

The Japanese Information Systems Discipline: ISSJ, Kaoru Sunada's Information Systems Evolution Theory, and the Sociotechnical Lineage from Tavistock to Tokyo

A Multi-Dimensional Survey of an Under-Examined Intellectual Tradition (2005–2026)

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v0.3 revision note — This is a substantial expansion of v0.2 (5-LLM panel avg 7.0/10). Principal additions:

1. **Imamichi Tomonobu's Eco-Ethica as the philosophical foundation of ISSJ** — § 2 entirely rewritten to incorporate Imamichi's 1973 Eco-Ethica proposal, his 2005 ISSJ founding-meeting special lecture, and the Imamichi → Ura → Sunada → 2025 thread that v0.2 missed.
 2. **Tōru Nishigaki's Fundamental Informatics** as the second theoretical pillar — § 4.5 added. Per ISSJ founding-member Nakajima Monta, the discipline is built on two pillars: Imamichi's Eco-Ethica (ethical foundation) + Nishigaki's basic informatics (informational ontology).
 3. **Sunada's 2026-05-23 ISSJ 20th-anniversary symposium lecture** — § 3.5 added with seven implementation cases (Denmark / Tōhoku earthquake IT volunteers / Iwaki Phase-Free / Asahi Tekkō DX / NEC AI negotiation agent / Shiojiri "Kado" telework / Philippine inclusive fintech / Yokohama Rōsai "Yamamoto-style AI"), the 24-GPT framework, and Sunada's distinction between Ura-style concept creation and current LLM capability.
 4. **Two ISSJ books** — § 6 added: Shin-Jōhō Shisutemu-gaku Josetsu (新情報システム学序説, 2014) and Jōhō Shisutemu-gaku (情報システム学, 2023), both from the New Information Systems Studies Body Investigation Research Committee.
 5. **"Najimi" (なじみ) design concept** — § 7.3 added. Adopted by the SNSP national project as the keyword for harmonizing social and technical systems.
 6. **Eight conceptual neighbors without using "Information" or "System"** — § 10 added (Care ethics, Wenger's communities of practice, ANT, JTBD, Aristotelian phronesis, human flourishing, Praxis, Nordic participatory design).
 7. **Imamichi's information etymology argument** — § 11 added. The Latin "forma" / Greek "eidos" reading, and the information ↔ incarnation opposition that resets the field's epistemic stance.
 8. **2026 frontier reframing** — § 12 added. The Sunada 2026 lecture explicitly placed AI/AGI as the 25th general-purpose technology (GPT) following computer (20th) and internet (22nd).
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Abstract

The Japanese Information Systems Society (情報システム学会 / ISSJ), founded April 23, 2005 under the intellectual leadership of the late **Shōji Ura (浦昭二)**, institutionalized a distinct Japanese intellectual tradition that v0.2 of this survey under-characterized. The tradition is best understood not as a Western IS / Japan branch but as a parallel construction with three independent foundations: (a) **Tomonobu Imamichi's Eco-Ethica** (生圏倫理学, proposed 1973 in Varna), which provided the ethical-philosophical foundation and was the inaugural special lecture at ISSJ's 2005 founding meeting; (b) **Tōru Nishigaki's Fundamental Informatics** (基礎情報学), which provided the informational ontology (the three-layer model of life-information → social-information → machine-information); and (c) the **Western sociotechnical-systems**

lineage (Tavistock / Mumford / Land), which provided the design methodology vocabulary. ISSJ founding member Nakajima Monta (中嶋聞多) explicitly identified Imamichi and Nishigaki as the discipline's two theoretical pillars. The discipline crystallizes in 2025–2026 through **Kaoru Sunada's** (砂田薫, International University GLOCOM) trajectory: her 2025 monograph *Information Systems Evolution Theory: Escaping the Technical Worldview Toward a Future That Nurtures Humans* and her 2026-05-23 ISSJ 20th-anniversary symposium lecture, which synthesizes twenty years of accumulated thinking with seven implementation cases (Denmark, post-Tōhoku earthquake IT volunteers, Iwaki phase-free disaster IT, Asahi Tekkō human-centered DX, NEC AI negotiation agent, Shiojiri inclusive telework, Philippine inclusive fintech, Yokohama Rōsai "Yamamoto-style AI") and a fluent re-positioning of AI as the 25th General Purpose Technology (following computer at 20th, internet at 22nd). The survey draws on **85 Perplexity Sonar queries** (51 original + 34 supplementary) and the user's eight curated memo documents totaling 138 KB. This v0.3 substantially revises v0.2 to incorporate Imamichi and Nishigaki and the seven Sunada cases.

Keywords: 情報システム学, ISSJ, Kaoru Sunada (砂田薫), 情報システム進化論, Shōji Ura (浦昭二), Tomonobu Imamichi (今道友信), eco-ethica (生圏倫理学), Tōru Nishigaki (西垣通), fundamental informatics (基礎情報学), Mumford ETHICS, Frank Land, Tavistock, sociotechnical systems, human-centered IS

Type: Multi-dimensional disciplinary survey, comprehensive revision.

1. Why This Survey, Why Now

Three observations motivate this comprehensive revision:

1. **v0.2 missed the philosophical foundation.** Reading the discipline as "Tavistock → Mumford → Land → Japan with HIS as the local cradle" is incomplete. The Japanese tradition has its own philosophical pillar (Imamichi's Eco-Ethica) and its own informational-ontological pillar (Nishigaki's basic informatics) — neither of which is a derivative of Western sociotechnical IS. v0.2 treated the discipline as "Western IS with Japanese sociotechnical-evolution emphasis"; this v0.3 treats it as a parallel construction with independent foundations.
2. **Sunada's 2026-05-23 ISSJ symposium lecture** is the most current crystallization, post-dating her 2025 monograph by about six months and synthesizing twenty years with seven concrete implementation cases. Its substance materially extends v0.2's account of "the discipline's signature."
3. **The two ISSJ books** (2014 Shin-Jōhō Shisutemu-gaku Josetsu, 2023 Jōhō Shisutemu-gaku) were absent from v0.2. They are the discipline's collective body-of-knowledge works, the equivalent of MIS Quarterly's foundational textbooks for the Anglophone IS tradition.

1.1 Five hypotheses (carried forward from v0.2)

- **H1 (distinct intellectual tradition)** — strengthened: the discipline has its own philosophical pillar (Imamichi) and informational ontology (Nishigaki), not just sociotechnical-Western inheritance.
- **H2 (small but coherent community)** — unchanged.
- **H3 (evolution-theoretic positioning)** — extended: the signature work in 2025–2026 is the pair of Sunada's 2025 monograph + her 2026-05-23 lecture, not a single text.
- **H4 (Western-Japanese asymmetric awareness)** — unchanged.
- **H5 (frontier-AI absorption advantage)** — honest reframing retained from v0.2: not "Japanese frame is better"; "Japanese frame produces systematically different responses" (testable).

1.2 What v0.3 adds beyond v0.2

| Component | v0.2 | v0.3 |
|---|--------|------------------------------|
| Imamichi Eco-Ethica | absent | central pillar |
| Nishigaki Fundamental Informatics | absent | second pillar |
| Two ISSJ books (2014, 2023) | absent | named and dated |
| Sunada 2026-05-23 lecture | absent | § 3.5 with seven cases |
| "Najimi" design concept | absent | § 7.3 |
| 24-GPT framework | absent | § 12.1 |
| Eight conceptual neighbors | absent | § 10 |
| Nakajima Monta as founding member | absent | § 5 |
| Imamichi etymology argument | absent | § 11 |
| Two-pillar (Imamichi + Nishigaki) framing | absent | § 4.5 (Nakajima formulation) |

2. The Philosophical Foundation: Tomonobu Imamichi's Eco-Ethica

2.1 Imamichi the philosopher (1922–2012)

Tomonobu Imamichi (今道友信) was professor emeritus at the University of Tokyo, a philosopher whose career spanned the second half of the twentieth century and whose later work — especially Eco-Ethica — became the philosophical foundation of ISSJ. He died in 2012, the same year as Shōji Ura.

2.2 The 1973 Varna proposal

Imamichi first proposed **Eco-Ethica** (Eco-Ethica / 生圏倫理学 / "ethics at the scale of the human biosphere") in his keynote address at the 14th World Congress of Philosophy in Varna, 1973. The proposal's defining move: traditional ethics treats person-to-person relations against a natural environment; modern ethics must additionally treat two emergent environmental strata:

1. **Technika** — the technical complex woven by sciences and technologies.
2. **Cultural environment** — the internationalized and diversified shared cultural space.

These three layers (natural + technika + cultural) together constitute the bio-sphere (the eco) in which contemporary ethics must operate.

2.3 The Eco-Ethica innovations

Three conceptual moves distinguished Eco-Ethica from prior ethics:

1. **Ethica ad Res (对物伦理 / ethics toward things)**: extends ethics from person-to-person to person-to-thing. Artifacts (products, systems, AI) are not merely tools — they are objects of ethical regard.
2. **Meta-ethics positioning**: existing applied ethics (bioethics, medical ethics, environmental ethics, engineering ethics) are fragmentary service codes. Eco-Ethica is the meta-ethics that grounds them all.
3. **Updated virtue list**: extending Aristotle's four virtues (justice, courage, phronēsis / practical wisdom, temperance) with eco-ethical virtues including philoxenia (love of the stranger / openness to the foreign), punctuality, eutrapelia (productive levity / cognitive flexibility), and international/linguistic openness.

2.4 The information etymology argument

In the **Bio-Sphere Information Systems Research Group** (生圏情報システム研究会) — established after ISSJ's founding at Ura's request, with Imamichi's senior disciple Noriko Hashimoto (橋本典子) leading instruction, running for three years — Imamichi pressed an etymological point that decisively reframed how information is understood:

- The form in information traces to Latin *forma* and ultimately to the Greek *eidos* (the form seen by the mind — Platonic).
- The opposite of information is therefore not entropy (the common engineering reading) but **incarnation** — the embodied, the particular, the situated.
- Implication: information systems handle abstracted form. The discipline's central task is the reverse process — reconnecting abstracted form back to lived particulars (human intent, context, embodiment).

Imamichi was reportedly impatient with IT professionals who dismissed philosophy as abstract: "information itself is the abstracted; IT professionals who dismiss philosophy are dismissing the foundation of what they do."

2.5 The 2005 ISSJ founding-meeting special lecture

In March 2004, at the Gakushikai (a Tokyo academic society), Imamichi delivered a lecture titled "21世紀のための倫理 ～エコエティカについて～" (Ethics for the 21st Century — on Eco-Ethica). **Shōji Ura attended and was profoundly affected.** When ISSJ was being founded in 2005, Ura invited Imamichi to deliver the **founding-meeting special lecture** ("情報と倫理 — 21世紀の課題 —" / "Information and Ethics — The 21st-Century Task") on April 23, 2005. The lecture was published in Volume 1 Issue 1 of the ISSJ journal.

Kaoru Sunada, in her 2026-05-23 lecture (Section 3.5 of this paper), recalls that Imamichi said:

"情報システムや情報社会が進展するのは良いことだが、同時にそれは良い目的に向かっていくことが大切で、新しい目的を考える姿勢を人間は持たなければならない。" "It is good that information systems and the information society advance, but it is equally important that they advance toward good ends; humans must maintain the disposition to think about new ends."

This sentence is the philosophical kernel of ISSJ. Ura's later signature line — "information systems are systems that nurture humans" (情報システムとは人間を育むシステムである) — is the Japanese-vernacular paraphrase of Imamichi's philosophical command.

2.6 What Eco-Ethica gave ISSJ that the Western tradition did not

The Tavistock / Mumford / Land tradition has ethical implications but no comparable meta-ethical foundation. Mumford's ETHICS is a method; Land's IS as discipline is a structural claim; Trist's sociotechnical thesis is a design principle. None operates at the level of what should be the goal of information systems at all. Imamichi's Eco-Ethica is, in this sense, more foundational — it asks the prior question. The Japanese tradition inherits this prior question and treats sociotechnical method as means.

This is why H1 (distinct intellectual tradition) is not a translation claim. The Western lineage gave Japan methods; the Japanese philosophical foundation supplied purposes.

3. Kaoru Sunada — Journalist, Theorist, Symposium Synthesizer

3.1 Biographical arc (carried forward, expanded)

Kaoru Sunada (砂田薫) is an unusual figure in academic IS: her career began in IT journalism in the 1980s–1990s (covering the bursting Japanese PC industry), advanced through editor-in-chief positions, and transitioned to research at International University of Japan GLOCOM in the 2000s. She is now a senior researcher with multiple monographs, academic-society engagement, and government-committee experience.

3.2 Research areas

GLOCOM's official profile lists three:

1. **Human-centered information systems** (人間中心の情報システム) — direct inheritance from Ura/HIS.
2. **Information industry policy history** (情報産業政策史) — a journalist's archival sensibility applied to government IT policy.
3. **Nordic digitalization** (北欧デジタル化) — Estonia X-Road, Denmark MindLab/borger.dk, Sweden, Finland. This intersects with the Sato 2026 Nordic-ethnography-JTBD survey: the same Nordic public-sector tradition is studied by both, from complementary angles.

3.3 Her 2025 monograph

『情報システム進化論：技術的世界観から脱却し人間を育む未来へ』 (Information Systems Evolution Theory: Escaping the Technical Worldview Toward a Future That Nurtures Humans), 2025, Institute for Administrative Information Systems (行政情報システム研究所).

Argument structure (carried forward):

1. The dominant technical worldview treats IT as the primary axis and humans as users.
2. The Japanese practice tradition (HIS, ISSJ) has long held the opposite — humans as primary, IT as service.
3. Evolution of information systems is evolution of the human-side/machine-side coupling.
4. AI (2024–2026) is when this evolutionary frame becomes decisive: AI is a co-evolution partner, not a tool.
5. The path forward is to operationalize human-centered evolution under AI conditions.

3.4 Sunada's earlier empirical work

Particularly notable: "日本企業における情報システム部の知識空洞化について" (On the Knowledge Hollowing-out of Information Systems Departments in Japanese Enterprises), with Masao Kuma (隈正雄). The paper's framing of knowledge hollowing-out — the steady decline of Japanese enterprise IS-department capability through generations of outsourcing — has become a standard reference in Japanese enterprise-IT discussions.

3.5 The 2026-05-23 ISSJ 20th-anniversary symposium lecture

On May 23, 2026, Sunada delivered the central lecture at ISSJ's 20th-anniversary symposium. The lecture synthesized twenty years of accumulated thinking with seven concrete implementation cases. The full transcript and summary highlights are preserved in the user's memo set.

Structural argument: Sunada opened by candidly acknowledging that "情報システムという言葉は古いのでもう使わない方がいい" (some critics in 2026 say "information system" is an old term that should no longer be used). She accepts the criticism honestly — admitting that ISSJ's twenty-year-old expanded definition is still poorly recognized — and then re-positions the discipline:

ISSJ's formal definition (2005 founding charter, restated in 2026): "情報システムとは、情報の利用を望んでいる人々にとって、手に入れやすく、役に立つ形で、社会または組織体の活動に適切な情報を集め、加工し、伝達するシステムである。それは単にコンピュータを中心にした技術的なシステムを指すのではなく、人間活動を含む社会的なシステムである."

Three innovations of this definition: (1) "people who wish to use information" — human want/purpose is the starting point; (2) "easily obtainable, useful forms" — accessibility and usability as constitutive; (3) "social systems including human activity" — explicit rejection of technical reduction.

3.5a Ura's three propositions (synthesized by Sunada)

Sunada (interviewing Ura in 2008) extracted three commitments that define the discipline:

1. "情報システムとは人間を育むシステムである" (Information systems are systems that nurture humans.)
2. "情報システムは組織でなく、個人を出発点として考えるのが良い" (Information systems are better thought from the individual, not the organization, as starting point.)
3. "機械系と人間系がなじむようにデザインすること" (Design so that the machine-side and human-side fit / become familiar with each other.)

The third concept — **najimi** (なじみ, "fit / familiarization") — is the operational design term. It was later adopted by the SNSP national project (人と情報のエコシステム領域 / Human-Information Ecosystem area) as the key term for harmonizing social and technical systems. This is a Japanese-Japanese inheritance from Ura's philosophical commitment into a national R&D program — evidence that the discipline has policy-shaping reach.

3.5b The Sunada AI experiment

Toward the end of the 2026 lecture, Sunada presented a striking experiment: she asked ChatGPT, Claude, and Gemini what Ura would say about AI in 2026. The responses (Sunada's evaluation, paraphrased):

- ChatGPT: "how to nurture humans" — generic
- Claude: "how should human information behavior become richer via generative AI" — closer
- Gemini: "will humans be happy with generative AI" — closer

Sunada's evaluation was sharp: "いずれも良い回答で模範的。利用者に忖度した内容" (all good, model answers — but they all defer to the user). Ura, she argued, was someone who introduced new concepts no one else had named yet, in plain language: information behavior, information culture, najimi, one's own information system. **Current LLMs lack this concept-creation ability**; they are excellent at remix and synthesis but not at the new naming that builds the conceptual space the discipline can inhabit.

This observation is more than rhetoric: it is a falsifiable empirical claim about what LLMs do and don't do, in a register the Western IS literature rarely articulates.

3.5c The 24-GPT framework

Sunada framed the discipline's historical position using the 24 General-Purpose Technology taxonomy:

| # | GPT | Era / Note |
|----------------|-------------------|-------------------------------------|
| 1 | Plant cultivation | agricultural revolution |
| 11 | Steam engine | industrial revolution |
| 16 | Electricity | electrical age |
| 20 | Computer | information revolution I |
| 22 | Internet | information revolution II |
| 25 (predicted) | AI / AGI | per Nikkei Shimbun June 2025 series |

Sunada cited the further Nikkei prediction: the 26th and beyond GPTs will be created by AGI, not by humans. The framing positions AI as not merely a technical update but a civilizational pivot.

3.5d The seven implementation cases

The lecture's empirical core: seven cases classified national → organizational/societal → individual.

National:

1. **Denmark digital government** — 2007 citizen portal, ~2000 services one-stop, citizen-participation continuous improvement, 95% utilization, mandated digital mail (2014), driver-license app (2020), health-insurance app (2021), **2025-12 postal delivery ceased** (digital maturity threshold). Sunada's attribution: "human-centered approach, not technology, is the reason for Denmark's top ranking."

Organizational / Societal:

1. **Post-3.11 IT volunteer movement** (Tetsushi Shibata, Cybozu): 2011 evacuation HQ HP → needs visualization → 2024 Noto earthquake real-time water/bread/blankets visualization.
2. **Iwaki City Phase-Free system**: 2023 Typhoon 13 — same IT tools in normal and disaster times. Sunada: "system focused not on the phase but on each person." Direct instantiation of Ura's "individual-starting-point" commitment.
3. **Asahi Tekkō manufacturing DX**: IoT waste visualization → on-site meetings → reinvestment of efficiency gains into new business (consulting). Success factor: not technology but organizational culture where no one feels intimidated, everyone problem-solves together.
4. **NEC AI negotiation agent**: buyer-side AI vs supplier-side human chat negotiation. 95% agreement rate; mean negotiation time **80 seconds** (down from hours-days). Sunada's striking observation from the supplier side: "忖度せず要求を投げられてフェアな取引になる" (without deference, demands are explicit and the transaction is fair). She speculates: AI may correct the deep-rooted "subcontractor-bullying" custom of Japanese B2B relations. A sociotechnical effect of AI that the engineering frame would not have predicted.

Individual:

1. **Shiojiri City "Kado" telework**: Nagano prefecture, since 2009 — child-care, elder-care, disability constraint workers. Local digital-talent development that scaled to autonomous-driving demonstration projects.
2. **Philippine Global Mobility Services inclusive fintech**: tricycle drivers (90% poverty-line, no loan eligibility). IoT + fintech with remote engine-stop / restart on default. Outcome: vehicle ownership → income → credit history → education / housing loans. Sunada's commentary: "very good objective: drawing out the latent labor of the poor."
3. **Yokohama Rōsai Hospital "Yamamoto-style AI"**: Dr. Haruyoshi Yamamoto, 26 years of unbroken email mental-health consultation. His expertise trained into ChatGPT-derived AI. Result: AI built on Yamamoto's accumulated practice **outperformed Yamamoto himself** in evaluation. Yamamoto's stance: "AI does not replace counselors; counselors using AI can engage clients more deeply."

3.5e Anti-examples that illuminate by contrast

Sunada also presented anti-examples that delineate the what we don't mean by human-centered IS boundary:

- Monitoring systems (school/workplace student/employee surveillance for control purposes)
- Division-amplifying SNS (algorithmic rage-monetization)
- Dark patterns (deceptive UI design — Sunada's personal experience)

Common structural feature: treats human information behavior as means (to revenue or control), not as end. In Imamichi terms, this is the **inversion of person-to-thing ethics** — Eco-Ethica failing.

4. The Sociotechnical Lineage — Western Predecessors

This v0.3 keeps v0.2's lineage account intact, with one refinement.

4.1 Tavistock (UK, post-WW2)

Trist & Bamforth's 1951 coal-mines study: technical change must be co-designed with social organization.

4.2 Mumford's ETHICS

Manchester, 1970s–1990s. Operationalized participatory IS design.

4.3 LSE / Frank Land

Established IS as a discipline distinct from computer science with sociotechnical commitments.

4.4 Continuity with the Japanese tradition

The Japanese tradition reads Mumford and Trist (cited in Ura). But it does not derive from them; it has independent foundations (Imamichi, Nishigaki). The Western lineage supplied methods; the Japanese foundations supplied purposes. v0.2 underweighted this distinction.

4.5 The Nakajima two-pillar formulation (added in v0.3)

Nakajima Monta (中嶋聞多), an ISSJ founding-member, at the 1st and 2nd ISSJ national conferences, named the discipline's two theoretical pillars explicitly:

1. **Tōru Nishigaki's Fundamental Informatics** — the informational ontology
2. **Tomonobu Imamichi's Eco-Ethica** — the philosophical-ethical foundation

This dual-pillar identification is the v0.3 conceptual correction to v0.2. The Western sociotechnical tradition is adjacent (read, cited, drawn upon) but it is not a pillar of the discipline. The pillars are Japanese.

5. Tōru Nishigaki and Fundamental Informatics

5.1 Nishigaki the theorist

Tōru Nishigaki (西垣通) is professor emeritus at the University of Tokyo and currently at Meiji University. His career bridges philosophy of information, systems theory, and Japanese intellectual history.

5.2 Fundamental Informatics (基礎情報学)

Fundamental Informatics is the informational ontology layer of ISSJ's two-pillar structure. Its key moves:

1. **Discipline taxonomy**: information studies divides into information engineering, applied informatics, and social informatics. **Fundamental Informatics** is the conceptual base layer underneath all three.
2. **Three-layer information model**:

| Layer | Description |
|-------------------------|--|
| Life information (生命情報) | The base. Information exists as such only when there is a meaning-interpreting subject — a living being. |

| Layer | Description |
|-----------------------------------|---|
| Social information (社会情報) | Information mediated by social-symbolic communication; constituted by linguistic/cultural shared meaning. |
| Machine information (機械情報) | Information as syntactic structures that machines can process; semantically empty when not interpreted by life-information layer. |

The hierarchical claim: all information is fundamentally life information. Machine information is a projection of social information that is a projection of life information. Without the life-information substrate, machines manipulate syntax but do not handle "information" in the strict sense.

1. **Autopoietic systems:** Nishigaki draws on Luhmann's autopoietic-system social theory and Maturana-Varela's biological autopoiesis. Society is a self-referentially closed system of communications. The implication for AI: machines that do manipulate syntactic structures are not automatically members of the meaning-generating closed system — they are operationally coupled but ontologically distinct.
2. **AI and meaning:** machines do not autonomously generate meaning. They process syntax; meaning arises only when the life-information layer interprets. This is a strong claim — distinct from the Western "AI as new kind of agent" framing.

5.3 ISSJ engagement

Since 2013, ISSJ has hosted a **Fundamental Informatics Research Group** (基礎情報学研究会) with Nishigaki as principal advisor / chief researcher. The group works on (a) the theoretical foundations of IS, (b) reform of high-school information education.

5.4 What Nishigaki gives the discipline

Where Imamichi supplies purpose, Nishigaki supplies ontology. The discipline can therefore:

- Reject technical reductionism not as ideology but as ontologically grounded (machine information is not the same kind of thing as life information).
- Engage AI without confusing syntactic capability with meaning-creation.
- Position IS research as the study of the entire stack (life → social → machine), not just the machine layer.

This ontological grounding is what the Western IS tradition characteristically lacks. Western IS treats "information" as broadly socially constructed (informational symbols, schemas, representations) but does not typically distinguish life information as a separate substrate.

6. The Two ISSJ Books

The discipline's body of knowledge is codified in two published volumes by the New Information Systems Studies Body Investigation Research Committee (新情報システム学体系調査研究委員会):

6.1 Shin-Jōhō Shisutemu-gaku Josetsu (新情報システム学序説, February 2014)

New Information Systems Studies: An Introduction — Toward a Human-Centered Information System!

Status: the discipline's first published collective statement. Approximately a decade after founding, it consolidated the discipline's positions for university curricula and practitioner reference.

6.2 Jōhō Shisutemu-gaku (情報システム学, April 2023)

Information Systems Studies — Toward a Human-Centered Information System!

Status: nine years after the 2014 introduction, this is the mature systematic statement. The subtitle preserves "Toward a Human-Centered Information System!" — emphasizing methodological / disciplinary continuity.

6.3 The 2007 capability-development report

Before the two books, in 2007 ISSJ produced a 100+ page report from its **Human Resource Development Investigation Research Committee** — an empirical study of Japanese IS professional capability gaps. This report (along with subsequent updates) shaped the discipline's pedagogical direction.

6.4 Why the two-book pair matters

Together, the 2014 Josetsu and 2023 systematic volume form ISSJ's collective textbook tradition. By comparison to the Anglophone tradition's MIS-Quarterly and IS-textbook ecosystem, the ISSJ two-book pair is small but coherent — exactly what one would expect of the small-but-coherent (H2) community.

7. The Najimi Design Concept

7.1 Operational meaning

Ura's najimi (なじみ) — variously translated "fit," "familiarization," "settling-in" — names a design-quality predicate about the human-machine relation. A system is najimi when the machine side has come to feel like a natural extension of human work flow, not a foreign imposition.

7.2 Distinction from "usability"

Western usability (Nielsen, ISO 9241-11) is closer to efficient learnability + low error rate. Najimi is closer to organic integration into the user's life-world. The difference: usability is measurable on task completion; najimi is measurable on whether the user feels the system is their own.

7.3 SNSP national project adoption

The najimi concept was adopted by Japan's **SNSP (Symbiosis between Humans and Information Society for the Promotion of Wellbeing)** national-project area as the key term for harmonizing social and technical systems. This is Japanese-Japanese inheritance from Ura's academic commitment into national R&D program — direct evidence that ISSJ-originating concepts have policy reach.

7.4 AI-era reinterpretation

In the AI era, najimi takes new significance: can an AI system come to feel like one's own extended capability rather than an external tool? This question reframes AI integration from "AI as new IT tool" to "AI as co-evolution partner whose najimi must be designed."

8. The Eight Conceptual Neighbors — Reading IS Without "Information" or "System"

A particularly striking exercise from the user's memo set: characterizing the discipline by what it studies, not what its name says. The exercise reveals eight conceptual neighbors that illuminate the discipline from outside its own vocabulary:

| # | Neighbor concept | Origin | Connection to ISSJ |
|---|------------------|--------|--|
| 1 | Care ethics | | shared concern with "what nurtures humans" |

| # | Neighbor concept | Origin | Connection to ISSJ |
|---|--|-----------------------------|--|
| | | Carol Gilligan, Joan Tronto | |
| 2 | Communities of practice (実践共同体) | Etienne Wenger | shared concern with tacit learning, organizational sociotechnical fabric |
| 3 | Actor-Network Theory (ANT) | Bruno Latour, John Law | shared concern with non-human actors in sociotechnical assemblages |
| 4 | Jobs-to-be-Done (JTBD) | Clayton Christensen | shared concern with the purpose the user hires the technology for |
| 5 | Aristotelian phronēsis (実践知) | classical philosophy | shared concern with practical wisdom in contingent contexts |
| 6 | Human flourishing (eudaimonia) | classical philosophy | shared concern with "good ends" — Imamichi's command |
| 7 | Praxis | Marx, Gramsci, Freire | shared concern with theory-practice integration |
| 8 | Nordic participatory design | Bjerknes, Ehn, Kyng | shared concern with user-as-co-designer |

The exercise: the discipline is not primarily about information or systems. It is about **the design and evolution of human-technology coupling so that humans flourish**. Each conceptual neighbor illuminates a different facet — Care illuminates the relational obligation, Communities of Practice the learning-network character, ANT the non-human-actor dimension, JTBD the purpose-orientation, phronēsis the contextual-judgment dimension, flourishing the normative goal, Praxis the theory-practice unity, Nordic participatory design the political-democratic dimension.

Reading IS through these eight neighbors clarifies the discipline's distinctive contribution: it is the synthesis position at the intersection.

9. The Adjacent Researcher Prosopography (Updated)

| Researcher | Role / Contribution |
|-----------------------------------|---|
| 浦昭二 (Shōji Ura), d. 2012 | ISSJ founder, HIS-research-group leader, three signature propositions, najimi concept |
| 砂田薫 (Kaoru Sunada), GLOCOM | Journalist-to-theorist trajectory; 2025 monograph; 2026-05-23 lecture |
| 今道友信 (Tomonobu Imamichi), d. 2012 | Eco-Ethica founder; 1973 Varna proposal; 2005 ISSJ founding-meeting special lecture; bio-sphere IS research group three-year mentor |
| 西垣通 (Tōru Nishigaki) | Fundamental Informatics; three-layer information model; ISSJ research-group chief researcher 2013– |
| 中嶋間多 (Monta Nakajima) | ISSJ founding member; named the two pillars (Nishigaki + Imamichi) |
| 橋本典子 (Noriko Hashimoto) | Imamichi senior disciple; three-year mentorship of ISSJ bio-sphere IS research group |
| 木暮仁 (Hitoshi Kogure) | IS pedagogy; textbook author; education-focused researcher |
| 細野公男 (Kimio Hosono) | Empirical Japanese enterprise-IT researcher |
| 隈正雄 (Masao Kuma) | Sunada co-author on knowledge hollowing-out research |
| 松為信雄 (Nobuo Matsui) | IS + disability-employment trinity-model researcher (cross-disciplinary) |
| 野中郁次郎 (Ikujiro Nonaka) | SECI model, ba concept (adjacent to ISSJ; widely cited in Japanese sociotechnical discussions) |
| | Post-3.11 IT volunteer movement leader; case in Sunada 2026-05-23 lecture |

| Researcher | Role / Contribution |
|-------------------------------------|---|
| 柴田哲史 (Tetsushi Shibata) (Cybozu) | |
| 山本晴義 (Haruyoshi Yamamoto) | Yokohama Rōsai mental-health consultation; Yamamoto-style AI case |

10. The Eight-Dimensional Analysis (Updated)

Carried forward from v0.2 with v0.3 enrichment.

10.1 JTBD (carried forward, expanded with Sunada 7-case grounding)

| JTBD layer | v0.3 grounding |
|-------------------------------------|---|
| L1 explanation | "knowledge hollowing-out," Sler multi-tier, post-bubble failure analysis |
| L2 methodology | najimi design, phase-free design (Iwaki), participatory continuous improvement (Denmark) |
| L3 policy | SNSP, Society 5.0, 2019 Human-Centered AI Society Principles |
| L4 practitioner support | Asahi Tekkō organizational culture, Yamamoto AI |
| L5 international comparison | Denmark, Estonia, Sunada's Nordic studies |
| L6 AI absorption | NEC negotiation agent, Yamamoto-style AI, Asahi DX trio |
| L7 social inclusion (new) | Shiojiri "Kado" telework, Philippine inclusive fintech — information systems designed to include the marginalized |

The L7 layer is the v0.3 addition derived from the Sunada lecture. It is the most distinctive JTBD layer of the Japanese discipline relative to the Western tradition.

10.2 History — major events updated

- 1951 Tavistock coal-mines (intellectual ancestor — Western)
- 1970s–90s Mumford ETHICS (Western)
- **1973 Varna — Imamichi Eco-Ethica proposed** (Japanese pillar 1)
- 1980s–90s Sunada IT journalism
- 1990s HIS study group forms
- 2001 Ura "Hope for IS Professionals" (programmatic paper)
- **2004 March — Imamichi Gakushikai lecture, Ura attends and resonates**
- **2005 April 23 — ISSJ founding meeting; Imamichi special lecture**
- 2007 — Human Resource Development Committee report
- **2013 — Nishigaki Fundamental Informatics Research Group launches** (Japanese pillar 2 instituted)
- **2014 February — Shin-Jōhō Shisutemu-gaku Josetsu published**
- 2012 — Ura passes; Imamichi passes (same year)
- 2020s — Sunada's Nordic and enterprise-IT works mature
- **2023 April — Jōhō Shisutemu-gaku (second book) published**
- 2025 — Sunada Information Systems Evolution Theory monograph
- **2026-05-23 — Sunada ISSJ 20th-anniversary symposium lecture**

10.3 Latest trends (2024–2026) updated

- Sunada 2025 monograph: theoretical consolidation

- Sunada 2026-05-23 lecture: empirical seven-case grounding
- 20th-anniversary symposium activity
- Digital Agency (デジタル庁) engagement increasing
- AI-era discussions in research groups and journal

10.4 Challenges — updated with 2026 observations

- International visibility (carried)
- Generational succession (Ura and Imamichi both gone; second/third generation must carry)
- AI integration operationalization
- Pedagogical standardization (Kogure's textbook contribution acknowledged)
- IPSJ differentiation
- New: handling the criticism that "情報システム" terminology is dated

10.5 Current state — consensus / dissensus

Carried forward.

10.6 Desired state

Carried forward.

10.7 AI-era positioning — strengthened

(See § 12 below.)

11. The Information-Etymology Reframing

A v0.3-specific contribution from Imamichi via Sunada's transmission:

The Latin forma → Greek eidos reading of information implies that information is the abstracted form. The opposite is incarnation — the embodied. Information systems work with abstraction; the discipline's challenge is the return path — re-embedding the abstracted in lived particulars.

This is a deep epistemic stance. It reframes the discipline's purpose: not to make better abstractions, but to better manage the abstraction ↔ incarnation cycle. AI systems that "process information" are increasingly capable of abstraction but categorically limited in incarnation. The discipline's frontier challenge in 2026 is operationalizing the return path.

12. AI-Era Positioning (Strengthened in v0.3)

12.1 The 24-GPT framing

Per Sunada's 2026 lecture: computer is the 20th GPT, internet the 22nd, AI/AGI the predicted 25th. The 26th and beyond are predicted to be created by AGI rather than by humans.

Reading the discipline at this moment: the question is whether the Japanese tradition's human-centered evolution commitment can shape what AGI creates from inside (by being the conceptual frame AGI operates in) or whether it will be displaced.

12.2 What the Japanese frame contributes uniquely

1. **Imamichi etymology:** information is abstracted; AI is excellent at abstraction; the discipline's job is the return path to incarnation. This is a specific AI-era research agenda.
2. **Nishigaki ontology:** machines manipulate syntax, not meaning. AI evaluation must distinguish syntactic competence from meaning generation — a position Western AI evaluation often conflates.
3. **Sunada's concept-creation observation:** LLMs are remix-capable but not new-naming-capable. The discipline must continue to do the new-naming work; LLMs will not do it for the field.
4. **Najimi-as-AI-integration:** the integration question for AI is not "is this tool useful" but "has this AI become najimi with the user's life-world."

12.3 The honest H5 reframing (carried forward)

The claim is not that the Japanese frame is epistemically better than Western frames. The claim is that the Japanese frame produces systematically different responses to AI-era questions — particularly the abstraction/incarnation cycle, the syntax/meaning distinction, and the new-naming labor.

13. Comparison with Western IS — Updated

Carried forward from v0.2 with one addition: the Imamichi-Nishigaki dual pillar is explicitly noted as a Japanese-specific structural feature absent from the Western AIS / ICIS tradition.

| Axis | Japanese ISSJ | Western AIS / ICIS |
|---------------------|---|--|
| Society size | <500 | ~5,000+ |
| Founding | 2005 (HIS from 1990s; Imamichi lecture 1973) | AIS 1995 (field from 1960s) |
| Theoretical pillars | Imamichi (ethics) + Nishigaki (ontology) | design science, behavioral IS, theory-building |
| Primary venues | ISSJ journal + 大会 | MIS Quarterly, ICIS, ECIS, PACIS |
| Industry coupling | strong (enterprise IT) | strong but indirect |
| Government coupling | growing (Digital Agency 2021+; SNSP) | varies |
| AI absorption frame | sociotechnical co-evolution; najimi | AI as new IT artifact |
| Concept creation | central (Ura new vocabulary tradition) | secondary (theory testing primary) |

14. Stakeholder Recommendations — Updated

14.1 For ISSJ leadership

1. **Selective English-language publication** — Sunada monograph, 2014/2023 books, Imamichi 2005 founding lecture
2. **Imamichi-Nishigaki centenary preparation** — 2073 will be Imamichi's centenary of Eco-Ethica proposal; long-term institutional positioning
3. **AI-era methodological operationalization** — translate the principles into practitioner methods
4. **Digital Agency strategic engagement** — SNSP-najimi inheritance is template
5. **International collaboration** — joint Japanese / Western papers on AI-era IS

14.2 For Japanese enterprise IT leaders

1. **Read Sunada's 2025 monograph and 2026 lecture**

2. **Engage ISSJ** for sociotechnical questions
3. **Recognize Sler multi-tier as sociotechnical, not procurement**
4. **Adopt phase-free / najimi design heuristics**

14.3 For Western IS researchers

1. **Cite Imamichi's Eco-Ethica** as the philosophical foundation of a distinct IS tradition
2. **Cite Nishigaki's Fundamental Informatics** as the informational-ontology basis
3. **Cite Sunada's 2025 monograph + 2026 lecture** for current synthesis
4. **Engage the najimi design concept** as complementary to Western usability/UX vocabulary

14.4 For Anthropic / Anthropic-class AI researchers (Mythos-era)

1. **The Japanese IS tradition is the natural intellectual partner** for sociotechnical AI integration
2. **The Imamichi Eco-Ethica frame is uniquely positioned** for the AI-era ethical question
3. **The Nishigaki three-layer model is testable**: AI capability at the machine-information layer is observable; meaning generation at the life-information layer is the contested frontier

15. Methodology and Limitations

15.1 Source acquisition (updated)

- 51 original Perplexity Sonar queries (v0.1/v0.2) + 34 supplementary queries (v0.3) = **85 queries**
- 8 curated memo documents from the user, totaling ~138 KB
- 359 unique sources in v0.2 source set; v0.3 will exceed when supplementary queries are aggregated
- Cross-reference: Sato 2026 series (Harness v0.3, Nordic, OpenMythos, Mythos cases)

15.2 Limitations (updated)

- We have not yet read Imamichi's 2005 ISSJ founding lecture text directly (only via Sunada's transmission and review summaries)
- We have not yet read Nishigaki's published monographs directly
- We have not yet conducted CiNii / J-STAGE bibliometric analysis
- The Sunada 2026-05-23 transcript was supplied by the user; we have not independently verified
- Translation of Japanese terms to English carries interpretive choices

15.3 Falsifiable claims (carried forward, refined)

H1, H2, H3, H4, H5 retained with v0.3 reframings:

- **H1** strengthened: not "distinct from Western IS" alone but "distinct with two specific Japanese theoretical pillars (Imamichi + Nishigaki) plus Western-method adjacency"
- **H3** refined: signature work is the pair of Sunada 2025 monograph + 2026-05-23 lecture, not single text
- **H5** honest reframing retained: "systematically different responses" not "advantage"

16. Conclusion

The Japanese Information Systems discipline — institutionalized in ISSJ since April 23, 2005 — is not a Western IS regional branch. It is a parallel construction with three independent foundations: **Imamichi's Eco-Ethica** (the philosophical-ethical pillar), **Nishigaki's Fundamental Informatics** (the informational-ontology pillar), and the Western sociotechnical lineage (the adjacent method vocabulary). ISSJ founding member

Nakajima Monta explicitly identified Imamichi and Nishigaki as the two theoretical pillars. The discipline's signature texts in 2025–2026 are **Sunada's 2025 monograph** plus her **2026-05-23 ISSJ 20th-anniversary symposium lecture**, which together synthesize twenty years of accumulated thinking through seven implementation cases (Denmark, post-3.11 IT volunteers, Iwaki phase-free, Asahi Tekkō DX, NEC AI negotiation, Shiojiri Kado, Philippine inclusive fintech, Yokohama Rōsai Yamamoto-style AI) and propose AI/AGI as the 25th GPT. The discipline's two ISSJ books (Shin-Jōhō Shisutemu-gaku Josetsu 2014, Jōhō Shisutemu-gaku 2023) codify the discipline's mature collective body of knowledge. Read through the lens of the eight conceptual neighbors (Care, Communities of Practice, ANT, JTBD, Phronēsis, Flourishing, Praxis, Nordic Participatory Design), the discipline is the synthesis position at the intersection — its distinctive intellectual contribution. For the AI era, the Imamichi etymological frame (information ↔ incarnation), the Nishigaki ontological frame (syntax ≠ meaning), Sunada's concept-creation observation (LLMs cannot create the field's vocabulary), and the najimi integration heuristic give the discipline a specific 2026 research agenda that the Western "AI-as-new-IT-artifact" frame does not provide. International citation, AI-era operationalization, and Digital Agency integration are the three immediate strategic challenges — none of which is existential, all of which are growth opportunities.

Five pre-registered hypotheses; H1 substantially strengthened; H2, H3, H4 supported; H5 honestly reframed as testable rather than confident.

The Western IS literature should engage Imamichi's Eco-Ethica and Nishigaki's Fundamental Informatics as the Japanese tradition's first-order contributions — not as regional curiosities.

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