Accounting for intellectual property?

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The Silence of Accounting

Accounting plays a significant role in shaping thoughts, beliefs, meaning and action of market participants[1] and in this sense frames the way they understand and act with respect to a particular issue. Assessing how accounting approaches intellectual property allows to grasp how proprietary knowledge is being constructed and re-constructed through the filter of the various accounting statements. More than any other language, accounting serves to 'normalize' social and cultural business practice. Meanings of 'patents', 'trademarks' or 'copyrights' in various business contexts arise in the context of a network of signs, messages and images, which under current accounting standards, privilege the communication of tangibles items over intellectual property. There are few possibilities to demonstrate the entire spectrum of IP based business transactions. While IP commercialization reinforces many of the arguments made by the resource-based view of the firm, accounting does not allow to linguistically reflect these business strategies. The various business options made possible through intellectual property law can

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[1] Alvesson, M. & Kärreman, D. (2000). Taking the linguistic turn in organizational research: challenges, responses, consequences. *Journal of Applied Behavioural Science.* 36 (2), 134-156.

hardly be expressed through current accounting systems since accounting primarily gives recognition to intellectual property associated with licensing transactions. Thus, only IP that is clearly associated with direct revenue streams can be expressed through the language of accounting. This means keeping silent about all other forms of IP based business relationships, particularly of IP that is used and generated internally.[2] Because historically accounting evolved as a double-entry book keeping tool to track and document the exchange of tangible items, accounting has difficulties in grasping intellectual property, which does not necessarily fit the socio-historic evolution of accounting. The following example is a good illustration that current accounting statements are precise but may lack practical significance in an increasingly knowledge based economy:

> 'At a U.N. conference on the reflection of intangibles in systems of national accounts (UNDESA, 2006) a representative of the U.S. based Securities Exchange Commission assessed the 2005 acquisition of Gillette by Procter & Gamble. The purchase price for Gillette was at 57 bn USD, whereas the reported net book value of the firm was at 3.5. The SEC found that Gillette had fully complied with current accounting standards, which led the SEC's representative to ask to which extent current accounting standards still met the reporting needs of intellectual property rich firms; In the case of Gillette the major value derived from its trademark protected brands, such as Gillette razors, Duracell batteries and Braun and Oral-B dental care products.'[3]

Clearly, the various challenges associated with determining the value of internally held intellectual property, paired with the inherent volatility associated with the value of some forms of IP can be cited as major reasons why accountants have been reluctant to fully report on IP. Yet, reasons for accountants' reluctance to embrace the concept of intellectual property are deeper than that and may be better understood in light of the conceptual differences between the accounting and the intellectual property community. The purpose of this article is to illustrate

[2] Sullivan P. (Jr.) & Sullivan P. (Sr.) (2000). Valuing intangibles companies – An intellectual capital approach. *Journal of Intellectual Capital Management*. 1(4), 328- 340

[3] United Nations Department of Economic and Social Affairs Conference. (2006) July 12-13. Conference on the Measurement of Intangibles in Systems of National Accounts. United Nations Headquarter. New York

empirically how accounting shapes a very particular perception on IP, which in turn may hamper the full commercialization of intellectual property. The article discusses first intellectual property from a business perspective and explains the various ways that intellectual property can be commercialized. I then turn to accounting and assess it from a linguistic perspective so to explain how accounting contributes to shaping specific business realities and dismantle systems of seemingly 'fact-based' accounting statements as social constructions that reinforce a particular understanding of firm behavior. This perception is based on two inherent assumptions, namely that tangibles, rather than intangibles contribute to business performance and that business depends largely on an arm's length transaction between a willing buyer and a seller. Both of these assumptions do not match the nature of IP. In the empirical part of this article I pick a couple of key examples, such as the notion of 'goodwill', 'fair value' or 'intangible asset' and explain how a very specific understanding of IP is being created through these various vocabularies that the language of accounting offers. I conclude by explaining the social implications this peculiar form of communication has and call for further empirical research to discuss the phenomenon in greater depth.

Intellectual Property Commercialization

Successful intellectual property commercialization entails product/service development, production, and distribution. However, an IP owner does not need to possess all these capabilities –or, complementary items—within the organization. Some of the essential questions of intellectual property management concern which capabilities to possess, acquire, or build inside the organization and which capabilities to leave to a partner. These strategic steps are facilitated through inherent features associated with intellectual property, which makes knowledge explicit and allows the exchange of codified information. Thus, one may argue that

IP makes knowledge economically functional and managerially controllable. In this sense, it may be viewed as 'knowledge in action' or a right in an abstract object.[4] Intellectual property determines the way in which knowledge relations are governed and therefore emerges as an essential organizational principle of the knowledge based firm. IP protects products of the human mind and is generally categorized into patents, trademarks, industrial designs, geographic indications of source and copyright, including literary and artistic works.[5]

Because by nature intellectual property is knowledge, IP shows non-rivalry in consumption and only partial excludability. This means that IP can be used by various business partners at the same time without decreasing substantially in its value. The relevance IP has to a business is furthermore shaped by the overall business context and background of the user, features that stand in strong contrast to tangibles. A trademark for a well-known consumer product, (i.e. a 'Gucci' handbag) will have little value to a biotechnology company. A lot of the IP that a company owns has an indirect impact on its cash flows. For example, IP protection often provides a firm exclusivity in the relevant market and/or the 'freedom to operate'. IP is used by firms to block products of competitors, as a bargaining chip in cross-licensing deals, and to prevent or defend themselves against infringement suits. Other reasons may be the prevention of copying, earning license revenue, strengthening of the firm's position in negotiation with other firms or enhancing a firm's reputation.[6] IP is also leveraged as part of an effort to allocate rents between different levels of production or development. Further, IP allows to sell, buy, trade or license knowledge that has been made explicit and codified through the judicial system. It has an

[4] Moerman, L. & Van der Laan, S. (2006). TRIPS and the pharmaceutical industry: Prescription for Profit? *Critical Perspectives on Accounting.* 17, 1089 – 1106

[5] World Intellectual Property Organization (2007). *What is Intellectual Property?* www.wipo.int

[6] ibid

impact on a firm's services or products, its business processes, know-how or tacit knowledge. IP protects the various business segments of a firm, ranging from the looks of its products and packaging (Industrial Design), to its recognition in the market (Trademarks, Geographical Indications), to the protection of the new or improved functional features of products and services (Trade Secrets, Patents). It is primarily the winning interplay of these different factors that can create cash flow for a firm.[7] In this sense IP is a primary strategic tool and can be a decisive factor for a firm's competitive advantage and survival in the market.[8] Or, as Audretsch and Lehman (2004) and previously Mavrinac and Boyles (1996) observe:[9] Firms only survive if revenues are large enough to cover costs. This largely depends on the firm's ability to learn about new products and optimize the cost function. A firm's competitive advantage lies therefore largely in its capacity to manage its strategic resources, which are at many instances protected through intellectual property law, rather than tangible in shape and character. While the latter may provide the business context, the former are the driving factor of business in markets for ideas. This is in line with the resource based view of the firm, which argues that a firm enjoys a competitive advantage if it controls physical, human or organizational wealth that is valuable, rare, inimitable and non-substitutable. It is the unique interplay of these resources that gives a firm its competitive advantage.[10]

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[7] Ghafele, R. (2005). Getting a Grip on Accounting and Intellectual Property. *WIPO SME e Newsletter*. http://www.wipo.int/sme

[8] Spender, J. (1996). Making Knowledge the Basis of a Dynamic Theory of the Firm. *Strategic Management Journal*. 17, 109-122

[9] Audretsch, D.B. & Lehmann, E. (1994). Financing high-tech Growth: The role of debt and equity. *Indiana University Working Paper 1904;* Mavrinac, S.C. & Boyles, T. (1996). Sell-Side Analysis. Non Financial Performance Evaluation and the Accuracy of Short-Term Earnings Forecasts. *Ernst & Young LLP Working Papers.*

[10] Barney, J.B. (1997). Firm resources and sustained competitive advantage. *Journal of Management Science*. 17, 99-120

Accounting: The Language of Business[11]

Parker (1992) defines language as a set of statements that bring social objects into being. In this sense, accounting may be viewed as a language.[12] Through accounting intellectual property experiences a specific form of authorization. Life is brought to IP by providing a system of stable semiotic orders, otherwise known as linguistic order, to communicate about intellectual property. With respect to IP this specific discursive selectivity serves a specific reproduction of complex socio-economic orders, which can currently be best described as the 'defensive rights' paradigm of intellectual property law.

Because accounting is a language, it conveys what is 'meaningful' and 'real' in business. Since it provides market participants with a limited inventory of signs, structures, vocabulary and syntax it allows market participants to communicate about business performance. Accounting determines 'what is and what is not', 'what can be done and what can not be done', 'what should be done and what should not be done in business'.[13] Without officially recognized systems of accounts specific business perceptions and understandings could not be maintained. The linguistic practice of accounting allows members of the business community to engage in the construction of a complex and diverse system of meanings.[14]

An accounting system serves as a mechanism of linguistic exchange with participatory mechanisms that provides information, clarifies possession and use in business transactions.

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[11] Davidson. S. (1999) 10th ed. *Accounting: The Language of Business*. Thomas Horton & Daughters.

[12] Parker, I. (1992). *Discourse Dynamics.* London: Routledge

[13] Phillips, N. & Hardy, C. (2002). *Discourse Analysis- Investigating processes of social construction*. Thousand Oaks California: Sage

[14] Mumby, D. & Stohl, C. (1996). Disciplining organizational communication studies. *Management Communication Quarterly.* 10(1), 50-73

Accounting provides a system of shared meaning through wide, heterogeneous symbolic engineering and circulation. Accounting is an artificial, highly mathematical language that seeks to be free from cultural connotations by following the strict code of a standard, officially sanctioned and recognized by the state, and increasingly so, by the international community. Accounting forces market participants, particularly if quoted on the stock exchange, to 'speak' about business performance in a highly standardized, ritualized way. Creativity of expression is to be by all means avoided and the officially codified linguistic order to be applied to address business transaction.

Because accounting enjoys a high level of official sanction, probably similar to the Latin of the Christian Church, it has significant power in shaping certain understandings of a subject and turn it into generally accepted truths. Certain positions are legitimized, while others are discredited, nullified or excluded. [15] For that reason, accounting constitutes the symbolic dimension of business, a major feature that an intellectual capital report can not provide since it neither enjoys the same claim to truth nor the same level of official recognition. Thus, the firm may be viewed as an artifact of accounting production. The distinction between the agent and the network collapses and, as can be shown for the accounting of intellectual property, the capacity of social agents to radically transform organizational structures are very limited.

Accounting 'arranges' markets in a specific way, by arranging information in a specific way, thus underlining Berger & Luckmann's (1967) argument that language is *the* constitutive

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[15] Jäger, S. (1994). *Text und Diskursanalyse, Eine Anleitung zur Analyse politischer Texte*. DISS: Duisburg

element of social representations of reality.[16] In this sense the 'natural' and the 'social' worlds differ. The reality of the social world needs language to produce meaning and make sense of the world, the natural world however can and does exist independently from the linguistic activity of humans. The socially 'real' is different from the 'empirical', the 'actual', which belongs to the domain of events and processes. Foucault would argue that the 'real' depends on the 'actual' and therefore does not fully constitute a world on its own. Yet, by introducing the notion of 'representation', he argues that linguistic realities are the only elements of a social reality that human actors can grasp.[17] As socially (re) produced actors, firms can however only experience the 'socially real' and not 'the actual'. The primary filtering mechanism that allows firms to experience the socially real is the accounting system. The resulting patchwork of practice forms the social network of a specific group, the 'imagined business community.'

This approach finds reflection in Barthes' concept of myth. By introducing the notion of ‚myth' Barthes depicts that a system of facts that seems to derive its sense 'naturally' from the objects themselves, but is in fact the result of a specific 'myth' that 'naturalizes' what is actually of historic nature. This is how the 'myth' escapes critique.[18] Accounting does not just simply map business, or objectively mirror an existing, pre-defined business context; rather, it creates that business context by offering a complex system of representation. Accounting as a discursive practice is not descriptive of business operation, but actively categorizes and combines operations in specific ways that make sense in the language of accounting**,** but do not necessarily help to grasp, communicate and improve IP commercialization.

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[16] Berger, P. L. & Luckmann, T. (1967). *The social Construction of Reality. A Treatise in the Sociology of Knowledge*, London: Penguin

[17] Bourdieu, P. (1992). *Language and Symbolic Power*. Blackwell Publisher: London

[18] Barthes, R. (1953). *Le Dégré Zéro de l' Ecriture.* Edition du Seuil: Paris
Barthes, R. (1964). *Mythen des Alltags.* Suhrkamp: Frankfurt am Main

Accounting for Intellectual Property?

With respect to intellectual property, accounting clearly differentiates what one can say, what one must say and what one has to be silent about. Accounting remains silent in many instances where intellectual property plays an important role in business. We thus support Rodov and Leliaert's (2002) argument that accounting is dominated by traditional factors of production and ignores the importance of proprietary knowledge as a factor for wealth creation or destruction.[19]

While it is hard to document silence, the untold story of intellectual property may often be more conducive towards the creation of certain business communities than the story that accounting eventually tells. The following empirical illustrations of the various ways in which accounting approaches IP do not claim to offer a complete overview of how accounting approaches IP. I furthermore recognize that each single vocabulary and grammatical structure that accounting provides for IP could fill an entire compendium of analysis in itself. Yet, because so far no attempt has been made to grasp how intellectual property is being constructed through accounting, I believe it is fully legitimate to provide a snapshot of the most prominent linguistic constructions so to show the disequilibrium between the language of accounting and the business context made possible through IP.

The following assessment of how the two most internationally recognized accounting systems, the USGAAP (U.S. Generally Accepted Accounting Principles) and the IFRS (the International Financial Reporting Standards) allow to communicate about intellectual property is the first of its kind and it is to be hoped that further analysis on that issue will follow. I look at these codes

[19] Rodov, I. & Leliaert, P (2002). FiMIAM: Financial method of intangible assets measurement. *Journal of Intellectual Capital Management*. 3 (3), 323- 336

through a linguist's lens and assess at the example of the differentiation between 'internally generated and acquired intellectual property', the notions of 'goodwill' and 'fair value' how and to which extent it is possible to speak about intellectual property within the existing grammar structure and vocabulary. In doing so I build upon a series of expert review panels that earlier versions of this paper were presented to:

12.3.2009	Oxford Intellectual Property Research Center	Oxford
20.4.2008	University of St. Gallen. Department of Entrepreneurship and Innovation	St. Gallen
14.7.2006	United Nations Department of Economic and Social Affairs. Statistics Division	New York
22.5.2006	5th Intellectual Property Management Gathering, ICMG Gathering	Copenhagen
27.9.2005	European Trendworkshop for Innovation. European Commission	Brussels

Following some basic Delphi methodology, the respective grammar structure and vocabulary analyzed below was presented in a series of oral presentations and comments on online blogs to the interested community and subsequently amended, modified and adjusted, following the feedback received. Most prominently I posted my observations on accounting and intellectual property at the following blogs:

IP Finance Blog	http://ipfinance.blogspot.com/search?q=Ghafele
IP Frontline	http://www.ipfrontline.com/depts/article.asp?id=21861&deptid=3
WIPO SMEs E-Newsletter	http://www.wipo.int/sme/en/documents/ip_accounting.html
Know IP	http://issuu.com/stockholmnetwork/docs/know_ip_34

These triggered some vivid discussions. The cumulative observations of the readers and seminar participants are reflected in the empirical part of this article.

Grammar Structure: Internally generated and acquired IP is treated differently

Currently, internally generated and acquired intellectual property is treated differently. Internally generated intellectual property is immediately expensed, appearing thus as a loss rather than a revenue. These costs are furthermore only reported at one single point in time. Silence thus prevails when one attempts to understand how intellectual property is generated. IP is considered a cost and immediately expensed and equally reported only at one single point in time. Says Caroline Kammerbeek, Head of Communication at Philips IP & Standards:

> ’For a long time Philips IP & Standards had to struggle so not to be seen as a cost center. With all the R&D and investment in patents, the board very much perceived us as a major source of costs, rather than a driver of the bottom line of Philips.’[20]

It may thus be a challenge to trace how IP based research & development, design or brand innovation has been generated, with significant consequences for the financial position, as well as the managerial competences of IP intensive firms. Acquired IP, to the contrary, is recognized at the purchasing price and amortized accordingly (i.e. 40 years under US GAAP).

This grammar structure creates a series on inconsistencies. Consider the case of a film maker. The major value of that firm derives from the ownership of copyrights associated with a movie. Yet, the same copyright portfolio may appear to be worth nothing (if internally generated) or worth a fortune, if associated with a market based transaction. If that film maker decides to license or sell the rights to its film, it will appear to generate revenues literally out of nothing. In practice, this has created certain disadvantages for IP intensive firms. London based ‘Mediafinance Group’ for example reported that banks refused to make a significant loan for a

[20] Personal email exchange, March 27 2009

film project available because the driving factor, copyright, appeared as a loss on the profit and earnings statement.[21]

This underlying rationale is not exclusively reserved to the accounting of IP, but reflects the way accounting in general enables business to communicate its financial position. The double entry accounting system accepted globally underpins the notion that business transactions constitute a unique and identifiable exchange of items that result in equal credits and debits.[22] The various forms of IP commercialization thus clash with a century old linguistic paradigm that derived its primary rationale from the business reality that the Renaissance merchants of Venice faced. Yet, in today's knowledge intensive sectors, driving factors of business are neither limited nor necessarily based on an arm's length transaction between a willing buyer and seller. Value is to a large extent generated through internally held patents, designs, trademarks, copyrights or trade secrets and may not necessarily be directly related to a business transaction.[23] It is the institutional context provided by IP that can offer a firm a unique competitive advantage.

Already in 2005 the World Intellectual Property Organization recognized that the specific grammar structure of current accounting standards appears insufficiently equipped to address the IP dimension of business. WIPO made however with the following restriction:

> 'Clearly, the various challenges associated with determining the value of internally held intellectual property, paired with the inherent volatility associated with the value of some forms of IP can be cited as major reasons why accounting has been reluctant to report on internally generated IP, which is seen as too subjective and risky. Furthermore,

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[21] Example provided by the CEO of Mediafinance at the ACCA, the Association of Chartered Certified Accountants, Roundtable discussion *on the Creative and Innovative Economy.* Held in London on March 12 2009 at the Premises of ACCA.

[22] Gu, F. & Lev, B. (2000). Markets in intangibles: Patent licensing. *Boston University School of Management Working Paper.*

[23] Lev, B. (2000). Communicating Knowledge Capabilities. *Discussion Paper of the Stern School of Business:* New York

> accounting has always been reluctant to anticipate future gains, overstate the value of assets or include assets on the balance sheet whose value is more volatile.'[24]

Yet, reasons for further investigations into that subject matter seem more complex, and particularly more political than this seemingly fact-based argument suggests. Most recently, the initiative of the Australian Government to deepen further research on this issue was not accepted by other members of the IFRS, primarily because certain associations were concerned with tax implications for its members associated with addressing this inconsistency.[25] Nonetheless, the political struggle towards further recognition of IP through accounting is evolving, as the following chart illustrates. More conservative accounting regulations, such as the Austrian and German Commercial Code rule out the recognition of IP, unless acquired.[26] Much of the IP held in a knowledge intensive firm will, therefore hardly be communicated about. At the more progressive end of the scale, we find jurisdictions, such as the US GAAP that allow for a more differentiated communication with respect to acquired intellectual property.

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[24] Ghafele, R. (2005). Getting a Grip on Accounting and Intellectual Property. *WIPO SME e Newsletter*. http://www.wipo.int/sme

[25] Informal conversation with ACCA (the Association of Chartered Certified Accountants) officials, 2.6.2009, London at the premises of ACCA.

[26] Article 197 paragraph 2 of the Austrian Commercial Code

Trend towards accounting for Intellectual Property

— Comparison of different Accounting Standards —

	German HGB	IAS/IFRS	US-GAAP
Recognition of IP	• Forbidden: 248/2 HGB • Exception: acquired IP	• Recognition of IP if IAS criteria are met: IAS 38	• Recognition of IP: Novel approach under FAS 141 &142
Acquired IP	• Recognition of acquired IP: 255/4 HGB	• Recognition of acquired IP if IAS criteria are met: IAS 38	• Purchase Price distributed across all items: FAS 141 • Impairment Test of Goodwill: FAS 142
Internally Generated IP	• Immediately expensed	• Immediately expensed	• Immediately expensed

Trend towards the explicit recognition of IP increases

'Goodwill' – a vague Vocabulary

For centuries, goodwill has been the only vocabulary to talk about intellectual property. The terminology is however in and by itself strongly misleading with respect to IP. Within the accounting profession there is a vivid discussion whether goodwill can be treated in mere residual terms.[27] This is associated with complex discussions over the conceptual dominance of the income statement versus the balance sheet.[28] Recent decades have seen an emphasis on the income statement as the driving statement with a significant concern for appropriately matched costs and revenues, and a reluctance to capitalize IP costs against uncertain future revenues. The increasing shift towards a balance sheet (Hicksian) notion of the income seen in increasingly wide ranging 'market to market' accounting re-emphasizes the need to capture 'well-offness' deriving from intangible sources. For a comprehensive discussion of the effects of the recent

[27] Johnson, L. & K. Petrone (1998). Is Goodwill an Asset? *Accounting Horizons.* 12 (3), 292-303
[28] Schuetze, W. (1993) What is an asset? *Accounting Horizons* 8 (1), 69-75

crisis on such accounting see Laux and Leux (2009).[29] This only sketches the contours of a deep and extensive set of debates, yet with respect to intellectual property it is important to note that the concept of goodwill is rather vague, since anything that can justify a higher price for a firm may be lumped together under goodwill. For market participants, be they managers or investors, this wording makes it really hard to compare the goodwill of various companies or understand how various forms of IP relate to business performance. Because market participants depend on language to communicate to each other and to understand their own position in the market, the vocabulary of Goodwill has made various strategic and financial IP- based operations a challenge. Because goodwill lumps together anything ranging from a customer base to a trademark and because each firm summarizes different intangibles under the term goodwill, it is a real challenge to make educated business decisions based on accounting statements.

So far, only in one specific business transaction, Mergers & Acquisitions, the terminology of goodwill has been redefined, in one internationally recognized jurisdiction, the USGAAP. FAS (Financial Accounting Standards) 141 & 142 of the USGAAP require a more explicit understanding of the role IP has for business. Rather than simply adding the goodwill of two firms, 'goodwill of firm A + goodwill of firm B= goodwill of firm C', technically described as the 'pooling of interest for business combinations' method, merging firms are asked to identify each single acquired asset and account for it at its fair value. Subsequently, the overall purchase price must be distributed across all business items qualifying as assets. FAS 142 abolished the amortization of goodwill. Firms are asked to review on a yearly basis acquired IP and conduct an 'impairment test.' In the context of M&As the USGAAP has thus been able to recognize the

[29] Laux, C. & Leuz, C. (2009). The Crisis of fair-value accounting: Making sense of the recent debate. *Accounting, Organizations & Society* 34 (6-7), 826-834
Email from Accounting Professor Christopher Chapman, 10.11.2009

explicit value of intellectual property and attribute associate a specific quantitative statement to a specific form of intellectual property. It remains to be seen to which extent the IFRS, which asks for the amortization of goodwill over a period of twenty years, will be able to adapt to the steps taken under the USGAAP.[30]

'Intangible Assets' and 'Fair Value' – Vocabulary that acts as Gatekeeper

Coca Cola has kept the trade secret over its syrup since 1891. Paired with successful trademark management, the company's trade secret has made up for most of its profits since the 19th century. Yet, under current definitions of intangible assets, Coca Cola's trade secret does not qualify as an intangible asset. While in economic terms, intellectual property can be classified as an intangible asset, current accounting standards only allow certain forms of intellectual property as an intangible asset.

> States IAS 38: 'An intangible asset must be identifiable, controlled by an enterprise as result of past events and should generate future economic benefits for the enterprise.'[31]

A highly significant aspect of this formal definition is that ownership is not the issue, rather control is. Thus the nature of assets brought about through finance leases is a decisive factor. This means that only intellectual property that is associated with direct revenue streams, such as a licensing agreement, qualifies as an intangible asset. That means that even progressive judicial reforms, such as the introduction of FAS 141 & 142 only apply to such form of IP. Internally held IP, IP held for defensive purposes, embedded IP or contextual IP does not qualify as an intangible asset and therefore must not be given further consideration in accounting. Defining only IP that has direct revenue streams as intangible assets means mentioning only a fraction of

[30] International Accounting Standards 38, London 1998, http://www.iasplus.com/standard/ias38.htm
FASB (Financial Accounting Standards Board): Summary of Statement Nr.142 'Goodwill and other Intangible Assets', http://www.fasb.org/st/summary/stsum142.shtml

[31] International Accounting Standards 38, London 1998, http://www.iasplus.com/standard/ias38.htm

IP based business strategies, while keeping silent about the value added by much of a company's other IP.[32]

The vocabulary 'intangible asset' triggers the phrase of the 'gap between the market and the book value', which can be seen as yet another expression of a lack of adequate means to communicate about intellectual property. While a range of authors studied and documented the increasing gap between the market and the book value[33], the observation in and by itself provides little information on IP related business performance. Firstly the market value is based on information given in the books (thus it is a circular statement) and secondly the market value reflects a common perception of the market of a company, but may say little on how a firm leverages IP for profits.[34] When it comes to the concern over book to market ratios, even a complete inclusion of intangible assets would not remove the gap completely, since the gap is there because of the nature of any asset (tangible or intangible) as a subset of an entity which may have an overall market value.[35] If anything, the sentence 'gap between the market and the book value' shows how ill equipped the language of accounting is to deal with intellectual property.

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[32] Sullivan, P. H (2000). Value Driven Intellectual Capital. How to Convert Intangible Corporate Assets into Market Value. *John Wiley:* New York

[33] Guthrie, J. (2001). The Management, measurement and the reporting of intellectual capital. *Journal of Intellectual Capital.* 4 (4), 429- 440; Lev, B. & Sougiannis, T. (1999). Penetrating the book-to-market black box: The R&D effect. *Journal of Business, Finance and Accounting*. 26, 419- 449; Reilly, R. & Schweihs, R.(1998). *Valuing Intangible Assets.* McGraw-Hill Professional: New Jersey; Razgaitis, R. (2002). Technology valuation. In: Goldscheider, R. (ed.): *Licensing Best Practices.* John Wiley: New York, 165-180

[34] Lev, B. & Zarowin, P. (1999) The Boundaries of Financial Reporting and How to Extend Them. *Journal of Accounting Research*. 37 (3), 220-240

[35] Email from Accounting Professor Christopher Chapman, 10.11.2009

To determine the value of IP accounting refers to the notion of 'fair value'. Fair value is defined as 'the amount at which an asset could be bought or sold in a current transaction between willing parties, other than in a liquidation.'[36]

The notion of 'fair value' is underpinned by a benchmark approach, which is not the most adept way to reflect the value IP has to individual business performance. Referring to the resource based view, one can illustrate that the 'value in use' of IP can range from providing a firm with the right to exclude to offering new opportunities of trading its products and services. Laux and Leuz (2009) offer a compelling discussion to which extent fair value accounting fits its purpose, yet no mention can be found of intellectual property.[37] Rescher furthermore (1969) argues that value is not a feature inherent in an item. Rather, items may have value because they are in some way desirable to someone.[38] The concept of value therefore comprises some sort of utilitarian purpose. Crosby (1997) again states that the notion of value is inherently benefit oriented, reflecting what a firm considers a desired output.[39] In many instances it is the winning interplay of various IP protected business segments that help a firm succeed in the market. Thus, there is no 'one size fits all' approach to determine the value of IP. Because by nature IP is knowledge and creativity, context, background and business strategy are decisive drivers of value. Furthermore, markets for IP are opaque and are not well developed. In many instances, IP owned by one firm could be of value to another firm, yet, because of a lack of adequately developed

[36] SEC (Securities and Exchange Commission): Strengthening Financial Markets: Do Investors Have The Information They Need? A Report by the SEC Special Task Force. 2001 http://www.mba.yale.edu/news_events/sec_exec_sum.htm
[37] Laux, C. & Leuz, C. (2009). The Crisis of fair-value accounting: Making sense of the recent debate. *Accounting, Organizations & Society* 34 (6-7), 826-834
[38] Rescher, N. (1969). *Introduction to Value Theory.* Prentice-Hall: New Jersey
[39] Crosby, A. (1997). *The Measure of Reality: Quantification and Western Society 1250- 1600.* Cambridge University Press: Cambridge

trading platforms for IP, theses exchanges don't take place. Much IP therefore sits gathering the dust. *This was already recognized by the Basel Committee on Banking Supervision, as early as in 2000:*

> 'In the absence of active markets it will be difficult to obtain or calculate a reliable fair value for certain non-marketable financial instruments held at cost...it concluded that it does not believe the time is right to proscribe full fair value accounting... for all financial assets and liabilities.'[40]

Finally, innovation is by its very nature not suitable for a benchmark. An innovative product or service that can be compared to products or services or services already in use does not deserve to be called 'innovative.' So far, accounting seems to have taken little steps in valuing intellectual property for what it is, rather than pressing it in a tangible assets' based paradigm that does not correspond its features.

The Impact of Linguistic Accounting Gaps on Business

Because business is a social practice that is constructed, created and maintained through language, the linguistic dis-orders provided by accounting for intellectual property, create all sorts of shortcomings and confusions when dealing with IP. Most prominently, the management of IP, but also the potential to attract funding on the basis of IP may be hampered by the limited way in which accounting addresses intellectual property. The disqualification of most forms of IP through very stringent criteria associated with the terminology of 'intangible asset' means that

[40] Basel Committee on Banking Supervision, (2000). *Report to G7 Finance Ministers and Central Bank Governors on International Accounting Standards*. Basel http://www.iasplus.com/resource/basel1.pdf, quoted from Ghafele, R. (2005). Getting a Grip on Accounting and Intellectual Property. *WIPO SME e Newsletter*. http://www.wipo.int/sme

a firm's earnings as well as book value of equity are ill reflected.[41] Again, the following illustrations may be read as a 'pars pro toto' of the entire spectrum of business behavior hampered by this form of language, yet serve as a solid illustration how the language of accounting impacts business practice with respect to IP.

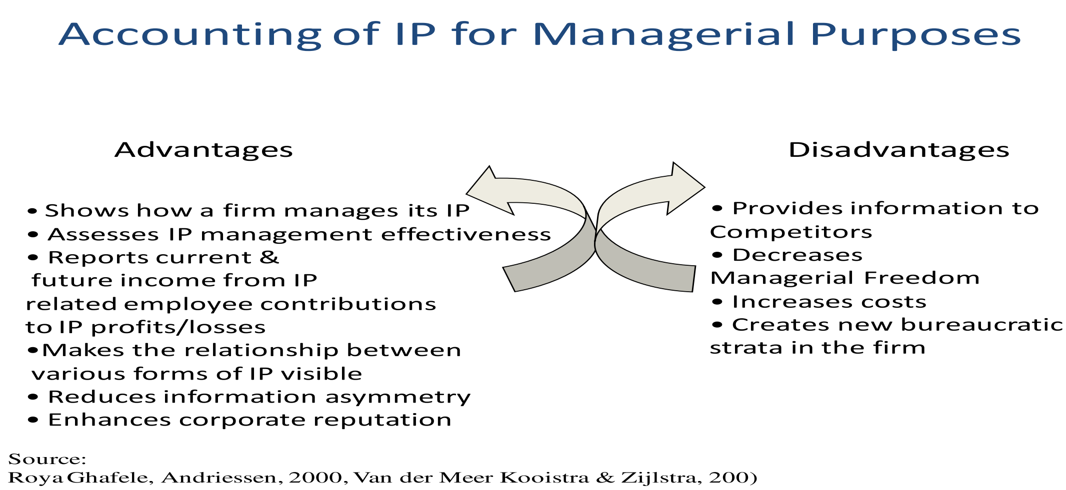
Can you manage what you cannot measure?

While Stewart (2001) argues that 'you can not manage what you can not measure is one of the oldest clichés in management since companies have always managed things -people, morale, strategy- that are essentially unmeasured,' he ignores the overall social function of accounting, which shapes a very specific understanding of a business.[42] The management of a company becomes a much greater challenge since adequate information on all the assets and liabilities of a company are not available. The internal management of IP is seriously hampered since its value is not made explicit through accounting. Since the bulk of the space of accounting statements is devoted to tangibles, managing intellectual property becomes a very intangible undertaking. Managerial efforts may at best be indirectly reflected, but do not become directly visible. The lack of visibility of IP through accounting systems makes it very difficult for management to shift the focus to developing adequate IP strategies. After all, bottom line results need to be delivered, yet in the case of intellectual property these will hardly find any reflection in the officially recognized language of business. The chart below illustrates the various advantages

[41] Caninbano, L, Garca-Ayuso, M. & Sanchez, P. (2000). Accounting for Intangibles: A Literature Review. *Journal of Accounting Literature*. 19, 23-40; Lev, B., Sarath, B. & Sougiannis, T.: R&D Reporting Biases and Their Consequences. New York University 1999, http://pages.stern.nyu.edu/~blev/research.html; Brown, S, Lo K. & Lys, T. (1999). Use of R2 in Accounting and Research: Measuring Changes in Value Relevance over the Last Four Decades. *Journal of Accounting Economics*. 28 (2), 18-36

[42] Stewart, T. (2001). *The Wealth of Knowledge: Intellectual Capital and the 21st Century*. Organization Currency: New York

and disadvantages of adequately reporting on IP form managerial purposes.[43] A study conducted by the management consulting firm McKinsey & Company found that in the US companies create on average not more than 0.5% of their operating income from the licensing of IP. McKinsey, however, calculates that firms could earn up to 10% of their revenues from the sale or licensing of IP.[44] Equally, Rivette and Kline (2001) estimate that 67% of US companies own IP that is in no way commercially exploited, underlining the gravity of inadequate communication.[45]



Can you finance what you cannot measure?

Lev (2000) has proven that the price of a technology stock is positively related to the firm's efforts to announce licensing agreements, royalty revenues, patenting activities and viable

[43] Andriessen, D. (2000). Weightless wealth: four modifications to standard IC theory. *Journal of Intellectual Capital.* 2 (3), 204- 214; Van der Meer-Kooistra, J.& Zijlstra, S.M. (2001): Reporting on intellectual capital. *Accounting, Auditing & Accountability Journal*. 14 (4), 456- 476

[44] Elton, J., Shah, B. & Voyzey, J (2002). Intellectual Property: Partnering for Profit. *McKinsey Quarterly*. 4, http://www.mckinseyquarterly.com/article_page.asp?ar=1248&L2=21&L3=35&srid=9&gp=1

[45] Rivette, K. G.& Kline, D. (2000). *Rembrandts in the Attic. Unlocking the Hidden Value of Patents.* Harvard Business School Press: Cambridge MA

technological developments.[46] Since IP is literally absent from the accounting, reporting and managerial discourse, investors find it difficult to access information on how a firm's IP portfolio relates to its income streams. For this reason, risk rates associated with investments in knowledge-intensive sectors may not be adequately assessed and a higher premium may be charged when funding is provided on the basis of IP. Since investors ask for a premium in deals where risk rates can not be fully determined, the costs of borrowing money increase for the IP intensive creditor.[47] Clearly, it is a risky undertaking to be investing in innovation, yet risk rates are multiplied by hazy accounting standards. Abody and Lev (2000) found that insider gains in firms with heavy R&D, were more substantial than those with fewer R&D activities. Since IP and its underlying R&D is poorly disclosed, insiders can easily manipulate information about planned changes in R&D budgets. Within that context Lev furthermore argues that the volatility of technology stocks is further nourished by accounting standards that make it hard for investors to track how innovation relates to business.[48] The chart below illustrates the various advantages and disadvantages of adequately reporting on IP form managerial purposes.[49] Finally, the overall lack of awareness on leveraging IP as an asset class is furthermore stipulated by current accounting standards. IP securitizations, such as the securitization of the copyrights of Annie Leibovitz's photographs or David Bowie's songs are all considered 'off book' deals.

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[46] Lev, B. (2000). Communicating Knowledge Capabilities. *Discussion Paper of the Stern School of Business:* New York

[47] Ghafele, R. (2005). Getting a Grip on Accounting and Intellectual Property. *WIPO SME e Newsletter*. http://www.wipo.int/sme

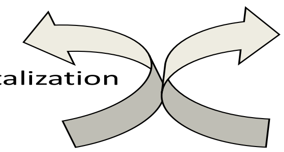
[48] Abody, D. & Lev, B. (2000). The value relevance of intangibles: The case of software capitalization. *Journal of Accounting Research.* 14, 245- 260

[49] Andriessen, D. (2000). Weightless wealth: four modifications to standard IC theory. *Journal of Intellectual Capital.* 2 (3), 204- 214; Van der Meer-Kooistra, J.& Zijlstra, S.M. (2001): Reporting on intellectual capital. *Accounting, Auditing & Accountability Journal*. 14 (4), 456- 476

Accounting of IP for Financial Purposes

Advantages

- Increases Transparency
Leading to weighted costs of Capital & higher market capitalization
- Increases Trustworthiness
Among employees & s stakeholders
- Supports long term vision
Through preparation of a long term perspective
- Acts as a Marketing tool
Since it enhances reputation & adjusts stock prices



Disadvantages

- Increases Costs
- Increases auditing complexity
- Creates additional financial risks
- Creates further tax liabilities

Source:
Roya Ghafele,, Andriessen, 2000, Van der Meer Kooistra & Zijlstra, 200) 1

Beauty lies in the Eye of the Beholder

Both from an academic and empirical point of view accounting has to a certain extent sought to capture how accounting's *specific* linguistic representation impacts business. From an academic point of view Hines (1988), Macintosh (2009) and Macintosh, Shearer, Thornton & Welker (2000) discuss how accounting constructs a specific business reality; yet with no specific reference to IP.[50]

In practice, various international bodies, aiming for an internationalization of current accounting standards have recognized that 'there may be a gap between the kind of information currently

[50] Hines, R.D. (1988). Financial Accounting: In Communicating Reality, we construct reality. *Accounting, Organizations & Society* 13, 251-261; Macintosh, N. (2009). Accounting and the truth of earnings reports : philosophical considerations. *European Accounting Review* 18 (1), 141-175; Macintosh N., Shearer T., Thornton D., Welker M. (2000). Accounting as simulacrum and hyperreality: perspectives on income and capital. *Accounting, Organizations and Society* 25 (1), 13-50

provided on intangibles (not intellectual property explicitly) and the kind of information needed to foster markets for innovation.'[51]

> Already in 2001 the FASB for example stated that: 'Companies are encouraged to continue improving their business reporting and to experiment with types of information disclosed and the manner by which it is disclosed.'[52]

Most prominently, the Sarbanes Oxley Act passed by U.S. Congress in 2002 aimed to overcome reporting scandals such as those of Enron or Worldcom. With respect to intellectual property the act asks publicly traded companies to increase their reporting on internal control structures and procedures for financial reporting. IP that has a material effect on financial performance, needs to be disclosed.[53] Thus, valuable intangibles, such as trademarks or domain names need to be disclosed. The act furthermore asks to identify, measure and disclose risks associated with IP, such as a potential litigation or expiration of a patent. In doing so, it does however not go further than FAS 141 &142. Thus the Act asks for a documentation of the 'fair value' and not the 'value in use'. It also adheres to the generally accepted definitions of 'intangibles.'[54]

Core to accounting's reluctance to fully embrace the concept of intellectual property are certainly issues surrounding the adequate valuation of various forms of proprietary knowledge. There is no way to introduce any form of valuation method that goes against the underlying principles of

[51] FASB (Financial Accounting Standards Board) (2001). *Improving Business Reporting: Insight into Enhancing Voluntary Disclosures*, Steering Committee Report. Business Reporting Research Project. http://www.fasb.org/brrp/brrp2.shtml

[52] FASB (Financial Accounting Standards Board) (2001). *Business and Financial Reporting, Challenges from the New Economy*. Special Report. Financial Accounting Series. http://www.fasb.org/articles&reports/new_economy.shtml

[53] Kote,l & Drehwing, E. (2005). *The Interplay between IP and Sarbanes-Oxley – Outline & Background Material.* From PLI's Course Handbook. Handling IP Issues in Business Transactions 2005 # 6056, http://www.darbylaw.com/Files/tbl_s31Publications/FileUpload137/1864/pli.pdf

[54] Gallagher & Dawsey Co. *Wading Through The Intellectual Property Requirements Of The Sarbanes-Oxley Act Of 2002*. http://www.invention-protection.com/ip/publications/docs/Wading_Through_The_Intellectual_Property_Requirements_Of_The_Sarbanes_Oxley_Act_Of_2002.htm

accounting. Yet, it is both insufficient and unsatisfactory to assume that for that very reason the current context cannot be changed or modified. With respect to various forms of intellectual property certain valuation techniques have proven to be useful instruments. Valuing rights to exclude is difficult, but it can be done using a variation of the Black-Scholes equation for pricing stock options.[55] No doubt, more research is needed to better understand the dynamics of intellectual property in business performance so to better grasp how to account for it.

Questions that would deserve further empirical underpinning are issues such as whether market participants do find a way to 'communicate around' the lingua franca of accounting so to communicate the role IP plays in business or if to the contrary, market participants themselves are so strongly embedded in the linguistic reality as designed by accounting that they cannot escape the overarching discourse of silence. In that case we would see a circular reinforcement of the current situation. It would also be worthwhile exploring empirically to which extent FAS 141 & 142 shaped a different awareness on IP among market participants and whether we can observe some spillovers to other business situations. From an innovation policy point of view one may also ask what alternative public policy measures may work to foster the financing of innovation and overcome existing reporting asymmetries with respect to intellectual property. The range of questions worthwhile deepening is wide; in that sense this paper offers nothing, but a preliminary outline, a scratch on the surface of the type of reporting dilemma we face in the knowledge-based economy. Social more than technical by nature, the lack of awareness on IP reveals the blind spot of a primarily modernist business culture. Apparently, what is needed is more than mathematics: A business culture that deals with IP in the same 'natural' way as it does

[55] Denton, F. & Heald, P. (2003). Random Walks, Non-Cooperation Games, and the Complex Mathematics of Patent Pricing, *Rutgers Law Review*. 55, 1175 - 1190

with machinery and other tangible items. It is self telling that a paper illustrating the various conceptual differences between accounting and intellectual property is very much the first of its kind, suggesting that bringing the intellectual property community closer to the accounting community would benefit the current state of the play. Current approaches lead to distortions in markets for intellectual property, which can only be counteracted by making the invisible visible, the intangible tangible and the unspoken outspoken. If accounting is to remain relevant, it needs to capture the behavioral dynamics of intellectual property, assess the impact of IP on organizational economics[56] and tell a more comprehensive story on the relationship between the past and the future by finding ways to systematically identify and map all of a firm's assets and liabilities, be they tangible or intangible in nature.

[56] Kannan, G. & Aulbur, W.: Intellectual capital- measurement effectiveness. *Journal of Intellectual Capital Management*. 5 (3), 389- 413