the kiai — at the precise moment of impact. The kiai has real value: it forces a breath cycle that prevents passive breath-holding from anxiety, and a sharp forced exhalation does spike abdominal wall activation momentarily. However, at the instant of impact the practitioner's lungs are partially or fully deflated, IAP is dropping rather than sustained, and the core is transitioning from tension to post-exhalation relaxation.

The Shorinjiryu rationale, rooted in the original Okinawan transmission through Chotoku Kyan and refined by Kaiso Hisataka's scientific approach, is that the most powerful strike is delivered with the core pressurised and the breath retained. The subtle breath is taken before the initiating movement, held through preparation and execution phases, and released only after the strike has been delivered and structural integrity re-established. The result is a strike in which every element of the kinetic chain — from foot through leg through hip through torso through arm to fist — is connected by a rigid, pressurised column, with no soft link on impact. Advanced SKK practitioners harness this breathing rhythm and can execute multiple strikes with appropriate breath retention, maintaining stability and power without sacrificing fluidity or coordination — a capacity developed through hours of practice striking the Anzen Bogu.

This approach also provides superior protection to the practitioner. A practitioner struck while exhaling has minimal resistance to impact; the deflated core offers no hydraulic cushion. A practitioner maintaining IAP is far more resilient to counter-strikes received

during the exchange — a consideration of direct relevance to a system developed for genuine self-protection rather than point-scoring sport.

## **The Tate Ken: History, Lineage, and the Vertical Fist's Biomechanical Superiority**

### **Historical Origins**

The tate ken's most direct historical progenitor within the Shorinjiryu lineage is Chotoku Kyan himself, explicitly credited by Shorinjiryu historians as the originator of the tate ken as a systematic punching principle within the Okinawan tradition. Kyan's approach to karate was pragmatic in the extreme, rooted in personal confrontation and real-world effectiveness; when a practitioner who had spent decades testing techniques against resistant opponents settled on the vertical fist as the structural basis of his punching system, that choice demands serious attention. Hisataka absorbed this preference and made it a definitional characteristic of Shorinjiryu Kenkokan.

The vertical fist has a long and distinguished history in Chinese martial arts. Wing Chun Kuen — arguably the most systematically analysed close-range striking system in Chinese martial arts — is built almost entirely around the vertical fist as its primary hand configuration. The Wing Chun chain punch (chun choy) is a rapid alternation of vertical fist strikes delivered along the centreline with the elbow kept low and forward. Practitioners of Bajiquan, another Chinese system that Kaiso Hisataka studied during his travels, similarly employ configurations maintaining the bones of the forearm in near-parallel alignment — corresponding to the vertical or near-vertical fist position. The primary difference is that Wing Chun uses the small two knuckles and Kenkokan utilises the top two knuckles with and emphasis on the thumb squeezing these knuckles on impact.

The Japanese connection comes through the tradition of Yagyū Shingan Ryu, a comprehensive battlefield art founded circa 1600 by Takenaga Hayato, whose founder trained directly under the legendary Yagyū Munenori, sword instructor to the Tokugawa Shogun. As a battlefield system designed for close-quarters combat in full armour, Shingan Ryu incorporated a sophisticated understanding of body mechanics. Within its

unarmed techniques — its taijutsu — a striking method known as sotetsuki appears, employing a vertical or near-vertical fist configuration. The convergence of this Japanese classical tradition and the Okinawan Shorinjiryu lineage upon the same structural solution — the vertical fist, striking body armour — is strong circumstantial evidence for its biomechanical validity. Shihan Brown's long association with Shihan Philip Hinshelwood (current Shihan of Yagyū Shingan-ryū Heihojutsu Kyodensho) since 1980, and subsequent training with Shimazu Kenji, has provided direct experiential exposure to this convergent tradition.

The historical rationale for the vertical fist also traces to the context of armed combat: a warrior accustomed to gripping a sword handle or Bo— which maintains the hand in a vertical or near-vertical orientation — naturally produces a vertical punch as the movement most consistent with that grip. Muay Thai historians note the same phenomenon: the traditional Thai straight punch was performed thumb-up, vertical, precisely because it mirrored the natural hand position of a fighter armed with a sword. Eighteenth-century bare-knuckle boxers similarly show the thumb-up vertical fist as standard in pre-glove fighting. The widespread adoption of the rotated horizontal punch in modern karate and boxing is, in this sense, a relatively recent historical development — one that may owe as much to aesthetic preference as to rigorous biomechanical analysis.

### **Peer-Reviewed Evidence: Forearm Biomechanics**

The scientific case for the vertical fist begins with forearm bone alignment during impact. Vences Brito et al. (*Journal of Electromyography and Kinesiology*, 2011; DOI: 10.1016/j.jelekin.2011.09.007) examined the choku-zuki in eighteen experienced karatekas versus nineteen non-practitioners, finding double-peak EMG activation in the antagonist muscles of the punching arm — the first peak interpreted as a stabilising contraction — and demonstrating that forearm pronation is a distinct timed neuromuscular event in trained karatekas, not a fixed structural end-point. This is directly relevant to the vertical fist argument: the degree and timing of forearm rotation is an active, trainable variable, not an anatomical given.

The anatomical argument rests on what happens to the radius and ulna during impact. When the fist is delivered palm-down — the horizontal yoko ken — the radius and ulna are in a pronated, crossed position. When the fist is vertical, these bones remain in their neutral, parallel alignment, allowing force to be distributed more evenly across the wrist and forearm rather than being deflected to the wrist joint alone. The 2025 EMG study in Sports (MDPI) (DOI: 10.3390/sports13070218; PMC12300276), in which an elite kata athlete performed twenty gyaku-tsuki repetitions with sixteen wireless EMG sensors, confirmed rapid whole-body coordinated muscular engagement as the hallmark of trained karate striking — with muscle activation sequences ranging from  $-0.31$  to  $-0.11$  seconds relative to punch execution, consistent with the kinetic chain model underlying Shorinjiryu's technical philosophy.

### **Anatomical Analysis: Tate Ken vs. Yoko Ken**

The distinction between tate ken and yoko ken is, at its core, a question of skeletal alignment and structural integrity under load. The forearm is composed of two bones: the ulna, larger, forming the primary structural column on the medial (little-finger) side, and the radius, smaller, which crosses over the ulna during forearm rotation and resides on the lateral (thumb) side. When the fist is held vertical — thumb upward — the radius and ulna lie parallel to each other and to the line of force transmission. The punch travels along the axis of the ulna through the wrist and into the upper knuckles of the fist, creating a straight structural column: shoulder to elbow to wrist to knuckle, all elements aligned. Force transmission is direct and the structural load is distributed along the length of the ulna.

When the fist is rotated to the horizontal position — palm facing downward — the radius crosses over the ulna and the two bones are no longer parallel but in a twisted configuration. The contact point shifts to the top two knuckles, which must now align with the radius rather than the ulna. The radius, being the smaller and structurally inferior bone, becomes the primary load-bearing element. More critically, the rotated configuration introduces a torque into the wrist joint that the vertical configuration avoids entirely. Any slight misalignment of the wrist under the speed and adrenaline of actual

striking can cause lateral buckling, absorbing force that should be transmitted to the target.

The shoulder joint argument made by Hanshi Hisataka within Shorinjiryu Kenkokan is equally compelling. When the fist is vertical and the elbow is kept low and forward — as it must be in a properly executed *tate ken* — the humerus rests in a position within the glenohumeral joint that allows it to seat more fully against the glenoid cavity. The rotator cuff muscles are in a mechanically advantageous configuration: the serratus anterior and lower trapezius, which anchor the shoulder blade against the thorax, can function optimally. The result is that the shoulder acts as a stable foundation rather than a rotating joint — a base through which force passes rather than a pivot around which force is generated.

By contrast, rotating the arm to produce the horizontal punch moves the head of the humerus slightly forward and upward in the joint — a less stable position in which the joint is more susceptible to shear forces generated by impact. The rotator cuff, particularly the supraspinatus, must work harder to prevent the humeral head from translating in the joint. Under repeated high-impact conditions, this configuration carries a materially greater long-term injury risk to the shoulder. The Shorinjiryu argument — that the humerus 'locks' more strongly into the shoulder joint in the vertical fist position — is anatomically well-founded.

A simple empirical test illustrates the difference. Stand against a wall, extend one arm, and press the fist against the wall with maximum effort, first vertical then horizontal. Most practitioners immediately feel the difference: the vertical fist transmission feels solid and direct, connecting to the entire posterior chain of the body; the horizontal feels more isolated in the shoulder and arm with a tendency to rotate rather than drive through. Push-ups performed *tate ken* style — fists vertical, elbows tucked close to the body — recruit the triceps and latissimus dorsi far more effectively than standard knuckle push-ups in the horizontal position. The *tate ken* is essentially a push-up in punching form.

There are acknowledged advantages to the yoko ken in specific contexts: the rotational snap can generate a brief spike of surface velocity potentially creating a shearing effect on soft tissue targets, and the slight additional reach from shoulder roll can offer tactical advantages in sport karate where light contact suffices. These are real considerations that explain why the horizontal punch dominates sport environments. But for transmitting maximum force through a rigid structural chain — the legitimate concern of a system designed for genuine self-protection — the tate ken presents a constellation of biomechanical advantages that are difficult to refute.

It is worth noting, as Shihan Hinshelwood has observed from oral school knowledge (*kotsuraku no hidden*), that there are specific traditional understandings regarding both the advantages and disadvantages of horizontal versus vertical punching — including the observation that it is easier to escape and prevent an arm break when using a horizontal punch. Shorinjiryu's preference for the tate ken does not rest on ignorance of these considerations but on a considered assessment that, for the primary purpose of force delivery, the vertical configuration is superior.

### **Synthesis: Breath, Structure, and the Unity of Shorinjiryu's Technical Philosophy**

What emerges from the preceding analysis is a coherent technical philosophy in which breath retention and the vertical fist are not arbitrary stylistic choices but mutually reinforcing components of a system designed around the science of maximum force transmission through a rigid, aligned body. The practitioner takes a controlled diaphragmatic breath before initiating the strike, creating elevated intra-abdominal pressure that transforms the core into a rigid column. The strike is then delivered with the fist vertical — bones aligned, shoulder stable, elbow forward — along a structural pathway that connects the ground reaction force, through the pressurised core, through the aligned arm and wrist, to the contact point on the target. The breath is retained throughout this transmission, maintaining the rigidity of the system until the technique is complete.

This is strikingly analogous to the mechanics of a heavy deadlift or squat: take the breath, create pressure, move through the full range of motion while the system remains pressurised, complete the lift. It is analogous to the pre-impact phase of a professional tennis serve: inhale, create IAP, rotate through the kinetic chain, contact. The difference is that in karate, the 'weight' being moved is the resistance of a target against which the entire structural assembly of the practitioner must express its force as efficiently as possible.

The peer-reviewed literature, while not yet examining Shorinjiryu by name, confirms the core biomechanical principles at every structural level: the Valsalva manoeuvre demonstrably increases trunk rigidity and force production (Hackett and Chow, 2013; PMC6945051 systematic review, 2020); forearm pronation is a timed neuromuscular event whose degree is trainable (Vences Brito et al., 2011); and whole-body coordinated muscular engagement is the hallmark of elite karate striking (Sports, MDPI, 2025). The convergence of these independent findings with the technical principles Kaiso Hisataka articulated and taught is not coincidental — it is the confirmation that scientific inquiry eventually provides to systems built on centuries of empirical refinement in the dojo.

Shihan Scott Brown's decades of training — including two uchi deshi periods at the Hombu Dojo totalling approximately fourteen months, two Bachelor's degrees bridging Japanese martial culture and Western pedagogy, and thirty-five years of teaching across Australia — represent one of the most sustained and serious efforts to maintain an authentic Okinawan martial transmission in the Southern Hemisphere. The tate ken and the principle of breath retention are central to that transmission: not peripheral curiosities but the very heart of what makes Shorinjiryu Kenkokan Karatedo a scientifically coherent and historically grounded martial system.

In an era when karate has been largely reshaped by the demands of Olympic sport competition — toward lighter contact, faster point-scoring techniques, and the aesthetic values of athletic performance — Shorinjiryu's preservation of these older, deeper principles is both a historical responsibility and a practical gift. The science vindicates the tradition. The tradition illuminates the science. And the living transmission, carried by

practitioners like Shihan Scott Brown from the Waseda Hombu Dojo to the dojos of Australia, ensures that neither the history nor the understanding is lost.

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