

## **Technopedagogies of Mass-Individualization: Correspondence Education in the Mid 20<sup>th</sup> Century**

Francis Lee

### *Abstract*

This article is about how technology and pedagogy is co-produced in correspondence education. Theoretically the article departs from post-foucauldian studies of materiality, and uses the concept of *dispositif* to construct a framework which is inspired by Foucault, Deleuze, and Actor-Network Theory.

Empirically, the article treats how the tension between educational thought on progressive individualism, scientific thinking, and automation was co-produced with technical artifacts in correspondence education during the 1930's, 40's and 50's.

The author shows how this co-production led to a specific mode of organizing correspondence education that tried to accomplish individualization on an industrial basis, and that this mass-individualization built on a pedagogy of testing, recording, classification, and differentiation.

In conclusion the article discusses how mass-individualization can be seen as an epitome of educational modernity's aspiration for equality of educational opportunity and progressive thoughts on individually tailored education. Furthermore the author shows that the *dispositif* of mass-individualization is closely associated to today's educational technology, and how today's educational technology embodies the tension in mass-individualization.

### *Introduction*

Material artifacts embody and change both pedagogical theory as well as educational practice: they enable the testing of students' knowledge – producing particular

knowledges about student intelligence, talent, or motivation; make possible seating arrangements – reflecting specific paradigms of educational theory; or make possible mediated expositions of school subjects – actually transmitting knowledges about education. Material artifacts are crucial for how education is organized, practiced and understood.

This article is interested in technologies as enablers of education, but also as producers of an educational situation with particular pedagogical and didactical discourses on students, learning, and education. Consequently, the article is interested in how technology is co-produced with pedagogy. The interest in the interminglings of knowledge and expertise with material artifacts and technology stems from Foucault's brief engagement with the material practices of classification, normalization, and observation in education.<sup>1</sup> On a more mundane level the interest stems from the increasing interest in computerized educational technology today, which promises to make education cheaper, more efficient, more individual, freer, or simply better.

The purpose of this article is to understand how the relations between technology and pedagogy produced a certain mode of organizing correspondence education that led to, what I have chosen to call, mass-individualization.<sup>2</sup> The concept of mass-individualization captures the basic tension that exists in correspondence education between the ambition to industrialize and streamline education (through a machinery consisting of teachers, printing presses, the postal system, and students) and the progressive ambition to individualize and adapt education to the individual student's talents, aptitudes and needs.<sup>3</sup>

These questions become particularly visible in distance education, which always depends on technology for the educational interactions, and especially historically in

correspondence education where the veil of technology hype is thin. This article is about the co-production of knowledge and technology in correspondence education in the early 20<sup>th</sup> century.

### *Theoretical Framework*

Taking the interaction between technology and pedagogy as the departure point for analyzing education generates a number of crucial questions about how pedagogical knowledges are imprinted in the material artifacts of education, but also how the material artifacts feed back into our understanding of intelligence, learning or education. Consequently, the article stresses that an analysis of the practices and knowledges of pedagogy cannot be separated from technology. Thus, the article moves in a co-productive idiom that treats technology and pedagogy as crucially interwoven entities, and introduces the concept of *technopedagogy* to stress this interrelation.<sup>4</sup> The concept *technopedagogy* stresses that technology is crucially fused with pedagogy: the prescribing powers of technology impressing certain modes of organizing education, and pedagogy making a decisive impact on how practice is shaped.

This article situates itself in a post-Foucauldian strand of research that has taken an interest in the interaction between technology and knowledge in education, thus it is located in a tradition of ‘material semiotics’ or ‘heterogeneous construction’.<sup>5</sup> In this strand of research there have only been a few works taking an interest in the interaction between knowledge, technology, and education. These works have focused on the classroom’s technology as source for analyzing discourse, or technology’s role for the emergence of child development psychology.<sup>6</sup> Within science and technology studies (STS) the interest in the interactions between knowledge and technology has been much

larger: for example in laboratory studies, studies of subjectivities, health care, or standards.<sup>7</sup>

To operationalize an analysis of the co-production of educational discourse and educational technology this article employs a materialist analysis of social apparatuses, *dispositifs*, which has been inspired by Michel Foucault and Gilles Deleuze.<sup>8</sup>

A dispositif is ‘a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. [...] The [dispositif] itself is the system of relations that can be established between these elements.’<sup>9</sup> In sum it can be said to be the institutionalized (routinized and ritualized) way something has been organized at a particular historic and geographic moment in order to control and manage different aspects of society.<sup>10</sup>

The concept of dispositif stresses the discursive as well as non-discursive aspects of practice and the varied processes and relations by which particular practices are constituted.<sup>11</sup> By employing the concept of dispositif the article aims to connect an analysis of thought or discourse with an analysis of material semiotics, which means that it analyzes the relationality of all things.<sup>12</sup> Consequently, an analysis of dispositifs is materialist in that it focuses on the relations between particular modes of ordering material practice and certain ways of thinking and knowing.<sup>13</sup>

Following Deleuze, this article analyzes dispositifs in four discrete but intertwined levels:<sup>14</sup>

The first level addresses the specific *forms of knowing* that make intelligible the dispositif. In this, questions are posed about different forms of knowledge and expertise that inform, produce, and modify the dispositif, such as medicine, pedagogy,

psychology, or social work. The knowledge and expertise help define the objects of the dispositifs, codify suitable ways of handling the objects, and define the proper institutional location of knowledge and expertise.<sup>15</sup>

The second level directs our attention to the *grid of perception* of the dispositif, and seeks to understand the constitution of objects of knowledge through techniques of perception and observation. An analysis of the grid of perception makes possible an understanding of how the techniques of observation constitute the objects of thought. In education this often entails different ways of measuring and controlling learning.

The third level directs our attention to the possible *subject positions* that are constructed in the dispositif: the collective or individual subjectivities that are produced in relation to the grid of perception, forms of knowledge, and relations of power and force.<sup>16</sup> Thus, the dispositif defines suitable ways of living, desirable characteristics, and modes of governing oneself. In education this can entail identities of citizenship, ideals of human capital, as well as positions of intelligence or class.

The fourth level pursues the aspects of *power*, or the actions, techniques or technologies that impose limits and create possibilities for action. This fourth level is crucial, as the lines of power or force that crisscross the dispositif link the grid of perception, forms of knowing, and the subject positions. The analysis of the fourth level of the dispositif is operationalized through the use of Actor-Network Theory's concept of *translation*.<sup>17</sup> Translation emphasizes the role of technology for our thought, perception and practice, and allows the article to move closer to the specific lines of force that the non-human elements produce between the grid of perception, forms of knowing, and subject positions. The concepts that will be used for this purpose are *inscription, delegation, prescription, and folding of time and space*. Inscription is used

to describe the translation from ephemeral knowledge to a more durable form; delegation to describe the process of transferring a role to a non-human actor; prescription for analyzing where material things make possible at the same time as they constrain action; folding of time and space is used to describe the process where non-human elements make knowledge and action work over distance in time and space.<sup>18</sup>

### *Material*

To investigate the co-production of technology and pedagogy of distance education this article uses the proceedings of two conferences on correspondence education and a pre-conference proceeding from the same series of conferences. The analyzed conference proceedings are part of a series of international conferences, the International Conference for Correspondence Education (ICCE) that started in Victoria, Canada in 1938 and run until today.

The participants and members of the ICCE included organizations and individuals who were interested in improving correspondence education, and the primary objective of the ICCE conferences was to improve correspondence education through facilitating exchanges between correspondence educators from different countries.<sup>19</sup> The first six conferences were extremely dominated by Anglo-Saxons, with 91-97% of the delegates coming from the US or Canada, except for the third conference, held in Christchurch, New Zealand, where 89% of the delegates came from Australia and New Zealand.<sup>20</sup>

The ICCE conferences were proposed in 1936 by J. W. Gibson – the director of high school correspondence instruction for British Columbia, Canada – at the US National Conference on Supervised Correspondence Study (CSCS) at Columbia University in New York. The idea was supported by the chair of the CSCS conference, Rex Haight from Montana. Haight served as the president of the first ICCE conference and Gibson

as the chairman of the program committee with assistance from Earl T. Platt, the director of supervised correspondence study at the extension division of the University of Nebraska.<sup>21</sup>

The conference proceedings are comprised of complete transcribed addresses, as well as transcribed discussion sessions on varying topics relating to correspondence education. These transcribed discussions have been particularly valuable for understanding distance education practice as the discussions were organized topically for the exchange of ideas on educational practice, and provided a window both into how educators organized their correspondence schools and how they understood this organization.

In this article I draw on an analysis of the conference proceedings from the first and the third conference, which were held in 1938 in Victoria, B.C., Canada and 1950 in Christchurch, New Zealand, as well as the pre-conference bulletin for the second conference that was held in Lincoln, Nebraska in 1948.<sup>22</sup> The three studied conferences are important for understanding a period when correspondence education had its largest spread, and gives a clear picture of the ideas that were formative of distance education at the time.

In addition to the conference proceedings, a large quantity of correspondence material, brochures, and pamphlets from the United States, Canada, New Zealand, and Australia, available in the archive of the 1957 Swedish National Committee on Correspondence Education, have been scrutinized.<sup>23</sup> This archive has been valuable as it retains a large collection (19 volumes) of correspondence course materials that were collected through contacts established at the ICCE conference. The analysis of the correspondence course material, brochures, and pamphlets has been used to validate the

interpretation of the discourse on educational practice at the conferences, thus serving as a means of data triangulation.

What can be found in the above outlined materials are traces of practices from many different locations under many different circumstances, and consequently every analysis of the conferences will be a condensation of the complex arguments that take place there. Regardless of the multifariousness, these dispositifs are orderings of both language and action that speak of a common way of seeing, thinking, and acting.

*Educational Thought Around Correspondence Education: Progressive Individualism, Individual Differences & Industrialization of Education*

In order to understand educational thought surrounding correspondence education – the first level of the dispositif – we must be aware of educational thinking of the first half of the 20<sup>th</sup> century. At this time educational thought was related to political programs that aimed at refining and developing the population; the formation of scientific methods of managing the population like statistics, the observation of children, mental measurement and child development psychology; but also to progressive ideas that saw education as a possibility for social change.<sup>24</sup>

Progressive thought had had a great influence on society at the time, and ‘tried to reform American democracy to meet the new challenges of industrialism, urbanism, and statism’.<sup>25</sup> One of the central arguments of the progressive educationists was that education should be organized on the interests of the children and their experiences, rather than on subject matters, or disciplinary blocks.<sup>26</sup>

The most important portal figure for the progressive movement, John Dewey, strove to emancipate education so that the abilities and talents of each child could develop in full and every individual’s talents and resources could contribute to the development of

a successful society and the common good.<sup>27</sup> In the progressive discourse it was argued that the individual's success would be determined by his/her talents and accomplishments rather than social status, thus connecting progressive thought with meritocratic ideals.<sup>28</sup>

As much as the progressives were focused on reforming education in a democratic direction, there was a great deal of respect for science, expertise and statistics within the progressive movement. Science and numbers were used as a way to organize, define, and master social change and provided direction and method for social reform programs.<sup>29</sup> In education scientific thinking through the psychology of individual differences introduced statistical methods and measurements that sorted children into classes based on measurements of subnormal and supernormal intelligence, and were closely connected to bureaucratic needs of classifying the student. The most important of these technologies being the IQ test, which combined normal distribution curve with developmental psychology.<sup>30</sup>

The dilemma for this progressive philosophy was to 'translate an expansive liberal philosophy into a method of mass instruction which required organization, direction, and systematization.'<sup>31</sup> Several educational technopedagogies evolved in conjunction with the progressive call for the democratization of education, the widening of educational access, and the adaption of education to the individual. One answer to this problematisation was correspondence education which was to provide a semi-automated and individually tailored system for instruction that reached across barriers of time and space to include rural children, working adults, members of the armed forces, or the unemployed.

Apart from progressive individualistic thought, a discourse of automating education also exerted a strong influence on correspondence education, which was materially articulated in the division of labor between different specialized teachers, archival clerks, mailing clerks, and secretaries that many large correspondence schools had instituted. A part of the industrialization of correspondence education was the application of mass produced model answers and form letters, which were to automate the teacher's composition of individual corrections. Occasionally the belief in automation went so far that it was argued that encouragement and guidance could be transferred from teachers to the correspondence course.<sup>32</sup> In many cases, especially in the commercial schools, when the Fordistic ideal was taken to the logical conclusion, teachers were employed on a piece work basis and the correspondence school largely became a center of administration, coordination, and logistics that funneled correspondence letters between teachers and students, coordinated the work, recorded the grading of pupils, and marketed the school products.<sup>33</sup>

As I show below the co-production of progressive individualism, the psychology of individual differences, and automation of education with the devices of correspondence education developed into specific techniques and technologies that tried to bridge the inherent tensions in a mass-individualized correspondence education.

#### *The Organization of Correspondence Education*

During the studied period correspondence education was most commonly organized through a systematic flow of educational materials between the student and one or several teachers. Books, comments, personal letters, and assignments flowed back and forth between the correspondence school and the student's home.<sup>34</sup> In the majority of cases a study unit was concluded with the submission of a test, or 'required response'

that was corrected and returned with a new study unit. Thus, new knowledge was imparted using books and/or technically reproduced study units, while the teacher taught through the corrections on these required responses making correspondence education resemble an assembly line.<sup>35</sup> Correspondence education also entailed a higher dependence on mass produced course materials, like the pre-printed model answer or the study unit, which tried to automate teaching through delegating the teaching actions and knowledge to technology.<sup>36</sup>

This was an attempt to standardize and streamline correspondence education, and was argued to be valuable for several reasons. The model answers were argued to relieve the teachers from the drudgery of corrections, and enabled efficiency and mass teaching on an individual level: they were likened to the blackboard that enabled the teacher to communicate with many students, but were not uncontroversial as they occasionally were seen as stereotyped and too much like a cross-word puzzle.<sup>37</sup>

#### *The Written Test as a Technology of Perception, Thought, and Action*

Two of the most important technologies in correspondence education were the test and its attached required response. In correspondence education the students were evaluated through the constant required responses on a variety of tests: essays, intelligence tests, study habit questionnaires, achievement tests, ‘standardized tests of attainment,’ examinations, ‘Lets Get Acquainted’ tests taken at enrollment, and reading questionnaires.<sup>38</sup> A typical correspondence student was tested at enrollment for his/her specific level, in every exchange with the teacher, as well as in examinations at various intervals throughout the course. The tests served several essential functions in correspondence education: they were used for promoting students, as a method of

teaching, a means of measuring learning, a preparation for outside examinations, and as an evaluation of course efficiency and school results.<sup>39</sup>

The constant testing of students' abilities was believed to produce a highly sensitive diagnostic instrument that would make it possible to correct and guide the student. It was argued that failures and successes needed to be collected, analyzed and diagnosed to create the most favorable learning situation for the student. In the summary of the discussion session on *The Preparation of Correspondence Courses* in the first ICCE conference, which was presented by Fred T. Wilhelms, Director of Secondary Course Construction, Extension Division, University of Nebraska it was stated that:

‘Only such materials should be submitted for evaluation ... which will enable the correspondence instructor to diagnose the causes of any failures and prescribe *corrective measures*. ... Great care and ingenuity should be exercised to make the *total of the pupil responses* on any unit into a comprehensive and *highly sensitive diagnostic instrument* which will give the correspondence instructor a real basis for teaching.’<sup>40</sup>

As assessment was delegated to the test, the test became the basis for pedagogical diagnosis which in turn led to corrective action on the student.

I argue that the test was an important node in the co-production of pedagogy and technology. The test was closely connected to progressive thoughts in that each educational exchange between student and teacher were individual, which was stressed as one of the main advantages of correspondence education.<sup>41</sup> Furthermore, the test was closely related to thoughts on industrialization through the changes it brought about in the teacher's role: from a role that included verbal expositions, drawings on the

blackboard, collective questioning sessions, etc, to a more corrective and automated role which included the use of model answers and pre-printed study material. Thus, the test was a centrally located technology that stood in the intersections between the levels of thought and action. It co-produced progressive individualism, individual differences, and automation with pedagogic technologies and techniques, and was crucial for the mass-individualization of correspondence education.

I also maintain that the test translated students' results into the object *learning*, becoming a constitutive part of the second level of the dispositif, the *grid of perception*, which made the students' learning observable and cognizable. This had very specific consequences for correspondence education when it was complemented with other technopedagogical measures. Importantly the object *learning* needed to be translated into *lines of power*, which would allow the test scores and grades to form the basis for a functional, efficient, and mass-individualized educational situation.<sup>42</sup> To accomplish the *translation* of the object *learning* into pedagogic and administrative power, to translate from the level of perception to the level of power, correspondence educators formalized and materialized the knowledges wrought from the tests. Thus, to successfully sustain a mass-individualized mode of organizing correspondence education over a period of time it was necessary to maintain detailed records of the students' results as they progressed through their correspondence courses.<sup>43</sup> This was accomplished through the *inscription* of the knowledges about students into material records.

#### *Record Keeping: Extending Knowledge over Time and Space*

The extensive use of tests entailed the utilization of a multitude of *inscriptions* of the students' abilities and performance: in New Zealand 'student passports' were utilized to accumulate records of the 'progress and abilities' of each student, in other countries so

called personality cards, ‘accumulative records’ or indexed student cards were employed.<sup>44</sup> It was thought that the educational situation could be adapted to a ‘real’ knowledge of the student’s abilities and performance through use of the students’ accumulated scores on tests. In the session *Post Primary Education by Correspondence* of the third ICCE conference, J. Nicol, the Principal of the Technical Correspondence School in New Zealand argued that:

‘The only apparatus that the teacher needs, apart from his pen, pencils and paper, is, for each pupil, a convenient and sufficiently roomy form of record sheet or record card where he can jot down the pupil’s personal particulars, record his incoming and outgoing scripts, enter a summary of the comments made on each script and the marks awarded to it (if marks are given), and keep a note of any incidental correspondence that he has with the pupil and of changes in the latter’s circumstances. The fuller his knowledge of the pupil, the more effective his teaching is likely to be.’<sup>45</sup>

The records *inscribed* the object *learning* into more durable forms like comments, marks, notes, and correspondence. The record keeping was a device that *translated* the knowledges generated by constant testing into *lines of power*: a device for linking pedagogical and administrative action with knowledge about the student. In distance education the records had a more important role to play, than in regular education in that they made possible action at a distance, and thus the existence of organized distance education.<sup>46</sup>

One form that the records took was the progress diagrams that sometimes were utilized to organize the work of the students. These could take the form of a rough

schedule for the handing in of assignments, instructions outlining what a normal pace of study was, a detailed schedule mimicking the school day of a regular school, or a simple progress check-list.<sup>47</sup> For example, in Alberta, the cards used for supervised correspondence study had personal characteristics on one side, with name, address, school attended, grade XI examination results, classroom subjects taken, credits taken, and room for notes. On the other side there was a grid with subjects on the vertical axis, and completed lessons on the horizontal. In New Zealand a similar device was utilized where a schedule of a school week was sent out with a grid for completed assignments on the backside.<sup>48</sup> These different recording devices *translated* various test scores into forms that were essential for the functioning of correspondence education, and which made it possible to track students' learning, development, and progress over time and space. The records functioned as a translating device in the dispositif which made it possible to effect a *folding of time and space* through making the object *learning* durable over a distance and at different times.<sup>49</sup>

The durability of the records were used primarily for tracking students progress so that they could be reminded, enticed, and motivated into handing in work. This motivational action was undertaken through withholding work from the students, classifying and grading students' work with color coded slips to discipline them, sending reminders to get students to submit their work, warning students that they were about to be marked as inactive, or trying to encourage them through distributing birthday cards to them.<sup>50</sup> For example J. S. Noffsinger of the National Home Study Council, an organization of for-profit correspondence schools, told the session on *The Preparation of Correspondence Courses* at the first conference that his member schools regularly sent pre-printed form letters as well as birthday cards to stimulate the student

regardless of the flow of lessons.<sup>51</sup> Thus, the folding of time and space, that the durable records facilitated, made possible an automation of education through mass-produced motivational letters and model answers. Also, the records made it possible to act at a distance on the individual student through automated means.

Additionally the records and their durability over time and space made possible a practice peculiar to correspondence education: the division of labor between different teachers working on a piece work basis. This job was often taken on by teachers or university staff needing to supplement a meager salary, and who worked with corrections in their spare time. This was often low paid and low status work which was contracted out to temporary employees without job security. This system was problematic for correspondence education, which was sometimes criticized for making promises of individual tutoring that could not be fulfilled in an educational system built on division of labor.<sup>52</sup>

The use of records brought out the essential tension between progressive individualism and automation which was inherent in correspondence education: the use of records, and the records themselves materialized the tension between action on the individual student and a standardization and industrialization of the educational process, and embodied the tension between industrialization and individualization.

But, the records were also important in another way: through the translation of *learning* into durable form they made it possible to hold one student record next to the other, effecting an efficient classifying apparatus.

#### *Classification & Guidance: Translating Knowledge into Placement*

For some delegates to the conferences, the belief in the importance of mental levels was so strong that it was argued that education that progressed from the wrong stage could

harm the educational outcome. In the third ICCE conference E. D. Pridgeon, Headmaster of Melbourne Correspondence School in Australia argued that:

‘Tests are used very carefully to determine the classification of a new pupil, and every effort is made to find the child’s standard of attainment. It is common to find that this is overrated by the child and his parents. Unless the correspondence tuition proceeds from a stage that is quite definite in the child’s mind, harm – not good – will probably be the result.’<sup>53</sup>

Thus, the object *learning* was translated back into the domain of thought, and knowledge, but also into the domain of a *subject position*, the third level of the dispositif. These groupings and classifications of students constituted a very specific form of understanding the students’ minds and learning abilities.

A result of this formation of testing, recording, and classifying was different practices of guidance. The point of guidance was to find the correct educational, and thus social, placement of the student. It was argued that the individual student’s needs, interests, abilities, talents, native endowments, intentions for the future or human personality should be the basis for teaching and guidance.<sup>54</sup> Through the practices of guidance it would be ensured that the student would achieve the optimal educational and vocational placement.

In the first ICCE conference Sydney C. Mitchell, the Superintendent of Schools, Benton Harbour Michigan, and also the originator of the *Benton Harbour Plan*,<sup>55</sup> argued that the guidance would lead to correct placement in education and work: ‘[B]oys who did not fit into the established educational groove’ were to be given specialized training that fit their interests and abilities better, and consequently find

‘entrance to their chosen fields more readily’.<sup>56</sup> The beliefs about intelligence and academic prowess were frequently associated with thoughts of an untapped talent reserve that could be developed using education.<sup>57</sup> This was vividly expressed when metaphors comparing intelligence and academic ability to natural resources like timber and gold were used: talented students were described as nuggets or college timber, and laggards as gold dust or dead timber.<sup>58</sup> The technologies of testing, recording and classification thus created specific subject positions for the student. The dispositif of correspondence education had made possible the translation of a multitude of actions by and on the students into specific subject positions that affected their educational trajectories, and hence their possibilities for working and living.

The practices of guidance in correspondence education were primarily data driven, which connected them to a progressive trust in numbers, and was dependant on the data that had been collected through required responses, tests, and examinations rather than on personal knowledge of the student’s characteristics. The collected and recorded data built a map of student characteristics that would be the basis for guiding the student into the most fitting educational channel. In the summary of the discussion session *The Work of the Correspondence Instructor – Teaching Evaluating and Recording of Results* in the first ICCE conference which was chaired by J. H. Straka, Supervisor of Correspondence Instructional Staff, Extension Division, University of Nebraska and W. G. Carpenter, Director of Technical Education for the Province of Alberta and Principal of the Institute of Technology and Art, Calgary, Alberta it was stated that:

‘A student who is registered for several subjects over a period of time becomes the source of much valuable information to all teachers concerned with his work. It is through personal letters, knowledge of interests, personal

characteristics, progress in various subjects, environment, etc., that the educator is furnished with the data necessary to guide the pupil into the correct channels ... Guidance cannot be possible if data are not collected and records of them kept within easy reach of the teacher.’<sup>59</sup>

Through the guidance of the student’s in different ability streams the tested, recorded, and classified mental level of the student was articulated in the gentle steering of the student into the course optimally fitted for his/her mental developmental position.

The classification of student’s minds was closely related to the type of thinking that was prevalent in the psychology of individual differences and progressive individualism, and had a decisive impact on correspondence education, which made it desirable to adapt education to the student and emphasized an education adapted to individual interests and needs: an individualized correspondence education.

*Differentiating: Making a Course for Every Student*

The psychology of individual differences and progressive individualism were affirmed continually in correspondence education. In the summary of the session on *The Preparation of Correspondence Courses* in the first conference Fred T. Wilhelms, Director of Secondary Course Construction, Extension Division, University of Nebraska argued that ‘every lesson should be adapted to meet precisely the interests, talents, and needs of the individual pupil,’<sup>60</sup> and in the third conference M. H. Kellerman, Headmaster, Blackfriars School, New South Wales, Australia contended that ‘supervision and correction must be adjusted to the needs of the pupil’ and their ‘intellectual, emotional, social, and moral differences’ as well as their IQ.<sup>61</sup> Thought on progressive individualism was so entrenched in correspondence education that

correspondence courses from the University of Nebraska in the 1950's had the subtitle 'A Series of Instructional Materials Developed to Meet Individual Interests and Needs'.<sup>62</sup> These arguments mirrored closely the progressive individualistic thoughts of the time, and constituted a milieu of thought for the differentiating practices that were adopted in correspondence education.

Differentiating the students in accordance with their ability was particularly compatible with the individualistic mode of examining, recording, classifying and communicating with the students, especially through the use of the letter as communicative device. But there were problems with individualizing correspondence education as well. One of the problems lay in the thinking on automation, and the mass produced and standardized course material that made it hard to give students an individualized curriculum adapted to their individual characteristics. Another problem, also related to standardized mass production, was the model answer that provided the student with the desirable and correct solution, which was antithetical to an individualized instruction.

The clash between automation and progressive individualism posed a striking problem for correspondence educators. On the one hand mass production of course materials inscribed automation and efficiency in correspondence education with specific prescriptions for the educational practice. On the other hand individually differentiated education was demanded by educational thought, and highly compatible with the individual technopedagogic devices. The solution for correspondence educators lay in the adaption of the course materials to the individual. Consequently, correspondence educators focused their attention on how to adapt the mass produced course units to the students' individual talents and needs. An example of the progressive scientific

individualism was provided in the summary of the session on *The Preparation of Correspondence Courses*:

‘If much is to be accomplished in the adaptation of the course to an individual it will be necessary to have a considerable body of information about the individual. It is the feeling of the majority of the group that objective measures of pupils’ intelligence, reading ability, etc. ought to be used much more extensively than they have been used’<sup>63</sup>

The methods for achieving individual adaption of the courses entailed several different methods for revising the course content and flexibility in providing for the students’ abilities. Loose leaf systems that allowed for constructing each course on demand, mimeographing that allowed for frequent revision, or adaption of projects and required responses to the individual were argued to be methods that could adapt the course to the students’ needs.<sup>64</sup>

Another way that correspondence education was to be adapted to mass-individualism was through the choice of courses. The courses that were developed in correspondence education had a vast spread, and ranged from courses in horticulture and home economics, to textile fabrication, refrigeration and the history of European civilization.<sup>65</sup> Correspondence schools developed a veritable flood of courses in subjects aimed at professionals, workers, school children, university students, military men, house wives, or seamen.

### *Conclusion*

This article has shown how the thinking, acting, seeing, and forming subjects in correspondence education resulted in a particular dispositif of mass-individualization. In

this dispositif, the right to education and freedom of choice met the harsh realities of state finance, teacher shortage, lack of time, long distances, sparse populations, and last, but perhaps most important, technology. The article has demonstrated how the co-production of progressive individualization, an ideal of scientificity, and automation as well as specific technical devices resulted in a specific mode of organizing education. In a manner of speaking one can say that correspondence education was a particular solution to the problematisation of progressive educational modernity – equality of educational access, democracy, scientificity, and individualism – and that this solution embodied the inherent tensions that existed in the welfare state’s educational system.

In correspondence education, the co-production of pedagogy and technology created an educational dispositif with specific problems and possibilities. On the level of thought, this was a struggle between progressive individualism, scientific thinking, and automation. On the level of power, this was a rupture between distance, time, motivation, loneliness, individualism, mass-production, and technology. On the level of perception, it was a matter of technical translation, where inscriptions constituted the student’s learning as an individualized object, and subsequently a coordination and action at a distance. On the level of subject positions the dispositif produced a number of possible alternatives, ranging from nuggets, to gold-dust, to dead timber.

Accordingly, correspondence education was a specific configuration of technologies, humans, actions, ideas, ideals, identities, objects, and seeings – a dispositif – which was constructed to bring about progressive individualism on an industrial scale.

The mass-individualized correspondence education dispositif was a technical fix for the tensions of educational modernity, and was very suggestive as such. One testimony to its suggestive power was its spread outside the traditional domains of correspondence

education. For example, the particular practices of mass-production, testing, and individualization were also implemented in regular schools. In the US this was called ‘supervised correspondence study’ and it soon gained widespread use in High Schools all over the US. This practice was so evocative of a solution to educational modernity that it even spread to the educational system in Sweden.<sup>66</sup> In supervised correspondence schools, just like in correspondence education, each course was produced to fit each student’s needs and aptitudes, and was followed in the student’s own pace and according to their own interests. Supervised correspondence study promised to meet the ‘individual student needs which inevitably [arose] in many high schools’ on a massive scale.<sup>67</sup>

I argue that mass-individualism in correspondence education was a historical premonition of a dispositif which is still in the making. There are several facts that point in this direction: For example, the European Union’s research policy calls for proposals to develop educational technologies that are hoped to result in mass-individualization on a massive scale.<sup>68</sup> This fact is illustrative of all the conferences, papers, and development money that are poured into making a reality of mass-individualization in education.<sup>69</sup> The belief in mass-individualization is also reflected in the growing e-learning market, which has seen business driven educational ventures start up at several universities.<sup>70</sup> Furthermore, correspondence education is an emblematic forerunner for the pedagogy of testing, which is reflected in today’s school with its attached focus on national and standardized testing – ‘the move to constant feedback which is killing education today’ – and which, as I have shown above, is a prerequisite for distance education.<sup>71</sup> I argue that the tensions that existed in correspondence education are a

forewarning for the tensions that will exist in the future educational systems that focus on technology as a solution to educational inequality, democracy, and pedagogy.

What I have shown to be the basic tension in correspondence education can be seen as an epitome of the modern educational problematisation, but also as a study of the genesis of a specific type of educational dispositif. What we must always be aware of is how the technopedagogical dispositif of mass-individualization translates tensions, ruptures, and fissures intrinsic to the modern educational project into a specific reality which we will hand down to coming generations.

### *Bibliography*

- Akrich, Madeleine, and Bruno Latour. "A Summary of a Convenient Vocabulary for the Semiotics of Human and Nonhuman Assemblies." In *Shaping Technology Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and John Law, 259-264. Cambridge & London: The MIT Press, 1992.
- Bowker, Geoffrey C., and Susan Leigh Star. "How Things (actor-net)work: Classification, magic and the ubiquity of standards [Electronic Version]." *Philosophia* (1996).
- . *Sorting Things Out: Classification and its consequences*. Cambridge, Mass: MIT Press, 1999.
- Brevskoleutredningen. "Korrespondensundervisningen inom skolväsendet (SOU 1962:16)." Stockholm: Ecklesiastikdepartementet, 1962.
- . "YK 1808." Stockholm: Swedish National Archives.
- Broadfoot, Patricia, ed. *Profiles and Records of Achievement: A Review of Issues and Practice*. London, New York, Sydney, Toronto: Holt, Rinehart and Winston, 1986.
- Broadfoot, Patricia M. *Education Assessment and Society: a sociological analysis*. Buckingham and Philadelphia: Open University Press, 1996.
- Bunker, Ellen L. "An historical analysis of a distance education forum: The International Council for Distance Education world conference proceedings, 1938 to 1995." Pennsylvania State University, 1998.
- "Course B, Form 3, Girls: English, Social Studies, Core Mathematics, General Science, Health Education." Wellington, New Zealand: Correspondence School, YK1808, Vol. 14.
- Dean, Mitchell. *Governmentality: Power and Rule in Modern Society*. London/Thousand Oaks/New Delhi: SAGE Publications, 1999.
- Deleuze, Gilles. "What is a dispositif?" In *Michel Foucault: Philosopher*, 159-168. New York, London, Toronto, Sydney, Tokyo, Singapore: Harvester Wheatsheaf, 1992.

- Eriksson, Rikard. *Psykoteknik: Kulturell fabricering av personlig identitet*. Stockholm: Carlssons, 1999.
- European Association of Distance Teaching Universities. *Conference 2004, Mass-individualisation of higher education for the knowledge-based society 2004* [cited 23 Jul 2007]. Available from <http://www.eadtu.nl/conference-2004/>.
- European Commission. *ICT - Information and Communication Technologies: A Theme for research and development under the specific programme "Cooperation" implementing the Seventh Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities, 2007*.
- Fass, Paula S. "The IQ: A Cultural and Historical Framework." *American Journal of Education* 88, no. 4 (1980): 431-458.
- Foucault, Michel. *Discipline & Punish: The Birth of the Prison*. second ed. New York: Vintage Books, 1995.
- . *Power/Knowledge: selected interviews and other writings 1972-1977*. New York: Pantheon, 1980.
- Gomart, Emilie, and Antoine Hennion. "A sociology of attachment: music amateurs, drug users." In *Actor Network Theory and After*, edited by John Law and John Hassard, 220-246. Oxford: Blackwell, 1999.
- Ince, Darrel. *A Dictionary of the Internet*. Oxford: Oxford University Press, 2001.
- IT Strategic Advisory Council Miami University. *IT Strategic Advisory Council Minutes 2007* [cited 23 Jul 2007]. Available from <http://www.units.muohio.edu/mcs/advisory/ITSAC/Agendas&Minutes/2006-2007/ITSAC%20Minutes%20May%2007.pdf>.
- Jasanoff, Sheila. "The idiom of co-production." In *States of Knowledge: The co-production of science and social order*, edited by Sheila Jasanoff, 1-11. London & New York: Routledge, 2004.
- Kamin, Leon. *The Science and Politics of I.Q.* Potomac, Maryland: Lawrence Earlbaum Associates, Publishers, 1974.
- Kirp, David L. *Shakespeare, Einstein, and the bottom line: the marketing of higher education*. Cambridge, Mass.: Harvard University Press, 2003.
- Latour, Bruno. "A Collective of Humans and Nonhumans: Following Daedalus's Labyrinth." In *Pandora's Hope: Essays on the Reality of Science Studies*, 174-215. London: Harvard University Press, 1999.
- . "Give me a Laboratory and I Will Raise the World." In *Science Observed: Perspectives on the Social Study of Science*, edited by K Knorr-Cetina and M Mulkay, 141-170. London: Sage Publications, 1987.
- . *Science in Action*. Cambridge: Harvard University Press, 1987.
- . "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In *Shaping Technology Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and John Law, 225-258. Cambridge and London: The MIT Press, 1992.
- Law, John. "After ANT: Complexity, Naming and Topology." In *Actor Network Theory and After*, edited by John Law and John Hassard. Oxford: Blackwell, 1999.
- . *Organizing modernity*. Oxford: Blackwell, 1994.
- . "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion." In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, edited by Wiebe E.

- Bijker, Thomas P. Hughes and Trevor Pinch. Cambridge, Mass.: The MIT Press, 1987.
- Lee, Francis. "Learning in Nowhere: Individualism in Correspondence Education in 1938 and 1950." (Forthcoming).
- Mol, Annemarie. *The body multiple: ontology in medical practice, Science and cultural theory*. Durham: Duke University Press, 2002.
- . "Ontological Politics: a Word and Some Questions." In *Actor-Network Theory and After*, edited by John Law and John Hassard, 74-89. Oxford: Blackwell, 1999.
- Moore, Michael G. "Editorial: The Benton Harbour Plan." *The American Journal of Distance Education* 16, no. 4 (2002): 201-204.
- Mulder, Fred. *Mass-individualization of higher education facilitated by the use of ICT 2005* [cited 23 Jul 2007]. Available from <http://www.delfi2005.de/sites/programm/keynotes.htm>.
- Noble, David. *Digital Diploma Mills: The Automation of Higher Education*. Paperback ed. New York: Monthly Review Press, 2002.
- Porter, Theodore M. *Trust in Numbers: The pursuit of objectivity in science and public life*. Princeton: Princeton University Press, 1995.
- "Pre-Conference Bulletin: International Conference on Correspondence Education." Lincoln, Nebraska, USA, August 22-24 1948.
- "Proceedings on the Third International Conference of Correspondence Educators." Christchurch, New Zealand, April 18-27 1950.
- Rabinow, Paul. *Anthropos Today: Reflections on Modern Equipment*. Princeton & Oxford: Princeton University Press, 2003.
- "Report of the First International Conference on Correspondence Education." Victoria, British Columbia, Canada, August 22-24 1938.
- Rose, Nikolas. "The Gaze of the Psychologist." In *Governing the Soul: The Shaping of the Private Self*, 132-150. London & New York: Routledge, 1989.
- . *Governing the soul: the shaping of the private self*. London: Routledge, 1989.
- Sewart, David. *SCOP meeting in Cologne 2005* [cited 23 Jul 2007]. Available from <http://www.icde.org/oslo/icde.nsf/id/132DC4A2C7DB09E5C125704B00330E13?OpenDocument>.
- Simpson, Merle. "A Course in Plane Geometry (Mathematics IIIx): Manual for the Supervisor Including Form A Tests." University Extension Division, University of Nebraska, 1955, YK1808, Vol. 27.
- Star, Susan Leigh. "Power, Technologies and the Phenomenology of Conventions: on being allergic to onions." In *A sociology of Monsters: Essays on Power, Technology and Domination*, edited by John Law, 26-56. London: Routledge, 1991.
- Supervised Correspondence Study in High Schools: An Outline of Suggestions for School Officials*. Chicago, Illionis: The American School, from the Swedish National Archives, YK1808, Vol. 30.
- Walkerdine, Valerie. "Developmental psychology and the child-centered pedagogy: the insertion of Piaget into early education." In *Changing the subject: Psychology, social regulation and subjectivity*, edited by Julian Henriques, Wendy Holloway, Cathy Urwin, Couze Venn and Valerie Walkerdine, 153-202. London: Methuen, 1984.

Wooldridge, Adrian. *Measuring the Mind: Education and psychology in England, c. 1860-1990*. Cambridge: Cambridge University Press, 1994.

---

<sup>1</sup> Foucault, *Discipline & Punish*.

<sup>2</sup> According to *A Dictionary of the Internet*, mass-individualization refers to “large scale development of products which are customized to buyers. ... [N]etwork technology has provided the infrastructure for a major expansion in companies offering mass individualization.” Thus, mass-individualization is a concept which is closely tied to technology, mass production, and customization, and, as I show below, is a useful and accurate way of depicting correspondence education. See “mass-individualization” in Ince, *A Dictionary of the Internet*.

<sup>3</sup> Cf. Noble, *Digital Diploma Mills*, Chapter 1. for a discussion of the industrialized characteristics of correspondence education, and Lee, 'Learning in Nowhere: Individualism in Correspondence Education in 1938 and 1950'. for a discussion of individualization in correspondence education.

<sup>4</sup> Cf. Jasanoff, 'The idiom of co-production'.

<sup>5</sup> Law, 'After ANT', Law, 'Technology and Heterogeneous Engineering'.

<sup>6</sup> For classroom technology see Walkerdine, 'Developmental psychology and the child-centered pedagogy'. For child development psychology see Rose, 'The Gaze of the Psychologist'.

<sup>7</sup> Lab studies, see Latour, *Science in Action*, Law, *Organizing modernity*. Subjectivities, see Gomart and Hennion, 'A sociology of attachment'. Health care, see: Mol, *The body multiple: ontology in medical practice*. Standards, see Bowker and Star, *Sorting Things Out*.

<sup>8</sup> The French word *dispositif* means device, mechanism, measure, apparatus or arrangement and has been employed by Michel Foucault to discuss *biopower*, and is translated into English in different ways. It has been translated it as apparatus or social apparatus, assemblage or regime of practice, and has also inspired theories based on networks or heterogeneous collectifs. In this article I wish to avoid these different translations, and therefore use the original French concept. See Dean, *Governmentality*, Deleuze, 'What is a dispositif?', Gomart and Hennion, 'A sociology of attachment', Rabinow, *Anthropos Today*.

<sup>9</sup> Foucault, *Power/Knowledge*, 194.

<sup>10</sup> Dean, *Governmentality*, 21, Rabinow, *Anthropos Today*, 50.

<sup>11</sup> Rabinow, *Anthropos Today*, 53.

<sup>12</sup> Law, 'After ANT'.

<sup>13</sup> Dean, *Governmentality*, 18.

- 
- <sup>14</sup> Ibid, Deleuze, 'What is a dispositif?'
- <sup>15</sup> Dean, *Governmentality*, 22, 31.
- <sup>16</sup> Ibid, Deleuze, 'What is a dispositif?'
- <sup>17</sup> Latour, 'The Sociology of a Few Mundane Artifacts', 229.
- <sup>18</sup> Inscription, delegation, and prescription, see Akrich and Latour, 'A Summary of a Convenient Vocabulary for the Semiotics of Human and Nonhuman Assemblies'. Folding of time and space, see Latour, 'A Collective of Humans and Nonhumans'. Cf. also Latour, *Science in Action*, Chapter 6.
- <sup>19</sup> Bunker, 'An historical analysis of a distance education forum', 36-39, 41.
- <sup>20</sup> Ibid., 377.
- <sup>21</sup> Ibid., 33.
- <sup>22</sup> I have been unable to attain a copy of the conference proceedings for the second conference, but I have been able to obtain a copy of the pre-conference bulletin.
- <sup>23</sup> Brevskoleutredningen, 'YK 1808,' vol. 14-33.
- <sup>24</sup> Fass, 'The IQ', Walkerdine, 'Developmental psychology and the child-centered pedagogy'.
- <sup>25</sup> Fass, 'The IQ', 434.
- <sup>26</sup> Ibid., 436.
- <sup>27</sup> Ibid., 435.
- <sup>28</sup> See for example Broadfoot, *Education Assessment and Society*, 32-37, Wooldridge, *Measuring the Mind*.
- <sup>29</sup> Fass, 'The IQ', 437. See also Porter, *Trust in Numbers*. for a discussion of the expanding use of statistics in society.
- <sup>30</sup> Eriksson, *Psykoteknik*, Kamin, *The Science and Politics of I.Q.*, Rose, *Governing the soul*, 137-142, Wooldridge, *Measuring the Mind*.
- <sup>31</sup> Fass, 'The IQ', 435.
- <sup>32</sup> 'ICCE 1', 191-192, 175.
- <sup>33</sup> Noble, *Digital Diploma Mills*, Chapter 1.
- <sup>34</sup> The organization of correspondence work was generally similar in different schools, but with some variations. See the various examples of how correspondence work was organized in 'ICCE 2', 'ICCE 3', 'ICCE 1'..
- <sup>35</sup> See the Brevskoleutredningen, 'YK 1808,' vol. 14-32. for a large selection of correspondence courses that use required responses as a means for communicating with the students.
- <sup>36</sup> Cf. Noble, *Digital Diploma Mills*.
- <sup>37</sup> 'ICCE 1', 60, 68, 69, 111, 112, 153, 156, 157, 169.

---

<sup>38</sup> 'ICCE 3', 13, 'ICCE 1', 155, 175, 177-178, 209.

<sup>39</sup> 'ICCE 1', 131, 132, 150, 151, 152, 183, 199.

<sup>40</sup> Ibid., 189. My emphasis.

<sup>41</sup> Lee, 'Learning in Nowhere: Individualism in Correspondence Education in 1938 and 1950'.

<sup>42</sup> C.f. immutable mobiles and centers of calculation in Latour, *Science in Action*.

<sup>43</sup> 'ICCE 1', 188.

<sup>44</sup> 'ICCE 2', 44, 'ICCE 1', 194, 197, 198.

<sup>45</sup> 'ICCE 3', 95.

<sup>46</sup> To to know the students performance, abilities, and characteristics through examinations and records did not differ considerably from regular school practices where records played an important role in the collection of data on student's progress as well as the communication of the student's strengths and weaknesses to parties outside of school. Broadfoot, *Profiles and Records of Achievement*, 3.

<sup>47</sup> , 'Course B, Form 3, Girls: English, Social Studies, Core Mathematics, General Science, Health Education.', Simpson, 'A Course in Plane Geometry (Mathematics IIIx): Manual for the Supervisor Including Form A Tests.' See the also large number of Bulletins from different US universities in the Brevskoleutredningen, 'YK 1808,' vol. 29.

<sup>48</sup> See YK1808

<sup>49</sup> Cf. immutable mobiles in Latour, *Science in Action*.

<sup>50</sup> 'ICCE 1', 172, 197, 203-204.

<sup>51</sup> Ibid., 171.

<sup>52</sup> Cf. Noble, *Digital Diploma Mills*, Chapter 1.

<sup>53</sup> 'ICCE 3', 46-47.

<sup>54</sup> 'ICCE 1', 94, 95, 108, 175, 194, 197.

<sup>55</sup> The Benton Harbour Plan was a instructional system where correspondence education techniques were used in regular high schools, so called supervised correspondence study, which gained widespread use in the US for a period. See Moore, 'Editorial: The Benton Harbour Plan', 201.

<sup>56</sup> 'ICCE 1', 101.

<sup>57</sup> Ibid., 20.

<sup>58</sup> Ibid., 33, 36, 104.

<sup>59</sup> Ibid., 200.

---

<sup>60</sup> Ibid., 191. See also 'ICCE 2', 75.

<sup>61</sup> 'ICCE 3', 39.

<sup>62</sup> Brevskoleutredningen, 'YK 1808,' vol. 27.

<sup>63</sup> Ibid., 191.

<sup>64</sup> 'ICCE 3', 48, 68, 'ICCE 1', 173, 176, 178.

<sup>65</sup> Brevskoleutredningen, 'YK 1808,' vol. 14-32.

<sup>66</sup> This was pioneered in Benton Harbour in 1923 through the work of Sydney C. Mitchell. 'ICCE 1', 99-101. In Sweden this method of teaching was used by both the largest correspondence schools, NKI-skolan and Hermods. See Brevskoleutredningen, 'Korrespondensundervisningen inom skolväsendet,' 15, 19, 22, 34-36.

<sup>67</sup> *Supervised Correspondence Study in High Schools: An Outline of Suggestions for School Officials*, 1.

<sup>68</sup> European Commission, *ICT - Information and Communication Technologies*, 36.

<sup>69</sup> See European Association of Distance Teaching Universities, *Conference 2004, Mass-individualisation of higher education for the knowledge-based society*, IT Strategic Advisory Council Miami University, *IT Strategic Advisory Council Minutes*, Mulder, *Mass-individualization of higher education facilitated by the use of ICT*, Sewart, *SCOP meeting in Cologne*.

<sup>70</sup> Kirp, *Shakespeare, Einstein, and the bottom line: the marketing of higher education*.

<sup>71</sup> I want to thank the anonymous reviewer for History and Technology for this comment.