

SPER

[SPUR]

NOUN

Old Saxon word

Middle English

meaning 'spere'

Alternative of spear

Spere



PHYSICAL
physical

INTRODUCTION

Sper is the EsadType graduation project of Lois Hinshelwood. Born from an interest in gesture and curiosity with exploring the structure of Latin letterforms.

The project began by identifying a language of form and gesture in the work of sculptor Noam Gabo. Although not at all letters, some of Gabo's drawings and prints had certain typographic qualities in terms of curve tension and counter shapes. From looking at the abstraction of shape in Gabo's work a journey began to discover if the possibility to create a system of type based on the shapes identified in some artwork.

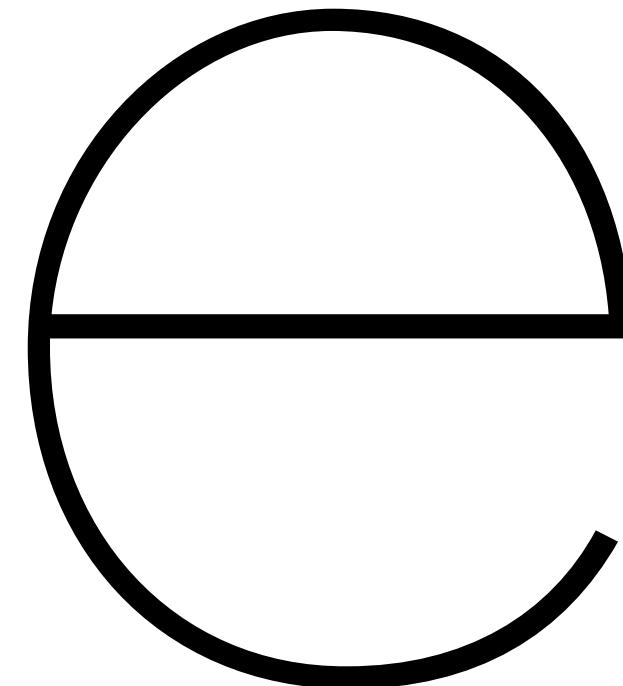
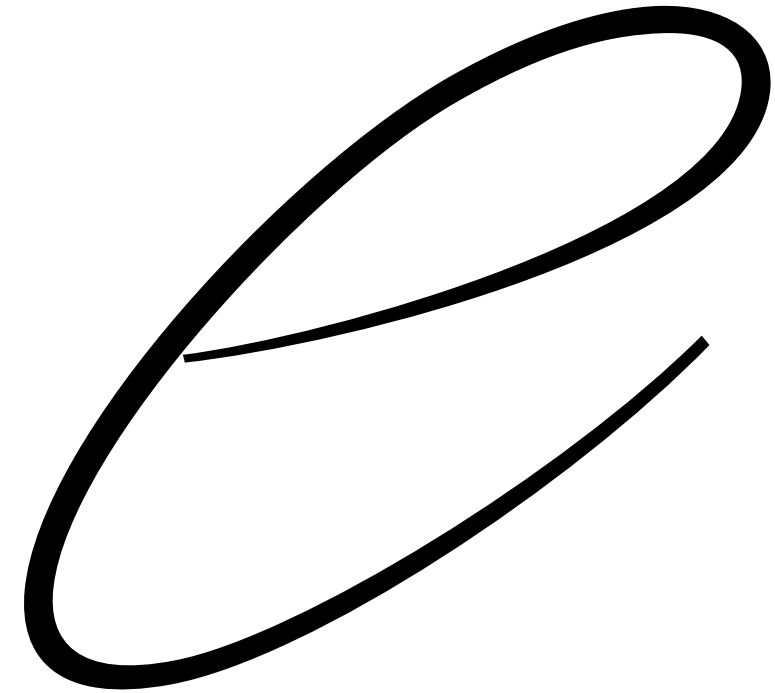
The family grew into something with tension at the core. Within the display style there is a strong tension between big curves and sharp angular shapes. As well as this there is a tension between the two contrasting styles. The fast and expressive display style and a rationalised geometric text, are stylistic opposites but designed to be used together.

NAMING

Pronounced 'spur', the name Sper comes from an old English name for spear. It is no longer used today and the meaning of the word is not obvious to a modern day native speaker.

It makes sense for this typeface to be named after something very sharp that suggests fast movements of the hand. The connotations of a spear allude to something agile, fast, aggressive and sharp, which are qualities that the display style embodies.

As well as this, having a name that is rooted in history also suits the project due to the 16th century calligraphy references that were the starting point for the design.



JOPR

[DISPLAY LIGHT]

QUZZ

[DISPLAY MULTI-LINE]

EXEMPT

[SANS LIGHT]

BROKER

[OBLIQUE LIGHT]

PILLOW

[SANS REGULAR]

ATELIER

[OBLIQUE REGULAR]

VAGUE

[SANS BOLD]

PRINTS

[OBLIQUE BOLD]



The Axel jump or Axel Paulsen jump, named after its inventor, Norwegian figure skater Axel Paulsen, is an edge jump performed in figure skating. It is the sport's oldest and most difficult jump, and the only basic jump in competition with a forward take-off, which makes it the easiest to identify. A double or triple Axel is required in both the short program and the free skating segment for junior and senior single skaters in all events sanctioned by the International Skating Union (ISU).

The quadruple Axel was successfully executed in competition for the first time in 2022. Compared to other basic figure skating jumps, the Axel requires an extra half revolution, which makes a triple Axel "more a quadruple jump than a triple".

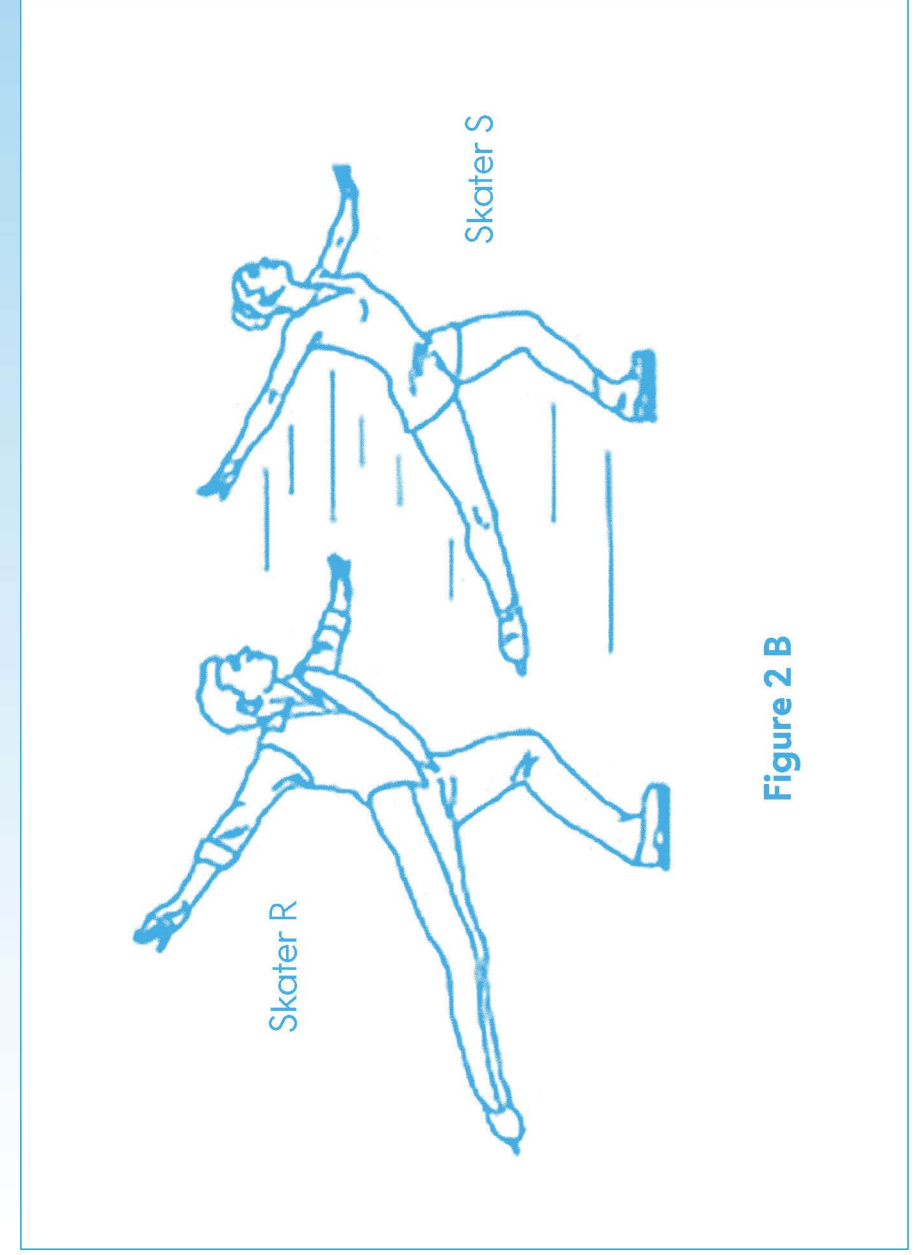
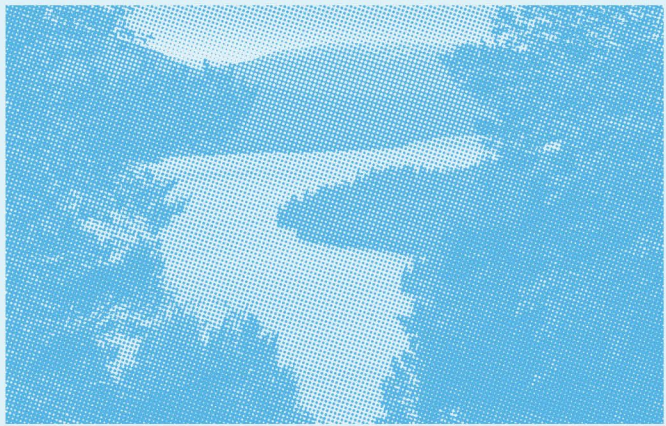


Figure 2 B

Kjeld Nuis

Speed

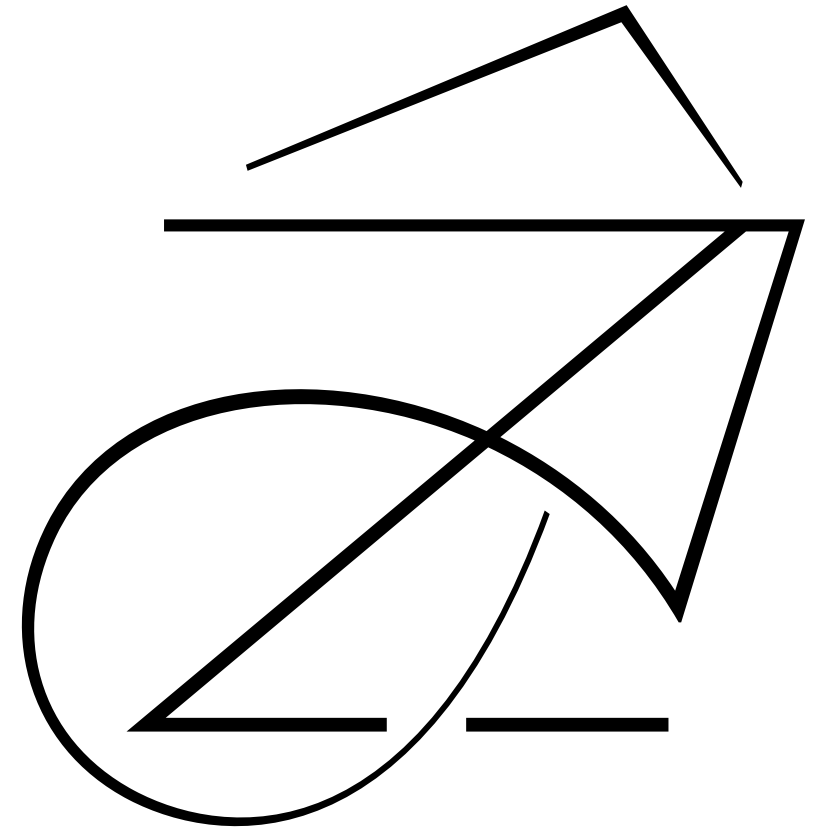


Save

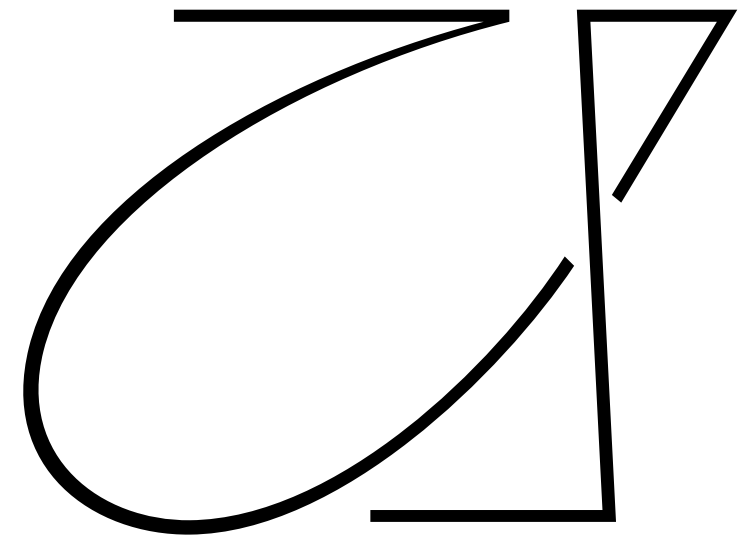
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World Rec

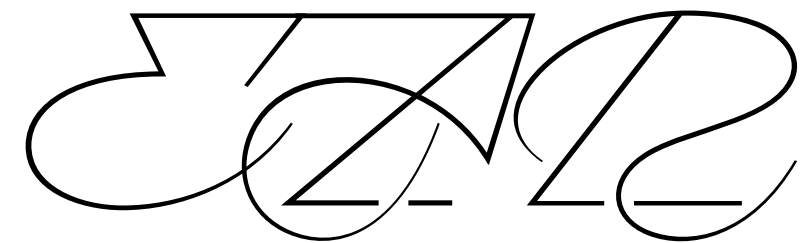
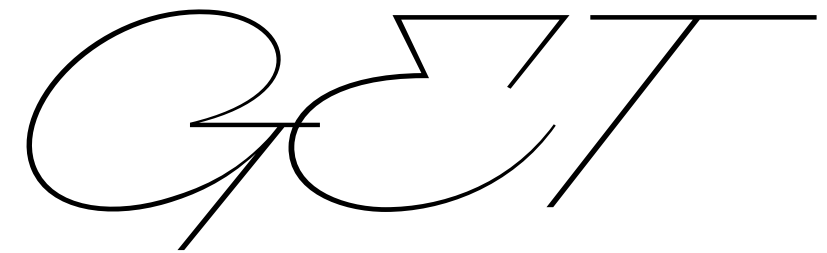
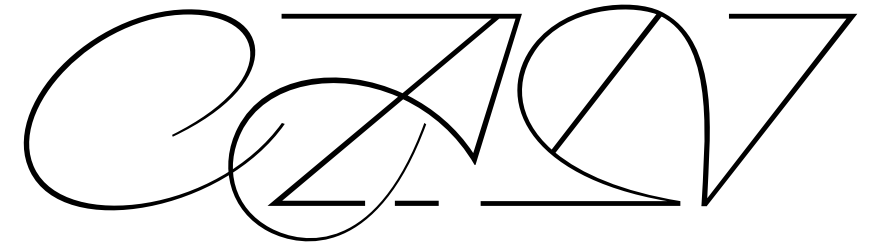
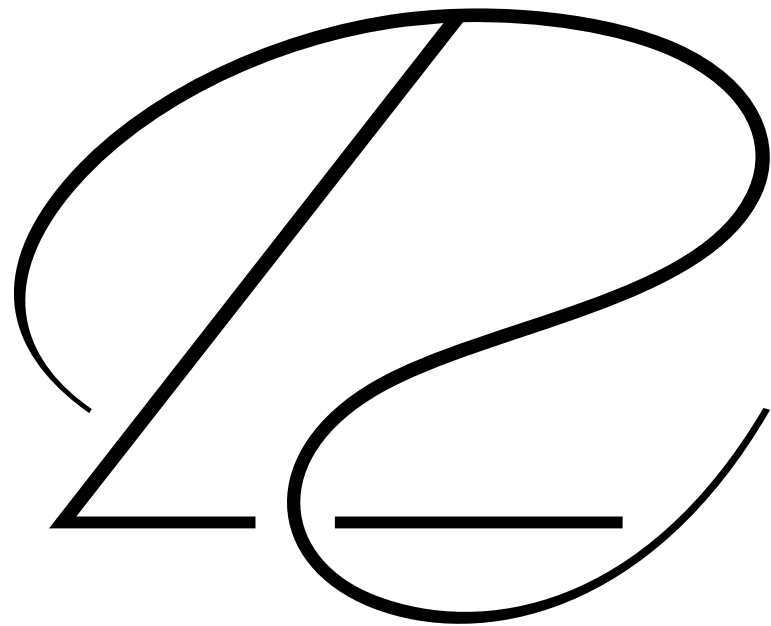
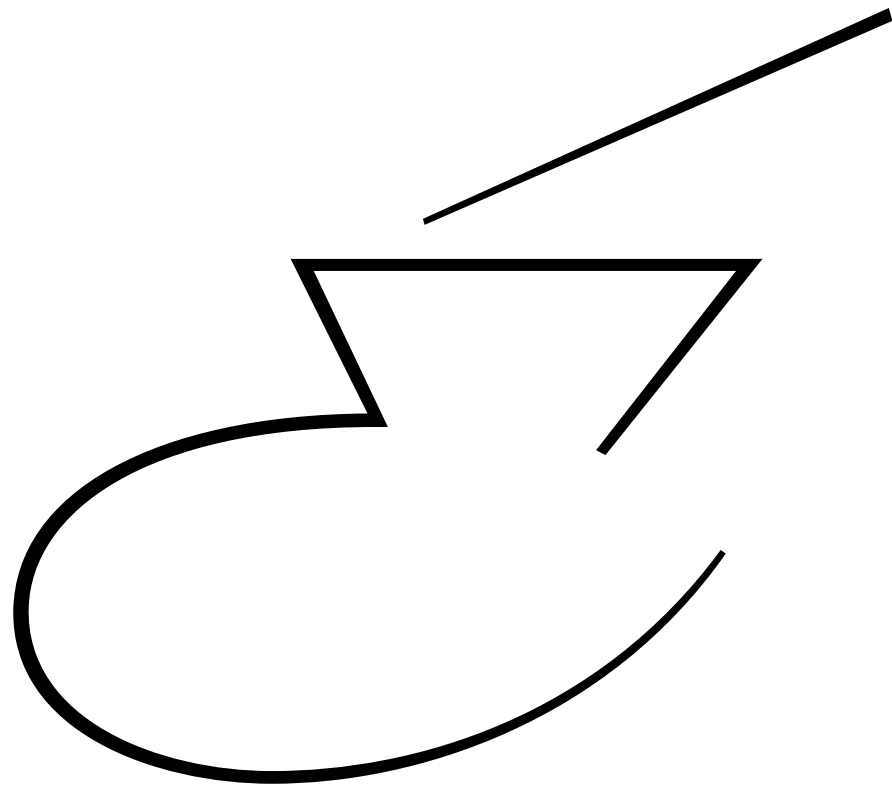
DISPLAY HAIRLINE



09



320PT



Agile

Quick

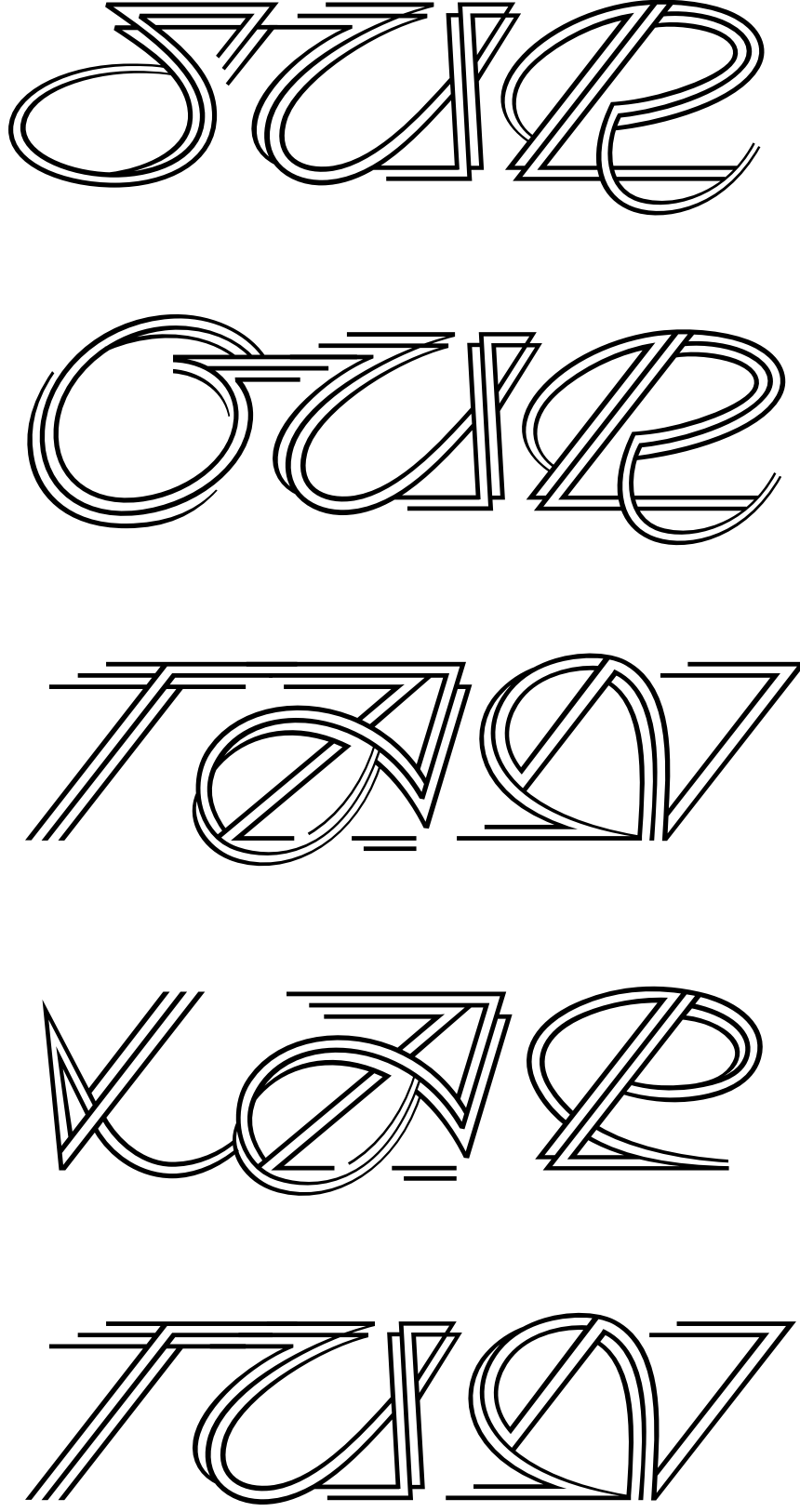
Swift

Rapid

Sepia

Agile

Quick



120PT



and stress fractures. Skaters add variations or unusual entries and exits to jumps to increase difficulty. Factors such as angular momentum, the moment of inertia, angular acceleration, and the skater's center of mass determines if a jump is successfully completed.

The Euler is an edge jump. It was known as the half-loop jump in International Skating Union (ISU) regulations prior to the 2018-2019 season, when the name was changed. In Europe, the Euler is also called the Thorén jump, after its inventor, Swedish figure skater Per Thorén. The Euler is executed when a skater takes off from the back outside edge of one skate and lands on the opposite foot and edge. It is most commonly done prior to the third jump during a three-jump combination, and serves as a way to put a skater on the correct edge in order to attempt a Salchow jump or a flip jump. It can be accomplished only as a single jump. The Euler has a base point value of 0.50 points, when used in combination between two listed jumps, and also becomes a listed jump.

Per Thorén competed in single and pairs figure skating. His greatest sporting success was his 1908 bronze medal, although he was a two-time Swedish champion. In 1909 he was runner-up to World Champion Ulrich Salchow, while in 1905 he won a World Championship bronze and was placed fourth and fifth several times. After winning bronze in 1906, 1909 and 1910 at the European Championships, he finally became champion in 1911 in St. Petersburg. In his native domestic Stockholm, Thorén appeared at the world championships in 1913, but only in the pairs event with Ely Svensson. As reigning Swedish champions they finished fifth. Just one year earlier Thorén had won the Swedish pairs alongside Elna Montgomery. Thorén was co-inventor of the eponymous jump "Thorén," also called the "Euler" or in English "half-loop." The jump never asserted itself as an independent single leap, and now serves only in simple design as a connecting jump.

The six most common jumps can be divided into two groups: toe jumps (the toe loop, the flip, and the Lutz) and edge jumps (the Salchow, the loop, and the Axel). The Euler jump, which was known as a half-loop before 2018, is an edge jump. Jumps are also classified by the number of revolutions. Pair skaters perform two types of jumps: side-by-side jumps, in which jumps are accomplished side by side and in unison, and throw jumps, in which the woman performs the jump when assisted and propelled by her partner.

According to the International Skating Union (ISU), jumps must have the following characteristics to earn the most points: they must have "very good height and very good length";^[3] they must be executed effortlessly, including the rhythm demonstrated during jump combinations; and they must have good takeoffs and landings. The following are not required, but also taken into consideration: there must be steps executed before the beginning of the jump, or it must have either a creative or unexpected entry; the jump must match the music; and the skater must have, from the jump's takeoff to its landing, a "very good body position".^[3] A jump



THEY

AXEL

LUTZ

PLAY

FLIPS

**ANGULAR
MOMENTUM
IS EQUAL TO:
ROTATIONAL
MASS X
ANGULAR
VELOCITY
(RPM) RPM =
MEASURE OF
ROTATIONS
PER MINUTE**

Figure skating jumps are an element of three competitive figure skating disciplines: men's singles, women's singles, and pair skating but not ice dancing. Jumping in figure skating is "relatively recent". They were originally individual compulsory figures, and sometimes special figures; many jumps were named after the skaters who invented them or from the figures from which they were developed. It was not until the early part of the 20th century, well after the establishment of organized skating competitions, when jumps with the potential of being completed with multiple revolutions were invented and when jumps were formally categorized. In the 1920s Austrian skaters began to perform the first double jumps in practice. Skaters experimented with jumps, and by the end of the period, the modern repertoire of jumps had been developed. Jumps did not have a major role in free skating programs during international competitions until the 1930s. During the post-war period and into the 1950s and early 1960s, triple jumps became more common.

During the post-war period and into the 1950s and early 1960s, triple jumps became more common for both male and female skaters, and a full repertoire of two-revolution jumps had been fully developed. In the 1980s men were expected to complete four or five difficult triple jumps, and women had to perform the easier triples. By the 1990s, after compulsory figures were removed from competitions, multi-revolution jumps became more important in figure skating.

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Jumps are divided into eight parts: the set-up, load, transition, pivot, takeoff, flight, landing, and exit. All jumps except the Axel and waltz jumps are taken off while skating backward; Axels and waltz jumps are entered into by skating forward. A skater’s body absorbs up to 13-14 g-forces each time he or she lands from a jump, which may contribute to overuse injuries and stress fractures. Skaters add variations or unusual entries and exits to jumps to increase difficulty. Factors such as angular momentum, the moment of inertia, angular acceleration, and the skater’s centre of mass determines if a jump is successfully completed.

According to figure skating historian James R. Hines, jumping in figure skating is “relatively recent”. Jumps were viewed as “acrobatic tricks, not as a part of a skater’s art” and “had no place” in the skating practices in England during the 19th century, although skaters experimented with jumps from the ice during the last 25 years of the 1800s.

RAZE

WHIP

LURK

TROT

SKITS

Speed is a measure of the rate of change of distance travelled by a moving object. It is a scalar quantity.

[OC] Tell us a little bit about life after [U.S. Nationals 2021 in] Vegas, where you competed for the first time at least in a full-fledged event in person this season. What have you been up to since?

[JB] Yeah, so after Vegas, I took about three weeks off, not totally intentional, but I took a week to see my family because I hadn't seen them since June, since coming back to Canada to start training again. And then after I saw my family, I went back to Canada. I quarantined for two weeks in Toronto, and then I started my training for worlds. And it's just been a day-to-day grind as we lead into worlds; we're working our butts off. I can't wait to get to Sweden.

This month in Pyeongchang, elite teams of physics and materials science experts from all over the world will dazzle us with ostentatious displays of grace and power. We commonly refer to these experts as athletes. Gymnasts demonstrate their subtle understanding of gravity and momentum. Swimmers and divers master fluid dynamics and surface tension. Skiers harness their knowledge of friction and hydrology, and lugers push their aerodynamics chops to the limits. Olympians, after all, understand science at a visceral level in ways most of us don't.

One of the best places to explore this variety of physical forces is figure skating. A skater's every twist, turn and leap begins with balance. And balance relies on being able to keep your center of mass—which, as the name implies, is the center of where an object's mass is located—directly over a point of contact with the ice. For a highly symmetric object like a circle or sphere, that is in the dead center. For the lumpier, bumpier shape of the human body, the center of mass varies from person to person but tends to be a bit below the navel. Through glides, spins, takeoffs and landings, a figure skater has to keep their center of mass aligned with a foot on the ice—or risk taking a tumble.

It's not just the center of mass that matters in figure skating. The "moment of inertia," a measure of how that mass is distributed relative to the center of gravity, makes a difference too. When a skater performs a dazzling spin, they control their rotational speed by pulling their arms in to decrease the moment of inertia and speed up rotation or spreading them out to decrease moment of inertia and slow rotation.

People who prefer to experience physics on a less slippery surface can spin around in an office chair with arms extended: Pull in the arms, and the spin speed increases. This increase is due to a principle called the conservation of angular momentum. A higher moment of inertia corresponds to a lower rotational speed, and a lower moment of inertia corresponds to a higher rotational speed.

But as nice as spins are, jumps might be the most beautiful textbook examples of physics in ice skating. Figure skaters take off and sail through a graceful parabolic curve, spinning as they go. That trade-off between energy used for sailing and spinning is what makes jumps such a difficult—and impressive—part of any skater's routine. "It amounts to three components: how much angular momentum do you leave the ice with, how small can you make your moment of inertia in the air, and how much time you can spend in the air," says James Richards, a professor of kinesiology and applied physiology at the University of Delaware who has worked with Olympic figure skaters and their coaches on improving their jump techniques.

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AIRES

HIGH

WHIR

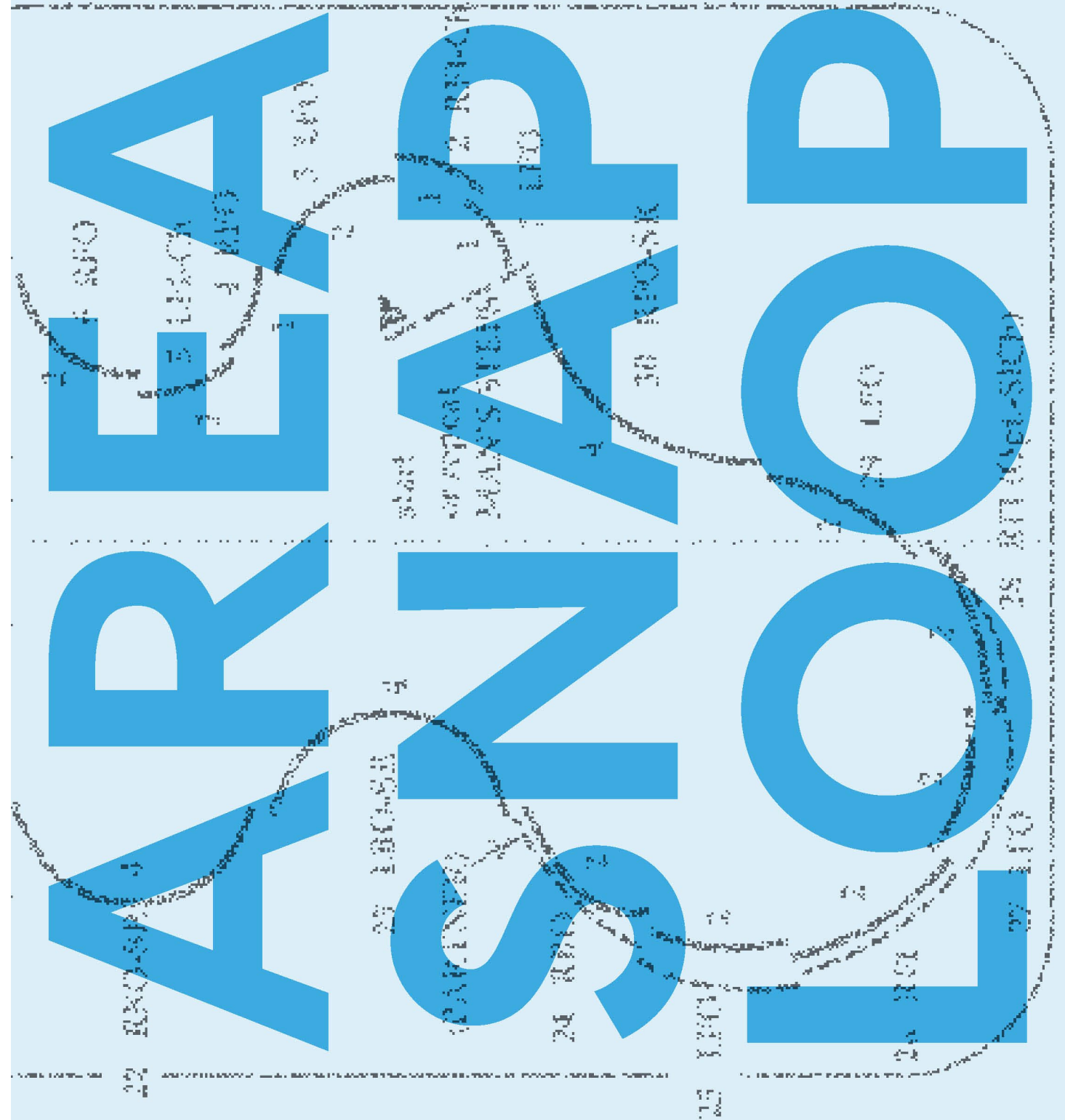
GAIN

RAZZZ

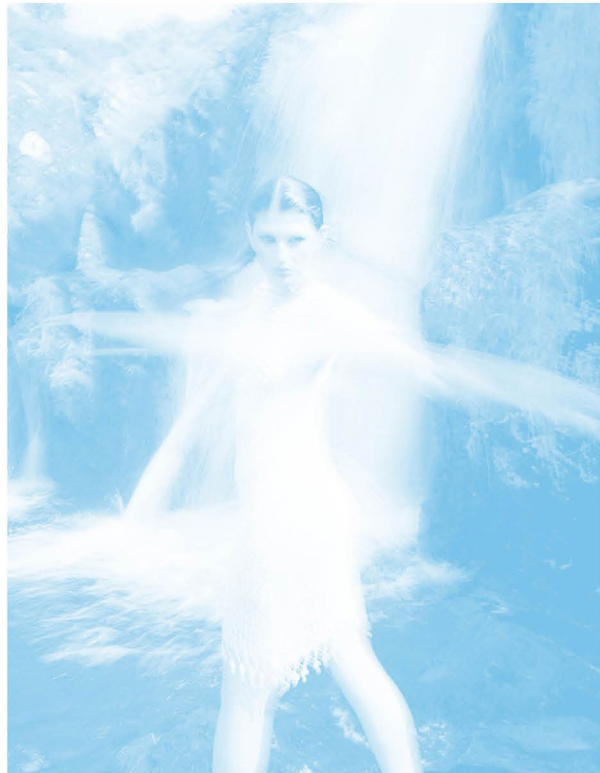
THE RATE
AT WHICH
AN OBJECT
MOVES
THROUGH
TIME IS
KNOWN
AS SPEED.

So many physical
factors must be
poise perfect for
consistent balance
on the tip of one
15mm long, 3mm
wide blade as the
world circles at
300 revolutions
per minute

Figure skating features artistic Q and precision in a competitive sporting environment. The skill and ability to produce an aesthetically pleasing performance requires a high degree of both athletic and technical skill. The unique role on figure skating as athletes and the vital role physiotherapists play in the long term management of these athletes.



Ruby Dluhar



Edward M. Catich, *The origin of the serif brush writing and Roman letters*, Catfish Press, Iowa, 1968, p.20.

k
kin
th
the

Kinesthesia is a bodily sense served by a special system of nerves by which the patterns of muscle movements are controlled. It is the sense that guides gestures of all kinds from dancing to winding a watch. In writing it enables the hand to trace letters even when the eyes are shut.

HIKE
AREA
NOW
HINT
JUKE

FIRST

FAST

*MINT**VULT**HEAT**PACE**WHIP*

According to special relativity, the fastest speed energy can travel through space, is the speed of light. The speed of light is considered a fundamental constant of nature. It is the single limiting velocity in the universe.

BEND

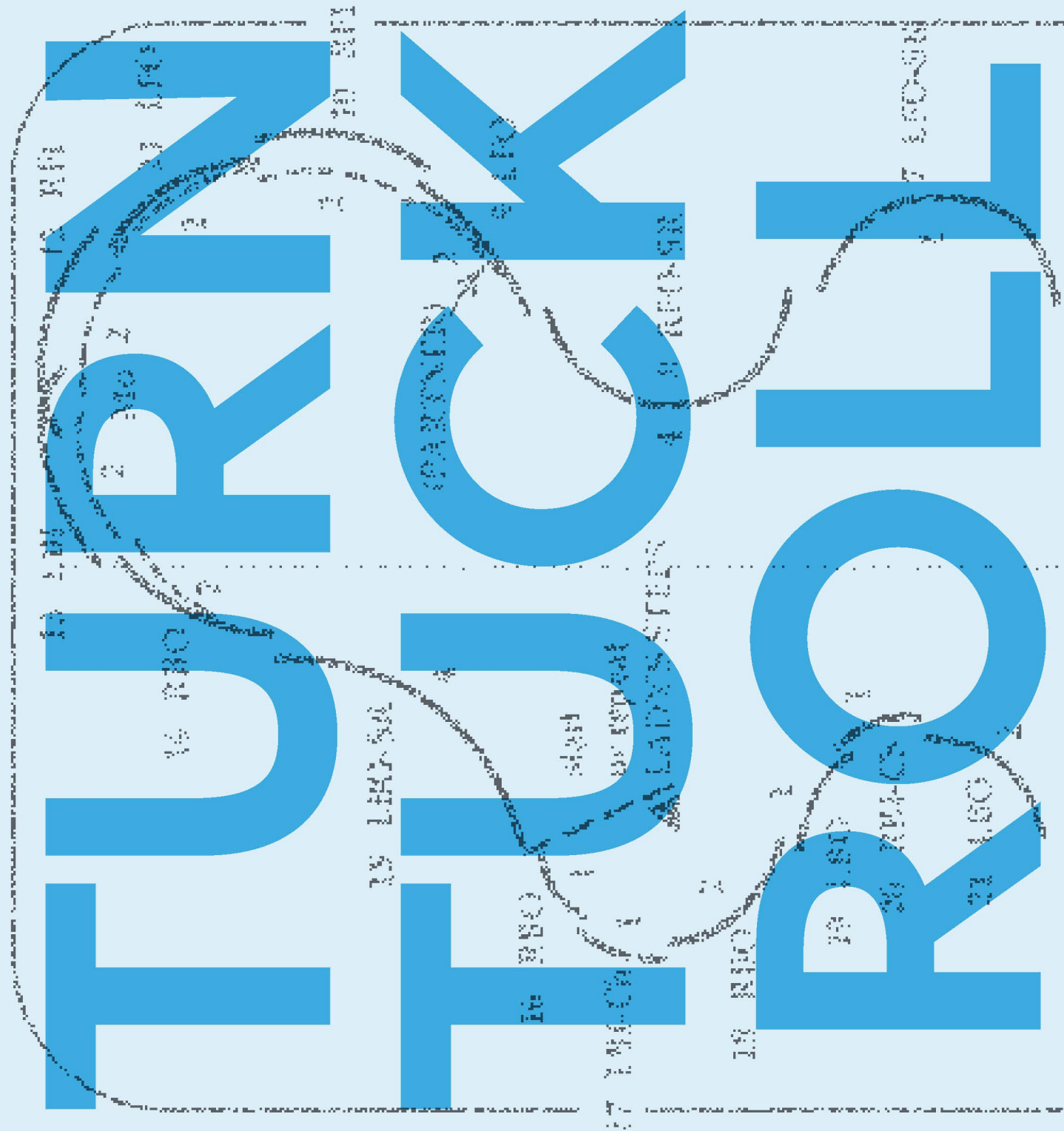
EMIT

RIDES

SEND

VOLT





LETZAR Roll
 curve *Skate* LIFT
 drop *Sequence* side
 by side *Flip* salchow
slide LUTZ *Segment*
 LOOP *double* and
 MOVES *Spin* pivot
turn circle forwards
Spiral *Form*
 technical *Edge* Step
ice WALTZ *Flutz*
 BEHIND *Open*
SP/VD jump single

CAN
YOU
READ
AND
LOOK
IN ONE
MOVE?

Achieving a maximal performance depends on co-ordination, a proper sequencing and timing of joint movement (Hudson, 1986). Indeed, body segments contribute in a proximo-distal sequence to the acceleration of the CG (Bobbert and van Ingen Schenau, 1988; de Boer et al., 1987; 1984; Jacobs and van Ingen Schenau, 1992). When planning and executing a vertical jump, the motor system must take account of several constraints that are related to the motion of a complex neuro-musculoskeletal system in a gravitational field. Thus considering the properties of the musculoskeletal system, this sequential pattern of co-ordination is seen as the optimal pattern.

Particularly, the ankle joint allows for a further acceleration of the CG. Plantar flexion indeed plays a major role in a squat jump (SJ) performance. For instance, in an experimental simulation study, Luhtanen and Komi (1978) compared the takeoff velocity of a maximal SJ with the takeoff velocity attained in a maximal extension of the ankle joint while the knee was fixed at 180° during the whole push-off phase. These authors concluded that plantar flexion could theoretically contribute up to 22% to the takeoff velocity in a maximal SJ. In figure skating, the range of motion of the ankle joint is strongly constrained by a stiff skate boot rigidly fixed.

Among these constraints, van Ingen Schenau (1989) has demonstrated that the proximo-distal delay of lower limb joint extensions is determined by the so-called geometrical and anatomical. In vertical jumping, the push-off is characterized by the explosive extension of the knee joint. The more the knee approaches its maximal extension, the less the transformation of the segment angular velocities into linear velocity of the CG is effective (geometrical constraint). Moreover, in order to preserve this joint from any damage, it is necessary to decelerate knee opening before its maximum extension, Bobbert and van Ingen Schenau (1988) have shown that.

In addition, similarly to speed skaters, figure skaters learn from the early development of specific skills, i.e. jumping, to limit plantar flexion in order to prevent the front of the blade from scratching through the ice. In comparing a speed skating push-off performed with conventional speed skating skates and klapskates, (i.e. the latter allows the foot to rotate independently from the blade and moves the location of the foot's center of rotation from the tip of the long blade, as in conventional speed skating skates, to under the ball of the foot), it has been concluded that klapskates enhanced the work output at the knee.

CANT
 WASP
 CALL
 SALT
 RATS

speed is
 equal to
distance
 divided
 by *time*

Z B

A C

Z S

Z S

The need wasn't just physical. It had to be something that would launch me from the weekly grind so I wouldn't dwell, as Nick Carraway had, on my thinning hair and thinning briefcase of enthusiasm. Warming my ego on the fading embers of my youth wouldn't do. I needed to fan them back to life. I

knew men who'd been claimed by golf, which had green expanses and technical demands to keep the mind from reality. Entire weekends could be spent playing golf. It was out for me. I'd always been bored by ball games and I was too fond of my wife. What seemed far more interesting was becoming a projec-

*it was not all magic
and soft landings*

tile myself. I'd ice-skated occasionally as a teenager and still had a pair of hockey skates. Why not? As I sharpened them I told myself: "Never too old; never too late." Then I showed up at the nearest rink and tried to avoid other skaters while restoring my ice legs. In time my fitness and reflexes improved

until I could make good speed, a self-made breeze blowing my 40-something cobwebs away. I was skating away from my old self as fast as I could, towards a new me. Before long, rapid circuits of the rink felt less interesting than what the figure skaters did. Some pirouetted so fast they blurred.

*spinning is exhilarating
and exasperating*

What did that feel like from the inside? The skater had been chosen by a talent scout from Disney on Ice to join its South American tour. He would spend the next 12 months smothered in sequins and plastic fruit, being paid to leap and spin for open-mouthed crowds in far-flung destinations. I was twice his

age and still rooted to the surface of the ice; but I was human too, and so help me I wanted to fly. Right then I became an aspirational figure skater. One evening I saw a young man launch himself with the blasé grace of a champion, so high he obscured loudspeakers hung from the roof.

disapproved

RETHINK

TEMPEST

homeopaths

SLIMIEST

BUDDIES

mismatched

REPEATS

DERIDED

mismatched

Writing

Any instance of writing involves a complex interaction among available tools, intentions, cultural customs, cognitive routines, genres, tacit and explicit knowledge, and the constraints and limitations of the writing system deployed. Inscriptions have been made with fingers, styluses, quills, ink brushes, pencils, pens, and many styles of lithography; surfaces used for these inscriptions include stone tablets, clay tablets, bamboo slats, papyrus, wax tablets, vellum, parchment, paper, copperplate, slate, porcelain, and other enameled surfaces. The Incas used knotted cords known as quipu (or khipu) for keeping records. Countless writing tools and surfaces have been improvised throughout history (as the cases of graffiti, tattooing, and impromptu aides-memoire illustrate).

The typewriter and subsequently various digital word processors have recently become widespread writing tools, and studies have compared the ways in which writers have framed the experience of writing with such tools as compared with the pen or pencil. Word processors include, often multi-document, text editors or note-taking apps, Web systems (search engines, Wikis, etc.), messaging software (chat apps, e-mail UIs, etc.), or their underlying operating systems' code supporting the text input device.

Advancements in natural language processing and natural language generation allow certain tools (in the form of software) to produce certain kinds of highly formulaic writing (e.g., weather forecasts and brief sports reporting) without the direct involvement of humans after initial configuration or, more commonly, to be used to support writing processes such as generating initial drafts, producing feedback with the help of a rubric, copy-editing, and helping translation.

side one

- 01. RIMSHOT (INTRO)
- 02. ON AND ON
- 03. APPLETREE
- 05. OTHER SIDE OF THE GAME
- 06. SOMETIMES - MIX #9
- 07. NEXT LIFETIME

side two

- 01. AFRO - FREESTYLE SKIT
- 02. CERTAINLY
- 03. 4 LEAF CLOVER
- 05. NO LOVE
- 06. DRAMA
- 07. SOMETIMES
- 08. CERTAINLY - FLIPPED IT
- 09. RIMSHOT (OUTRO)

B *BA* D

NOT

good

BAD

label

Did it work out?

“In the world of figure skating, everything happens (a bit) **unfairly**... ..That’s how it turned out. When you consistently 100% skate **clean** throughout the season and do well at a specific competition but then someone else comes out and performs a program with **double jumps*** & makes it into the team, it becomes frustrating! I was 8th. I thought I might at least make it into the **reserve team**. The top 6 make it to the main team; I was only a point away from 6th place. I kept training, working on my **triple axel**.”





combination is executed when a skater's landing foot of the first jump is also the takeoff foot of the following jump.[4][5]: Rule 610 All jumps are considered in the order they are completed. Pair teams, both juniors and seniors, must perform one solo jump during their short programs.

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SANS BOLD AND REGULAR,

OVER A 1-YEAR PERIOD **48%** CORRESPONDED TO **#53** +/-2 AND +/-3 BEATS MIN-1 FOR THE MALES AND FEMALES THE SKATERS TRAINED FOR **15-41** H/WEEK, FOR **60-95** MIN.

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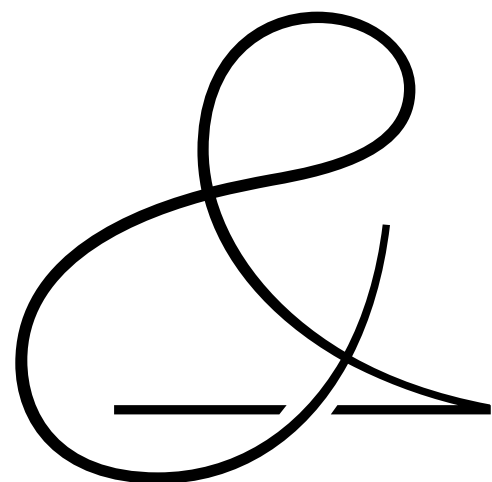
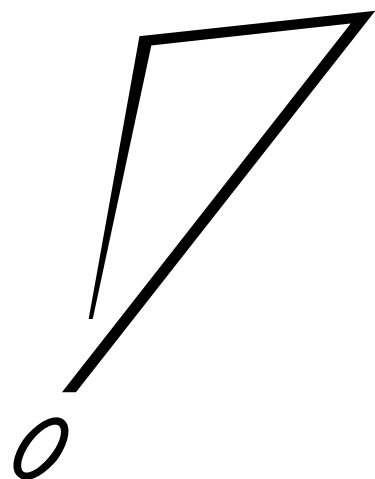
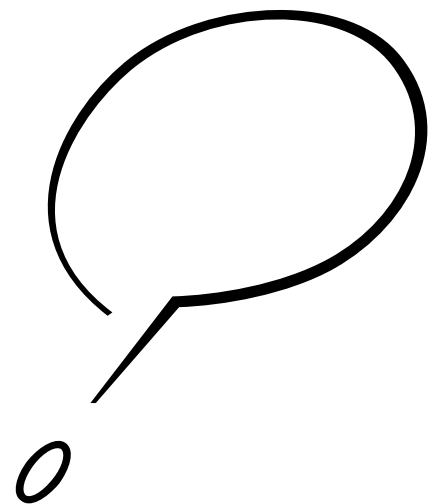
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Skater

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A B C D E F G H I J K L M N
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q r s t u v w x y z

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TEACHERS

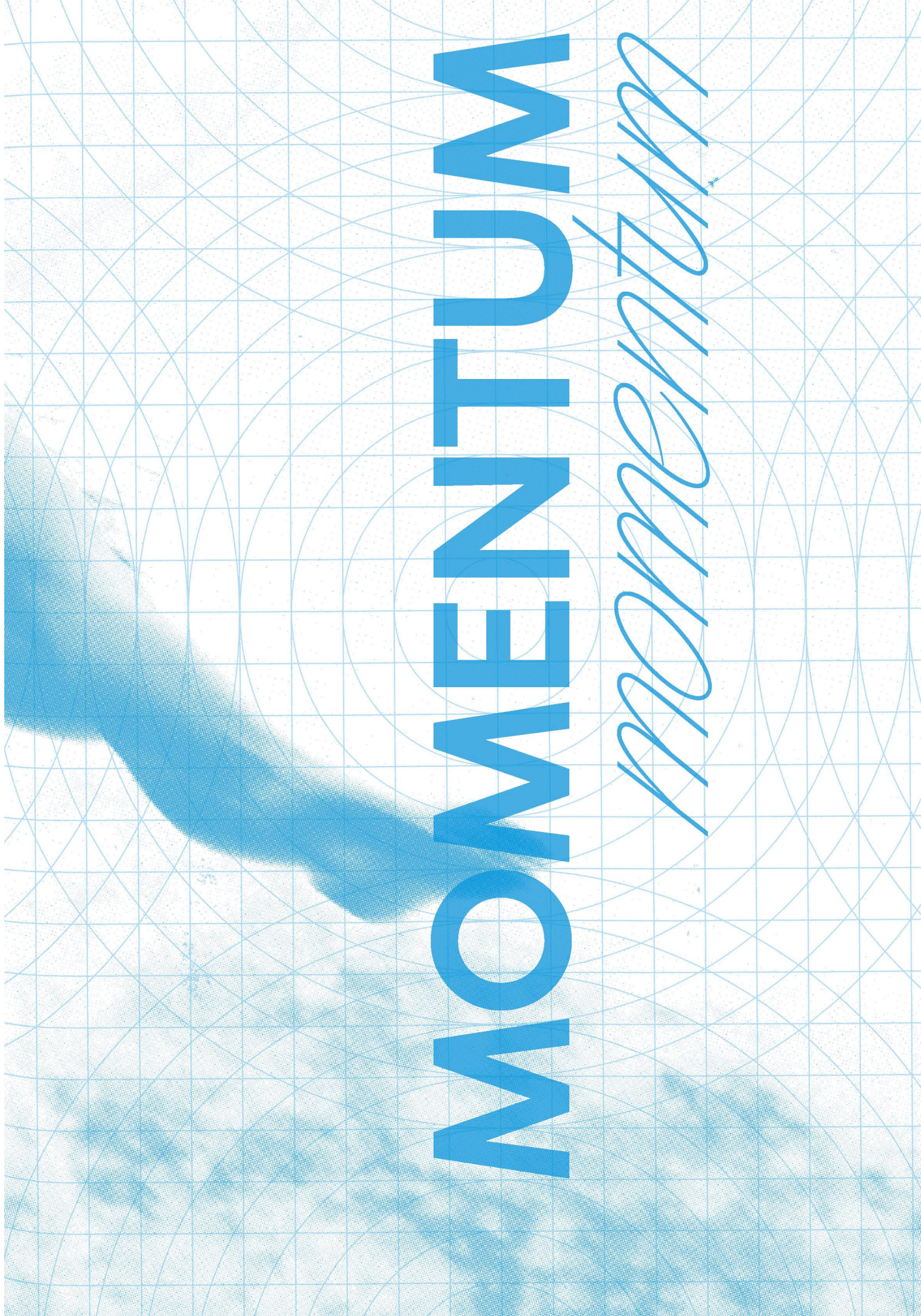
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The image shows a hand holding a pen, writing the word 'MOMENTUM' on a grid background. The word is written in a large, bold, blue, sans-serif font. The background is a light blue grid with a pattern of overlapping circles. The word 'MOMENTUM' is written vertically, with the letters 'M', 'O', 'M', 'E', 'N', 'T', 'U', 'M' stacked from top to bottom. The word 'MOMENTUM' is written in a smaller, blue, cursive font, positioned to the right of the main word. The overall image has a blue and white color scheme with a grid pattern.

**SPECIMEN
ESADTYPE
2022-24**