

If you are Data Rich,
Information Poor, you
can not create
wealth/wisdom

SEMINAR NASIONAL DAN KULIAH UMUM

TANTANGAN PENELITIAN MENGHADAPI INDUSTRIALISASI 4.0

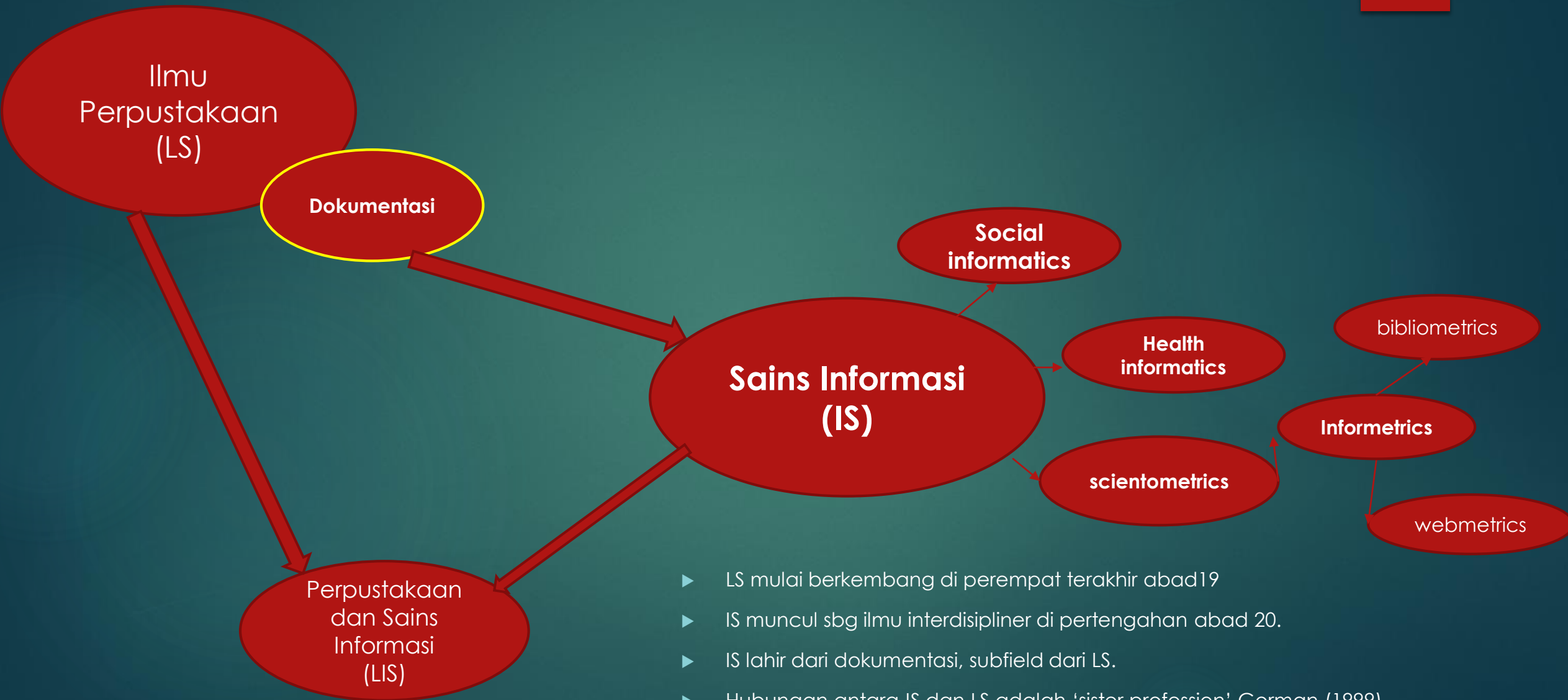
Information Science: An interdisciplinary science

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Information science

- ▶ Information science is the science of all things information. In the same way data science takes a scientific approach to data, information science seeks to define and standardize information collection and organization for dissemination, consumption, and usage. Whereas library science is the scientific approach to specifically library management and organization (Durr, 2018)

Perkembangan Information Science



- ▶ LS mulai berkembang di perempat terakhir abad 19
- ▶ IS muncul sbg ilmu interdisipliner di pertengahan abad 20.
- ▶ IS lahir dari dokumentasi, subfield dari LS.
- ▶ Hubungan antara IS dan LS adalah 'sister profession' Gorman (1999)

Data Science & Information Science

- ▶ Data science was once considered a product of statisticians since it was scholars of statistics who initially promoted the term within their work. “Statisticians have had much to say about data science, since it is they who actually created the term ‘data science’ and promoted the upgrading of statistics to data science as a broader discipline,” (Cao, 2017, p.7).
- ▶ Information science derived from the subfield documentation with addition of quantification of information

ilmu informasi (IS)

Ilmu Informasi (IS)

Borko (1968): IS is “a study that is concerned with behavior, properties, and media that manage information”

Seadle (2012): IS “less oriented toward the humanities than toward the sciences, but clearly includes both.” (p. 206)

Berkembang thn 1950an dari dokumentasi atau Information retrieval. Pemanfaatan teknologi membawa ke kuantifikasi informasi (Wersig and Neveling, 1975).

berkembang dgn karya Shannon terkait kuantifikasi informasi (Meadow, 1991). Kajian kuantitatif informasi berkembang juga dlm informasi tercetak dan menghasilkan bibliometrics.

Ilmu Informasi (IS)

Belkin (1978):

IS concerns with:

- (1) desired information,**
- (2) information in human or cognitive systems,**
- (3) the relationship among information, generator and user, and**
- (4) the effectiveness of information.**

**IS has involved
cognitive science in
research and theories
(Holland, 2008).**

Sains Informasi (IS)

**Ilmu Informasi
(IS)**

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graph TD; A([Ilmu Informasi (IS)]) --> B([Informasi sudah menjadi subyek kajian dari berbagai bidang, kolaborasi antara ilmu informasi dan bidang lain sudah biasa dan memperluas perspektif]); A --> C([mempelajari pencarian, produksi, organisasi, penyimpanan, temu kembali, diseminasi, dan penggunaan informasi (Bates, 1999; Wolfram, 2000).]); A --> D([Mengkaji informasi dan hubungannya dengan manusia: information searching, information-seeking behavior, how human beings process information (cognition and behavior in dealing with information)]);
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Informasi sudah menjadi subyek kajian dari berbagai bidang, kolaborasi antara ilmu informasi dan bidang lain sudah biasa dan memperluas perspektif

mempelajari pencarian, produksi, organisasi, penyimpanan, temu kembali, diseminasi, dan penggunaan informasi (Bates, 1999; Wolfram, 2000).

Mengkaji informasi dan hubungannya dengan manusia: information searching, information-seeking behavior, how human beings process information (cognition and behavior in dealing with information)

Sains Informasi (IS)

Ilmu
Informasi (IS)

Informasi

Spink (2000): **IS “not only a technical but even more so a cognitive, social, and situational process”** (p. 73).

Communications, computer science, library science, management of information system (MIS), mathematics, product information for marketing, and sociology

Animal information behavior: Koops (2004), for example, has studied the value of information in animals and found that when animals have no capability to get the value of information, the animals will let it go.

Ilmu Informasi (IS)

Spink (2000) tentang IS:
menganalisis kegiatan terkait dengan informasi (information-related activities) dari information seeking and retrieving behavior, information organization, sampai cognitive and intellectual aspects of information retrieval and systems.



Apa itu informasi?

Informasi?

**“Any stimulus that alters
cognitive structure in the
receiver.”**

(Bill Paisley, 1969)

Informasi?

- ▶ bisa di “luar” pikiran manusia
- ▶ bisa di “dalam” pikiran manusia
- ▶ bisa dimanapun
- ▶ Ada sejak lahirnya kehidupan

*James
Gleick*

THE INFORMATION



A History, a Theory, a Flood

Informasi?



- ▶ Ada hubungan antara informasi dengan kenyataan yang direpresentasikan?

Tiga Dimensi Informasi

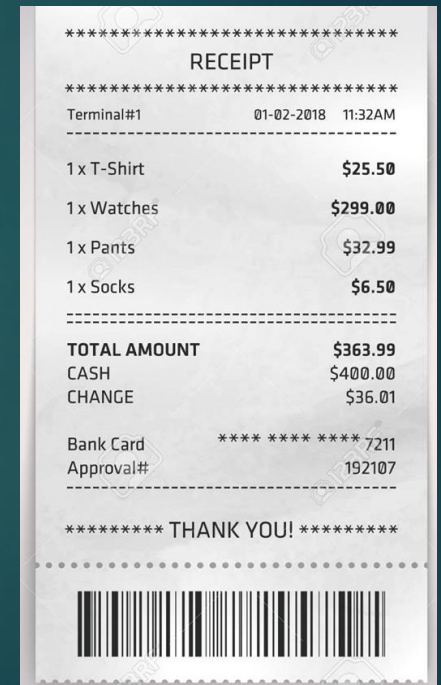
- ▶ **Information AS reality**

- ▶ e.g. Fingerprint



Tiga Dimensi Informasi

- ▶ Information FOR reality
 - ▶ e.g. Struk belanja



Tiga Dimensi Informasi

| International Departures | | | | |
|--------------------------|---------------|------|------|--------------------|
| Flight No | Destination | Time | Gate | Remarks |
| CX7183 | Berlin | 7:50 | A-11 | Gate closing |
| QF3474 | London | 7:50 | A-12 | Gate closing |
| BA372 | Paris | 7:55 | B-10 | Boarding |
| AY6554 | New York | 8:00 | C-33 | Boarding |
| KL3160 | San Francisco | 8:00 | F-15 | Boarding |
| BA8903 | Manchester | 8:05 | B-12 | Gate lounge open |
| BA710 | Los Angeles | 8:10 | C-12 | Check-in open |
| QF3371 | Hong Kong | 8:15 | F-10 | Check-in open |
| MA4866 | Barcelona | 8:15 | F-12 | Check-in at kiosks |
| CX7221 | Copenhagen | 8:20 | G-32 | Check-in at kiosks |

- ▶ Information ABOUT reality (FACTUAL information)
 - ▶ e.g. Jadwal penerbangan, peta,

Informasi dalam sains



Kinds & Studies of Information

| | <i>Intangible</i> | <i>Tangible</i> |
|---------|--|--|
| Entity | Information-as-knowledge: knowledge | Information-as-thing: data, document, recorded knowledge |
| Process | Information-as-process: becoming informed | Information processing: data processing, document processing, knowledge engineering |

Coverage of Information Science

Information behavior

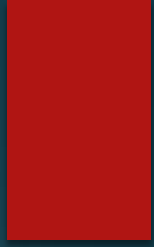
Personal Information Management

Informasi dalam media (sosial)

Industri informasi

Scholarly Communication

Politics and policy of education



Terima kasih